The Scope of Occupational Therapy Services for Individuals With Autism Spectrum Disorders Across the Lifespan

Introduction

Occupational therapy is important in both assessment and intervention services for individuals with autism spectrum disorder (ASD). Autism currently affects 16.8/10,000 children, while another 45.8/10,000 children are affected by other pervasive developmental disorders (Fombonne, 2003). These numbers reflect a dramatic increase in the number of children diagnosed with ASD in the United States over the past ten years. The primary purpose of this paper is to define the role of occupational therapy and the scope of services available for individuals with ASD to persons outside of the occupational therapy profession. In addition, this document is intended to clarify the role of occupational therapy with this population for occupational therapy practitioners.1

Pervasive Developmental Disorders (PDD) is the diagnosis used in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition, text revision (DSM-IV-TR; American Psychiatric Association [APA], 2000) and in the International Classification of Diseases (ICD-10; World Health Organization, 1993) to describe children with a cluster of symptoms that vary widely in type and severity. The symptoms are grouped into three broad categories: (1) qualitative impairment in social interaction, (2) communication disorders, and (3) stereotyped, repetitive patterns of behaviors or a restricted range of interests. Depending on the level and distribution of impairment across these categories, a child can be diagnosed with Autistic Disorder, Asperger’s Disorder, or Pervasive Developmental Disorder-Not Otherwise Specified (PDD-NOS). All three of these diagnoses are usually included under the umbrella term “autism spectrum disorders” (ASDs). This practice statement addresses occupational therapy service provision for individuals with Autistic Disorder, Asperger’s Disorder, and PDD-NOS. These are considered medical classifications of the ASDs.

The Individuals with Disabilities Education Act (IDEA, Pub.L. 108–446) also includes autism as a disability category under which children might be eligible for special education and related services. The IDEA regulations define autism as “a developmental disability significantly affecting verbal and non-verbal communication and social interaction generally evident before age 3 that adversely affects a child’s educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or change in daily routines, and unusual responses to sensory experiences” (34 C.F.R., §300.7[c][1][i]). Under IDEA, occupational therapy is a related service, and must be provided to students with autism if those services will help the student to benefit from special education (Pub.L. 108–446, §602[a][6]). Because educational classification and identification criteria vary considerably from state to state, the reader is referred to the particular state policies and requirements.

Occupational therapy practitioners work with individuals with autism as well as parents, caregivers, educators, and other team members in a variety of settings, including the home, school, clinic, and community to assist the individual with ASD to engage in meaningful occupations.

Occupational Therapy Domain and Process

The domain of occupational therapy addresses engagement in occupations to support participation in context (American Occupational Therapy Association [AOTA], 2002). Occupations are defined as “activities . . . of everyday life, named, organized, and given value and meaning by individuals and a culture” (Law, Polatajko, Baptiste, & Townsend, 1997, p. 34). Occupational therapy services focus on enhancing participation in and performance of activities of daily living, instrumental activities of daily living, education, work, leisure, play, and social participation. For an individual with ASD, the domain of occupational therapy services is defined according to that individual’s goals and priorities for participation. Some examples of skills addressed by the occupational therapy practitioner are included in the following table.
<table>
<thead>
<tr>
<th>Domain of Occupational Therapy</th>
<th>Examples of Skills that may be Impaired in Individuals with ASD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-care (activities of daily living/instrumental activities of daily living)</td>
<td>Dressing, eating, toileting, hygiene, sleep/rest, communication device use, community mobility, meal preparation, fiscal management, shopping.</td>
</tr>
<tr>
<td>Education</td>
<td>Written language skills, computer use, assistive technology, skills needed to access to the curriculum, participation in classroom, and other school activities.</td>
</tr>
<tr>
<td>Leisure and Play</td>
<td>Identifying desired play or leisure activities, participating in play and leisure activities, making choices for free time.</td>
</tr>
<tr>
<td>Social Participation</td>
<td>Appropriate interactions with others (e.g., peers, adults, neighbors), social skills awareness, behavior management.</td>
</tr>
<tr>
<td>Work</td>
<td>Identifying and selecting work opportunities, preparing for interviews, developing skills related to job performance (e.g., punctuality, completion of work).</td>
</tr>
</tbody>
</table>

The process of occupational therapy service delivery for individuals with ASD includes evaluation, intervention, and assessment of outcomes. Throughout the process, collaboration with family, caregivers, teachers, and other team members is essential in understanding the daily life experiences of the individual and those with whom the individual interacts. Occupational therapy service provision focuses on salient outcomes that include, but are not limited to, the individual’s engagement in and performance of daily activities, personal satisfaction, adaptation, role competence, and quality of life. The needs of the family are also addressed.

The evaluation process is designed to gain an understanding of the individual’s challenges with engagement in occupations and activities. Research shows that individuals with autism may have difficulties in the areas of self-care, sensory modulation, self-regulation, praxis, motor imitation, functional and pretend play, social participation, education participation, and work performance (Baranek, 2002; Case-Smith & Bryan, 1999; Dawson & Watling, 2000; Kientz & Dunn, 1997; Libby, Powell, Messer, & Jordan, 1998; Rutherford & Rogers, 2003; Watson, Baranek, & DiLavore, 2003). These performance skills and patterns, client factors, and activity demands impacting occupation performance should be evaluated by an occupational therapist when working with an individual with ASD (Filipek et al., 2000). In addition, given the well documented difficulties that individuals with ASD have with generalization of skills, the environments in which occupational performance occurs is a vital consideration in evaluation. Recent textbooks have been developed to help guide the practice of occupational therapy with this population and include comprehensive chapters on evaluation of individuals with ASD (Frolek Clark, Müller-Kuhanek, & Watling, 2004; Tomchek, 2001).

The occupational therapy intervention process is based on the results of the evaluation and is individualized to foster occupational engagement and social participation through techniques and procedures directed at the client, the activity, and the environment. When providing services to clients with ASD, occupational therapy practitioners routinely include intervention in the areas of attention, behavior, social skills, sensory processing, motor function, play, and self-care skills (Case-Smith & Miller, 1999; Watling, Deitz, Kanny, & McLaughlin, 1999). Occupational therapy practitioners may use a variety of intervention approaches when working with children with ASD, all aimed at improving participation and performance in those areas identified as problematic for the individual. Effective programs for individuals with ASD described in the literature emphasize active engagement in activity (Dawson & Osterling, 1997; Dunlap, 1999; Hurth, Shaw, Izeman, Whaley, & Rogers, 1999; National Research Council, 2001; Strain, Wolery, & Izeman, 1998). The physical, social, and cultural environments in which an individual with ASD functions are considered in planning intervention.

Assessing the outcomes of service is an integral part of the occupational therapy process and is important for determining future actions with the client and to evaluate occupational therapy services. This involves monitoring the client’s responses to intervention, reevaluating and modifying the intervention plan, and measuring intervention success through outcomes that are important to the individual within the dynamic physical, social, and cultural contexts where functioning occurs. Progress is noted through improved occupational performance, client satisfaction, role competence, improved health and wellness, prevention of further difficulties, and improved quality of life. Occupational therapy practice for individuals with ASD is consistent with the World Health Organization’s (WHO, 2001) framework (i.e., the International Classification of Functioning, Disability and Health [ICF] and the National Research Council’s recommended practices for educating individuals with ASD (2001)).

**Supervision of Other Personnel**

The occupational therapist is responsible for all aspects of occupational therapy service delivery and is accountable for...
the safety and effectiveness of occupational therapy service delivery process. The occupational therapy assistant delivers occupational therapy services under the supervision of and in partnership with the occupational therapist (AOTA, 2004a).

Case Studies

The following chart provides examples of how the occupational therapy process can be applied to individuals with ASD across the lifespan.

<table>
<thead>
<tr>
<th>Case Description</th>
<th>Occupational Therapy Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quentin, a 2(\frac{1}{2})-year-old non-verbal boy with Autistic Disorder. He receives weekly OT as part of the statewide early intervention system in his home with parent present.</td>
<td>• Assess Quentin’s self-regulation, play skills, and social interaction skills during daily routines in the natural environment. Screen self-care and gross motor abilities. • Identify triggers for temper tantrums and the function of these behaviors (e.g., escape, attention) based on observation and parent input. • Explore, identify, and implement calming strategies incorporating parental input, sensory strategies, environmental modification, and behavioral methods, as appropriate. • Assist parent in identifying triggers for temper tantrums and incorporating behavior management and calming strategies into the family’s daily life activities. Include strategies for Quentin to self-regulate so he can calm or arouse himself, as appropriate. • Provide direct/hands-on intervention to address difficulties in play and peer interaction. Consult with parent regarding methods for supporting Quentin in his daily play activities (e.g., peer play, independent play). • Address development of gross motor skills including coordination, motor planning, initiation, execution, and completion of activities for success while playing on playground.</td>
</tr>
<tr>
<td>Michael is a 5-year old boy with PDD-NOS. He is receiving OT and speech therapy services in a clinic setting and a behavioral program in the home.</td>
<td>• Assess Michael’s self-care abilities, play skills, self-regulation, sensory processing abilities, and motor skills during his daily routine and in his natural environments. Screen social interaction. • Identify circumstances related to Michael’s over-stimulation, develop hypotheses about relationship between overstimulation and performance delays, test hypotheses, identify and implement strategies to prevent overstimulation and support performance. • Explore, identify, and implement strategies to regulate arousal and improve underlying sensory processing. Teach Michael strategies to self-regulate. • Work with Michael’s parents to prevent episodes of over-stimulation and to implement strategies that support self-regulation when overstimulation does occur. • Provide direct intervention to address deficits in self-care, motor skills, and play abilities. • Collaborate with speech-language pathologist and parents to expand repertoire of food textures and thicknesses. • Consult with and train the behavioral therapist in the appropriate use of sensory and behavioral strategies for regulation and developmentally appropriate gross and fine motor activities for Michael. • Work with parents on strategies to prepare Michael for community outings and social events.</td>
</tr>
<tr>
<td>Jackson is an 8-year-old boy with Asperger’s Disorder. He is in the 2nd grade at his neighborhood elementary school and receives school-based OT services to support Jackson’s written school work and peer interaction. Social Participation: Jackson has difficulty making friends and interacting socially with peers. He talks non-stop about computers. He has difficulty playing with other children. He is very literal about rules and does not read social cues well. His teacher would like him to learn to go with them to restaurants and to attend neighbor- hood social functions such as children’s birthday parties. Sensory/Motor: Jackson is experiencing difficulty with handwriting.</td>
<td>• Provide Jackson’s teacher with strategies for helping him to identify and practice appropriate behavior and topics for discussion with Jackson’s classmates. • Support the teacher in establishing a peer buddy system to build social-communication skills during naturally reinforcing activities in the lunchroom, in corridors, and on the playground. • Train in classroom computer use as an alternative to handwriting. Jackson can also continue to practice handwriting skills, and a decision can be made as to which system works best for him. • Initiate a “computer club” with two other boys in the second grade to talk about computers, practice computer skills, and play games. • Work with Jackson and one other child on T-ball skills during recess. • Consult with the Cub Scout den-mother and parent to provide training and support as necessary.</td>
</tr>
<tr>
<td>Luke is an 18-year-old male with autism. He is in a self-contained high school class for adolescents with moderate developmental disabilities. Luke receives OT services to support his transition program in the areas of pre-vocational skills, behavior skills, community mobility and independent living skills.</td>
<td>• Assist teacher or speech pathologist with a weekly social skills group to help Luke identify and develop socially-appropriate behavior, recognize social cues, and develop strategies for managing social situations. • Consult with the owner of sporting goods store where Luke will work in the coming semester regarding motor difficulties and strategies for avoiding handling of fragile items or working in high traffic areas. • Identify job skills Luke will need. Provide direct intervention to facilitate development of these skills. Collaborate with the educational team to facilitate further development of job skills and self-management related to employment. • Work with Luke to develop skills in using a hand-held electronic cueing device with digital pictures and auditory cues to guide him through his job routine. • Train the employer in how to use visual supports to show Luke what to do rather than rely on verbal communication. • Provide training in how to use public transportation. • Meet with Luke and his parents regarding transition to adult living situation and lifestyle choices.</td>
</tr>
<tr>
<td>Louise is a 32-year-old female with autism. She recently began living in a group home that provides 24-hour supervision. An OT consults bimonthly. Communication: Louise is verbal but difficult to understand. Mental Functions, Behavior, and Leisure: Louise has anxiety and poor behavioral regulation that often results in aggressive behaviors. These behaviors have increased since the move to the group home. Her caregivers would like her to be at ease in her new home and participate with the other residents in leisure activities and community outings.</td>
<td>• Consult with the residential staff and provide training in the following areas: sensory strategies to reduce the high arousal associated with anxiety; behavioral strategies to help reinforce positive behavior and compliance; educational strategies such as forward and backward chaining, visual supports, and environmental structure to support success during everyday activities, leisure, and community outings. • Identify leisure activities in which Louise expresses interest. Monitor Louise’s participation in these activities through weekly consultations with the staff and provide training, as needed, to facilitate further engagement and participation.</td>
</tr>
</tbody>
</table>

Sensory/Motor: Jackson is experiencing difficulty with handwriting.

Motor Performance: Gross and fine motor skills are delayed.

Work: Luke, his teacher, and his parents are beginning to plan for the transition from school to supported work and living following high school.

Case Description

Self-Care: Michael has difficulty with self-care skills (eating, dressing, and toileting) and selecting and engaging with play materials.

Sensory Functions and Social Participation: Michael has many sensory issues, including tactile, auditory, and oral sensitivities. When over-stimulated, he rocks back and forth and hums. His parents would like him to be able to go with them to restaurants and to attend neighborhood social functions such as children’s birthday parties.

Motor Performance: Gross and fine motor skills are delayed.

Cognition and Leisure: Luke is able to do some basic reading and math and is very interested in sports.


Social Participation: He has difficulty with social interactions.

Work: Luke, his teacher, and his parents are beginning to plan for the transition from school to supported work and living following high school.

Louise has anxiety and poor behavioral regulation that often results in aggressive behaviors. These behaviors have increased since the move to the group home. Her caregivers would like her to be at ease in her new home and participate with the other residents in leisure activities and community outings.
References


Authors

Renee Watling, PhD, OTR/L
Scott Tomscek, MS, OTR/L
Patti LaVesser, PhD, OTR/L
for

The Commission on Practice

Sara Jane Brayman, PhD, OTR/L, FAOTA, Chairperson

Adopted by the Representative Assembly 2005C220