Relationship Between Context and Sensory Processing in Children With Autism

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KEY WORDS
• autistic disorder
• child behavior
• environment
• sensory processing
• sensory threshold

OBJECTIVE. The purpose of the study was to determine the relationship between sensory processing and context for children with autism. We examined home and school contexts using the Sensory Profile (Dunn, 1999) and the Sensory Profile School Companion (Dunn, 2006a) questionnaires.

METHOD. Teachers of 49 students with autism completed the Sensory Profile School Companion, and parents completed the Sensory Profile. We conducted correlational analyses using the avoiding and seeking quadrant scores from the School Companion and corresponding avoiding and seeking quadrant scores from the Sensory Profile.

RESULTS. The avoiding quadrant score coefficient (.59) and the seeking quadrant score coefficient (.45) were statistically significant (p = .01) with good and fair correlations, respectively, suggesting that sensory processing patterns have both universal qualities and context-specific qualities in children with autism.

CONCLUSION. Findings from this study provide initial evidence that sensory processing and context for children with autism are related.

In the United States, the prevalence of autism is 1 in 150 births, and it affects more boys than girls (4.8:1; Centers for Disease Control and Prevention [CDC], 2007). Autism is a neurodevelopmental disorder characterized by impairments in social skills and nonverbal and verbal communication, and it involves repetitive behaviors and unusual interests (American Psychiatric Association, 2000; Corsello, 2005; Rapin, 1991). In addition to those core characteristics, many children with autism have unusual ways of learning, attending, and responding to sensory experiences (Rapin, 1991; Strock, 2004); this area of consideration has received greater attention in the past decade.

Sensory Processing Concepts

Scholars have continued to advance the study of sensory processing since Sensory Integration Theory was first developed by Jean Ayres. Dunn’s (1997) Model of Sensory Processing is based in knowledge from neuroscience and behavioral science (Figure 1). The model conceptualizes sensory processing’s contribution to a child’s behavior. Dunn’s model hypothesizes that an interaction between neurological thresholds and behavioral responses exists (Dunn, 1997). In Figure 1, neurological thresholds (i.e., the vertical axis) indicate the amount of stimuli needed for a child to notice or react to the stimuli. The behavioral responses (i.e., the horizontal axis) indicate the manner in which a child responds to stimuli.

According to Dunn’s Model of Sensory Processing, neurological thresholds and behavioral responses fall on a continuum and interact with each other. The intersection of the two continua results in four sensory processing patterns (i.e., registration, seeking, sensitivity, and avoiding) that offer possible interpretations of a child’s behavior (Dunn, 2006a):
Registration is described as the degree to which a child misses sensory input (high neurological threshold and passive response).

Seeking is the degree to which a child obtains sensory input. Children in the seeking quadrant also have a high neurological threshold but respond actively. Children with low neurological thresholds fall into the sensitivity or avoiding quadrants.

Sensitivity is the degree to which a child notices sensory input (passive response).

Avoiding is the degree to which a child is bothered by sensory input (active response).

The interaction of neurological thresholds and behavioral responses provides a method for explaining how children process sensory information and guidance for intervention planning (Dunn, 1999).

Sensory Processing and Children With Autism

One of the many difficulties children with autism face is that they respond to sensory experiences in an unusual way (CDC, 2007; Rapin, 1991; Strock, 2004). Children with autism may be sensitive and overreact to auditory stimulation and withdraw (Case-Smith & Bryan, 1999). They may also seek proprioceptive and vestibular input through self-stimulatory, repetitive behaviors such as rocking, spinning, or flapping their hands (Case-Smith & Bryan, 1999). The unique sensory processing patterns of children with autism are associated with dysfunction in attending, arousal, interactions with others, and goal-directed play (Case-Smith & Bryan, 1999; Greenspan & Wieder, 1997; Wieder, 1996).

Moreover, research has shown that sensory processing affects a child’s ability to learn (Ayres, 1979; Dunn, 2001; Dunn & Donaldson, 2001). Specifically, children with autism often fail to notice sensory input that is important; at other times, they are overly sensitive to sensory input and withdraw from stimuli (Ermer & Dunn, 1998; Kientz & Dunn, 1997; Ornitz, 1974; Rapin, 1991; Tomchek & Dunn, 2007; Watling, Deitz, & White, 2001). This pattern of responding makes it difficult for a child to learn because he or she misses important information needed to profit from instruction; this situation becomes critical in the school context. For these reasons, education teams need the appropriate tools to identify and design effective interventions specific to the educational context.

Evaluation Within the Educational System

With a cause for autism not yet understood, effective interventions for children with this disorder are in demand. Because of federal laws and the fact that children spend most of their day at school, the educational system is expected to provide much of the instruction and intervention for children with autism (Individuals With Disabilities Education Act of 1990; Individuals With Disabilities Education Improvement Act of 2004; No Child Left Behind Act of 2001). Public schools are required to provide supportive programming to facilitate children’s success in academics and social interactions. Including assessment of sensory processing in the educational assessment plans of children who have autism may facilitate individualized intervention planning.

A critical factor that the educational system faces when serving children with autism, however, involves conducting valid and reliable assessments. Assessments are used to determine children’s learning strengths and needs. Many authors have suggested that children’s reaction to sensation may interfere with both assessment and educational planning (Ayres, 1979; Case-Smith & Bryan, 1999; Case-Smith & Miller, 1999; Cook, 1991; Kientz & Dunn, 1997; Larson, 1982). If we are better able to understand children’s reaction to sensation, particularly their sensory processing patterns, then professionals will have important information to guide educational planning.

Methods for Assessing Sensory Processing

Behavior is influenced by context; therefore, it is important to consider a person’s context when considering his or her potential to learn (Dunn, Brown, &
The Sensory Profile (Dunn, 1999), which is based on Dunn’s Model of Sensory Processing, has been used in many interdisciplinary studies to document sensory processing patterns in children and adults with and without disabilities (Brown, Tollefsen, Dunn, Cromwell, & Filion, 2001; Dunn, 1994; Dunn & Bennett, 2002; Ermer & Dunn, 1998; Kientz & Dunn, 1997; Rogers, Hepburn, & Wehner, 2003; Watling et al., 2001). However, behaviors assessed by the Sensory Profile are not specific to behaviors that would occur in the classroom setting, where a school-age child spends most of his or her day.

Home and school contexts are unique, and contextually relevant assessments are therefore essential. Recently, the Sensory Profile School Companion (hereinafter referred to as the School Companion) has been published to answer this need (Dunn, 2006a). The School Companion is built on Dunn’s Model of Sensory Processing (Figure 1) and coordinates findings with the well-established Sensory Profile (Dunn, 1999). The School Companion reflects scores that are grounded in tested theoretical concepts from the literature (i.e., sensory processing patterns: seeking, avoiding, sensitivity, and registration), providing insights into the child’s sensory patterns in the context of school. The School Companion also offers sensory system scores (i.e., visual, auditory, touch, movement) and a behavior score. Because teachers complete this form, it also includes four school factor scores reflecting teacher and classroom perspectives.

The School Companion is designed for children ages 3–11. The child’s teacher uses a 5-point Likert scale to complete the 62-item questionnaire regarding the child’s responses to daily sensory experiences in the classroom. Additionally, the School Companion is designed to be used in conjunction with the Sensory Profile (Dunn, 1999), which solicits the caregivers’ input, providing a comprehensive view of the child’s sensory processing patterns. We used the Sensory Profile and School Companion in this study of home and school contexts because of their common conceptual basis.

### Identifying the Best Source for Evaluation Information

Research has shown that when teachers and parents are asked the same questions about a child, the responses are only slightly correlated, suggesting that each informant has a unique view and that one view cannot be substituted for the other (Achenbach, McConaughy, & Howell, 1987; De Los Reyes & Kazdin, 2005; de Nijs et al., 2004; Kumpulainen et al., 1999). The low correlations between teacher and parent responses to the same questionnaire also suggest that home and school variables differ and indicate the need for contextually designed assessments and different interventions and goals (Achenbach et al., 1987).

Questions may be raised about how home and school versions of sensory processing assessments relate to each other. If assessment of sensory processing only concerns children’s reactions, then home and school assessments will be highly correlated. If, however, the contexts of children’s reactions are an important factor, then both similarities and differences will perhaps indicate the contribution of context to behavior. For this study, we hypothesized that the greatest difference between parent and teacher responses would be seen in the two active behavioral response quadrants from Dunn’s Model of Sensory Processing (i.e., avoiding and seeking). Perhaps the active behavioral response quadrant behaviors would be more noticeable, making it easier for parents and teachers to report behaviors.

In summary, a strong need for effective assessment and intervention for children with autism exists. The school system is expected to provide specialized instruction to meet the unique learning needs of all children. Research has shown that children with autism have unique sensory processing patterns affecting the way in which they respond in their everyday lives, including at home and at school (Ermer & Dunn, 1998; Kientz & Dunn, 1997; Ornitz, 1974; Rapin, 1991; Tomchek & Dunn, 2007; Watling et al., 2001). Being able to determine how specific sensory processing patterns might relate to participation at home and at school will help professionals support children, families, and teachers by demonstrating how therapists might adjust the context to better fit children’s needs.

The purpose of this study was to determine the relationship between sensory processing and context. To address this purpose, we examined Sensory Profile and School Companion findings for the same children, hypothesizing that each assessment would provide contextually specific information about the sensory processing responses of children with autism at home (Sensory Profile) and at school (School Companion). If context (home and school) and sensory processing patterns are related, then some aspects of sensory processing responses in children with autism will be unique to school. We hypothesized (1) a low relationship between seeking quadrant scores at home and at school and (2) a high relationship between avoiding quadrant scores at home and at school. For this study, we focused only on the seeking and avoiding quadrants. We hypothesized that the active quadrant behaviors from Dunn’s Model of Sensory Processing Information.
Processing (i.e., avoiding and seeking) would be more noticeable, making it easier for parents and teachers to report them, and that these two quadrants would have the greatest difference in parent and teacher responses.

Method
Research Design
We conducted correlational analyses to explore the relationship between sensory processing and context for children ages 3–11 yr. The avoiding and seeking quadrant scores from the School Companion (school) were correlated with the corresponding avoiding and seeking quadrant scores from the Sensory Profile (home). The teachers of 49 students with autism completed the School Companion, and parents completed the Sensory Profile. Participants in this study were part of a larger study conducted from September 2005 to March 2006 to establish validity and reliability for the School Companion. This parent study was approved by the institutional review board of the University of Kansas Medical Center, and participating parents and teachers provided informed consent.

Participant Selection
The sample for this study included 56 students with autism (49 boys and 7 girls) located across the United States and their public school teachers (n = 56); teachers completed the School Companion on participating students. To participate, students were required to have a diagnosis of autism as designated by the educational system. Children with multiple diagnoses were excluded from the data set. As a result of missing data, 49 pairs of teachers and children with autism had complete data sets for the analyses in this study.

Instruments
The Sensory Profile (Dunn, 1999) is a caregiver questionnaire consisting of 125 items that describe a child’s response to sensory experiences. The items are divided into three main sections: (1) sensory processing, (2) modulation, and (3) behavioral and emotional responses. The questionnaire items also form nine meaningful groups, or factors, that characterize children by their responsiveness to sensory input. The Supplement Summary Score Sheet to the Sensory Profile (Dunn, 2006b) provides four quadrant scores (registration, seeking, sensitivity, and avoiding) that correspond to Dunn’s (1997) Model of Sensory Processing (Figure 1). According to the model, registration is the level at which a child misses sensory input, seeking is the level at which a child obtains sensory input, sensitivity is the level at which a child notices sensory input, and avoiding is the level at which a child is bothered by sensory input. Parents respond to each statement by reporting the frequency with which their child engages in a behavior on a 5-point Likert scale (i.e., 1 = always, 100% of the time; 2 = frequently, 75% of the time; 3 = occasionally, 50% of the time; 4 = seldom, 25% of the time; and 5 = never, 0% of the time). The Caregiver Questionnaire and the Summary Score Sheet require approximately 30 min to complete. We calculated the Supplement Summary Score Sheet in SPSS 16 (SPSS, Inc., Chicago) using the raw scores.

We estimated the Sensory Profile’s reliability using internal consistency. Internal consistency indicates the extent to which the items in each section measure a single construct. The value of Cronbach’s $\alpha$ for each of the various sections ranged from .47 to .91 (Dunn, 1999).

Validity refers to the extent to which a test measures what it is designed to measure. Dunn (1999) compared scores from the Sensory Profile with scores obtained on the School Function Assessment (Miller-Kuhaneck, Henry, Glennon, & Mu, K. (2007). Both high and low correlations were found, providing evidence of convergent and discriminant validity. Convergent and discriminant validity are types of construct validity, which is the ability of an instrument to measure an abstract concept or construct (Portney & Watkins, 2000).

Convergent validity indicates that two assessments are believed to reflect the same concept (high correlation). Conversely, discriminant validity indicates that two assessments assess different characteristics (low correlation). For example, correlations were higher between the behavioral regulation section of the School Function Assessment and the modulation sections of the School Companion. Lower correlations were found between the more detailed performance items on the School Factor Assessment (e.g., manipulating small objects in art class) and items on the Sensory Profile (Dunn, 1999).

Other researchers have provided additional validity data for the Sensory Profile. For example, researchers have shown that children with autism have significantly different sensory processing patterns from those of their peers (Kientz & Dunn, 1997; Tomchek & Dunn, 2007; Watling et al., 2001), children with Asperger syndrome (Myles, Hagiwara, Dunn, Rinner, & Reece, 2004), and children with attention deficit hyperactivity disorder (Emer & Dunn, 1998). In addition, Rogers et al. (2003) reported sensory processing differences among children with autism, fragile X syndrome, and developmental delays and children without disabilities, suggesting that the short Sensory Profile can discriminate among these groups.
The School Companion (Dunn, 2006a) is a 62-item teacher questionnaire; items describe a student’s response to common sensory experiences in the school context. Because the School Companion is designed to be used in conjunction with the Sensory Profile, the School Companion uses the same 5-point Likert scale and scoring procedures as the Sensory Profile. The Teacher Questionnaire provides the same four quadrant scores (registration, seeking, sensitivity, and avoiding) corresponding to Dunn’s Model of Sensory Processing, four school factor scores (School Factors 1, 2, 3, and 4), and section scores for four sensory groups and one behavior group (auditory, visual, movement, touch, and behavior). Teachers required approximately 15 min to complete the Teacher Questionnaire, and we calculated the scoring summary using the raw scores within SPSS 16.

Dunn (2006a) used Cronbach’s α coefficient to report reliability of the School Companion. Correlations ranged from .83 to .95, which are considered to be in the adequate reliability range (DePoy & Gitlin, 1994). Dunn also reported test–retest reliability coefficients ranging from .80 to .95, reflecting good to excellent stability of scores from the teacher’s first rating on a child to the teacher’s second rating on the same child (Dunn, 2006a).

To test the validity of the School Companion, we correlated the scores from the teacher responses on the School Companion with scores from the parent responses on the Sensory Profile and indicated contrasting high and low correlations, providing evidence of convergent and discriminant validity. For example, the parent and teacher ratings for the avoiding quadrant score had the highest correlation (.62), and the parent and teacher ratings for the seeking quadrant score had the weakest correlation (.34).

In addition, teachers completed a demographic data sheet that included educational level and degree attained, frequency of teacher contact with students, years of teacher contact with students, and years of teaching experience. Teachers also reported parents’ educational level.

Procedures

To prevent conflict of interest, an independent testing company sent packets to teachers and parents of children with autism. The packets included a cover letter with instructions, a demographic data sheet, a consent form, and the Sensory Profile and School Companion questionnaires. Teachers completed the demographic data sheet, consent form, and the School Companion, and parents completed the Sensory Profile. Participants returned the material to the testing company within 2 months of receipt of packet materials. The testing company compiled the data into deidentified files and forwarded them to us. We calculated summary scores using raw scores and conducted statistical analyses using SPSS 16.

Data Analysis

To determine the relationship between home and school reports of sensory processing patterns in children with autism, we conducted correlational analyses using the avoiding and seeking quadrant scores from the School Companion and the corresponding avoiding and seeking quadrant scores from the Sensory Profile. We hypothesized that the school’s context may restrict seeking patterns that are demonstrated at home, whereas behaviors associated with avoiding patterns may be more likely to occur in both the home and the school contexts. We conducted one-tailed Spearman rank order correlations with a bivariate correlation design. We chose Spearman rank order correlations because data from a Likert scale are nonparametric. We set the p value at the standard level of .05. We used SPSS 16 to complete the correlational analyses and frequency distributions of the demographics.

Results

The 49 students (43 boys and 6 girls) ranged in age from 3 yr 3 mo to 11 yr 11 mo (Table 1). Five of the children received one service (i.e., occupational therapy, physical therapy, speech–language therapy, special education, or counseling), 10 children received two services, and 34 students received more than two services (Table 2). Of the children, approximately 18% were from various ethnic backgrounds (4 African-American, 2 Asian, 1 Hispanic, 2 other–multiracial), and approximately 82% were White (n = 40).

Teachers’ experience ranged from 0 to ≥26 yr, and educational levels ranged from no degree to a doctoral degree (no degree = 1, bachelor’s degree = 22, master’s degree = 23, doctoral degree = 2, missing = 1; see Table 3). Seven teachers had contact with students 2 days a week, 17 teachers had contact with students 3–4 days a week, and 25 teachers had contact with students daily (Table 4). Most teachers had only 1 year of contact with

| Table 1. Distribution of Children With Autism by Age and Gender |
|------------------|------------------|------------------|------------------|------------------|
| Age (yr,mo)      | Male (n = 43)    | Female (n = 6)   |
|                  | n    | % of Sample | n    | % of Sample |
| 3.0–5.11         | 20   | 40.82       | 2    | 4.08         |
| 6.0–8.11         | 12   | 24.49       | 1    | 2.04         |
| 9.0–11.11        | 11   | 22.45       | 3    | 6.12         |
| Total            | 43   | 87.76       | 6    | 12.24        |

Note. N = 49.
students \((n = 30)\), but some teachers had multiple years of contact \((8 \text{ had } 2 \text{ yr}, 4 \text{ had } 3 \text{ yr}, 2 \text{ had } 4 \text{ yr}, 5 \text{ had } \geq 5 \text{ yr})\).

In addition, parents of the same children completed the Sensory Profile Caregiver Questionnaire. Mothers’ and fathers’ education levels (based on teacher report) ranged from \(\leq 11 \text{ yr of school} \) (mother \(= 0\), father \(= 2\)) to \(\geq 16 \text{ yr of school} \) with most parents had \(\geq 16 \text{ yr of school} \) (mother \(= 21\), father \(= 21\); see Table 5). Other education levels included \(12 \text{ yr of school or a GED} \) (mother \(= 12\), father \(= 10\)), and \(13–15 \text{ yr of school} \) (mother \(= 16\), father \(= 15\)); one parent was unreported (mother \(= 0\), father \(= 1\)).

Table 6 summarizes the results of the correlations using the avoiding and seeking quadrant scores from the Sensory Profile (parent report) and School Companion (teacher report). The avoiding quadrants correlated at .59 \((p < .01)\). The seeking quadrants correlation was also positive (.45, \(p = .01)\).

As a result of missing data, only 49 of the 56 pairs of teachers and students with autism were eligible for the study. In addition, we excluded cases pairwise in the correlations to minimize the effect of missing data. For this reason, the number of participants reported in Table 6 varies.

When data were plotted, both the seeking and avoiding results had outliers (Figures 2 and 3). When outliers were excluded, the correlation strength improved. The demographics, however, indicated no reason to exclude the outliers from the results; thus, the reported results include data from outliers.

**Discussion**

In this study, we examined the relationship between sensory processing patterns at home and school in children with autism. Specifically, we correlated the seeking quadrant scores from the Sensory Profile (completed by parents) and the School Companion (completed by teachers). We also correlated the avoiding quadrant scores from each of the assessments. Data analysis revealed statistically significant correlations, with both good and fair correlations suggesting that sensory processing patterns have both universal qualities (i.e., the impact is the same across different contexts).
everywhere) and context-specific qualities (i.e., the impact is specific to a situation or activity) in children with autism.

The avoiding quadrant had a moderate to good correlation coefficient (.59), suggesting that a child’s reactions of being overwhelmed by sensory experiences might sometimes be similar at home and at school. Perhaps children with autism are universally overwhelmed and avoid sensations across contexts. For example, both teachers and parents may report that students with autism hold their hands over their ears to protect against sound, avoid eye contact, or withdraw in response to changes in routine. The context has the potential to provide multiple sensory experiences. Children with avoiding patterns can become easily overwhelmed; stimuli that trigger avoiding reactions can occur anywhere and at any time. However, because the correlation between context and sensory processing was not perfect, data suggest that the home and school contexts also reflect sensory circumstances that are unique to each environment. For example, a family with one child may have a home context that is quieter than the school context. Such parents would likely observe fewer auditory reactions than would the child’s teacher, who observes the child amid a classroom full of students.

For practitioners, these findings can be helpful in intervention planning. Both parents and teachers can implement strategies that could minimize sensory experiences to reduce a child’s need to use avoiding behaviors. Situations in both home and school contexts may be especially overwhelming (i.e., school assemblies, fire drills, shopping at a department store with a parent, or receiving a haircut). Therapists should ask additional questions about these high-risk situations when children have avoiding patterns so that strategies can be created to prevent challenging behaviors. Encouraging parents and teachers to discuss a student’s sensory preferences across contexts can provide additional information that will assist in determining which situations are most overwhelming for a student and in planning more effective interventions.

The seeking quadrant correlation (.45) was in the fair range. For seeking responses, expectations and limitations of a particular context may contribute to the fair correlation between home and school. For example, when a child sings out loud at home, such behavior might be considered delightful. This behavior would be considered disruptive when exhibited in the classroom setting, resulting in a difference in reporting by parents and teachers. Some parents may observe their children in multiple unstructured contexts in which seeking behaviors are acceptable and encouraged. Other parents might provide greater amounts of structure that guide the child’s responses. By contrast, teachers may be more likely to notice seeking behaviors during structured classroom activities (such as seatwork, a time when students are expected to be more controlled) and less likely to take note of seeking behaviors during recess when all students

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<th>School Companion Quadrants</th>
<th>Sensory Profile Quadrants</th>
<th>Avoiding</th>
<th>Seeking</th>
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<tr>
<td>Avoiding</td>
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<td>Seeking</td>
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Note. The ns vary as a result of missing data.
*p < .05 level (one-tailed). **p < .01 level (one-tailed).
are more active. Alternatively, a child with seeking preferences may maintain self-control during the school day but exhibit more seeking behaviors when at home. As a result, the seeking patterns at home and school may require special attention to understand the impact of seeking on a child’s ability to participate in daily life. Discussion between parents and teachers provides a more comprehensive understanding of a student’s unique sensory processing needs related to seeking.

As shown in Table 6, the correlations using the corresponding seeking and avoiding quadrant scores were significant. However, we also found significant correlations between the School Companion avoiding quadrant score and the Sensory Profile seeking quadrant score (.42, p = .05), as well as between the School Companion seeking quadrant score and the Sensory Profile avoiding quadrant score (.46, p = .01). Both correlations fell in the fair range. Perhaps we found significant correlations across these quadrants because, according to Dunn’s Model of Sensory Processing (Figure 1), both avoiding and seeking patterns are active self-regulation patterns. Self-regulation is on a continuum and is defined as the strategy a person uses to manage his or her own needs and preferences (Dunn 2006a). Perhaps children’s need to control their own sensory input, whether it be to receive more (i.e., seeking) or less (i.e., avoiding), is reflected in these fair correlations.

The literature on multiple informants indicates that when parents and teachers are asked the same question, the answers are only slightly correlated, suggesting that each informant has a unique view (Achenbach et al., 1987; De Los Reyes & Kazdin, 2005; de Nijs et al., 2004; Kumpulainen et al., 1999). This literature also reiterates the importance of receiving information from both parents and teachers during the assessment process and the necessity of using context-specific assessments (Achenbach et al., 1987). In addition, having both home and school information provides an opportunity to identify successful strategies from parents and teachers that may be useful in the other context. Furthermore, using context-specific assessments (home and school versions) can provide a way to respectfully discuss what is happening at home and school without suggesting that either parents or teachers are providing an inaccurate perspective.

We know from the literature that children with autism have unique sensory processing patterns (Ermer & Dunn, 1998; Kientz & Dunn, 1997; Ornitz, 1974; Rapin, 1991; Tomchek & Dunn, 2007; Watling et al., 2001) when compared with those of typically developing peers. This study illustrates that for children with autism, behavioral responses to sensory experiences seem to be context-related, suggesting that simply knowing a child’s sensory processing patterns without considering contextual factors would be insufficient information for comprehensive intervention planning.

Implications for Occupational Therapy Practice

This study’s results support the need to assess sensory processing patterns in children with autism across contexts. The School Companion may be a valuable addition to the Sensory Profile measure in accomplishing this goal. Because both measures are built on the same conceptual foundation, therapists can examine the impact of sensory processing in everyday life from parents (using the Sensory Profile) and from teachers (using the School Companion). Having more pieces of the autism puzzle may help to provide more effective and individualized interventions. Having data to support the concept that the context may be a factor in one’s sensory processing provides a respectful way of discussing the similarities and differences between home and school as unique settings in which children can thrive.

Limitations and Future Research

This study’s small sample size limits its generalizability. However, the sample included children with a distribution of age, race, involvement in special education (i.e., number of services, frequency of teacher contact), and parental educational levels, increasing the confidence that results are relevant to a larger population of children with autism. Future studies should investigate additional patterns of sensory processing. In addition, future research using other samples of children and adolescents with disabilities would provide further information regarding the relationship between context and sensory processing.

Conclusion

This study’s findings provide initial evidence for the existence of a relationship between sensory processing and context for children with autism. Both similarities and differences in children’s reactions to sensory stimuli may indicate the influence of context on behavior. The relationships between home and school sensory processing patterns found in this study suggest that therapists must consider the context when assessing and treating the behaviors of children with autism. Comprehensive assessment should include information about behaviors both at home and at school to plan the most effective intervention strategies. ▲
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