

# Occupational Therapy Interventions for Adolescents With Autism Spectrum Disorder

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Evidence Connection articles provide a clinical application of systematic reviews developed in conjunction with the American Occupational Therapy Association's (AOTA's) Evidence-Based Practice Project. In this Evidence Connection article, we describe a case report of an adolescent with autism spectrum disorder. The occupational therapy assessment and treatment processes for school, home, community, and transition settings are described. Findings from the systematic reviews on this topic were published in the September/October 2015 issue of the *American Journal of Occupational Therapy* and in AOTA's *Occupational Therapy Practice Guidelines for Individuals With Autism Spectrum Disorder*. Each article in this series summarizes the evidence from the published reviews on a given topic and presents an application of the evidence to a related clinical case. Evidence Connection articles illustrate how the research evidence from the reviews can be used to inform and guide clinical decision making.

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## Clinical Case

Jimmy, a 17-yr-old adolescent with autism spectrum disorder (ASD), is the middle child of three children of a single mother who works outside the home as a medical office manager. Jimmy is a junior at a public school in a general education curriculum, although he receives special education supports under ASD eligibility to facilitate social and academic participation. He is in the culinary club at school, but he often forgets to attend the events and meetings. He likes to write down recipes, but he has difficulty with independent meal preparation. He has difficulty making friends as well as organizing and managing his time; he also becomes very focused on specific tasks, which depending on the context can be a strength or challenge. He received occupational therapy services during elementary school and middle school, and his mother is requesting an occupational therapy evaluation by the school-based therapist; the team agrees to assist Jimmy with transitioning after high school.

## Occupational Therapy Assessments and Findings

Nadia, the school-based occupational therapist, completed an occupational therapy profile with Jimmy using the Canadian Occupational Performance Measure (Law et al., 2005). Four main performance areas were identified as concerns and priorities: daily living occupations (bathing and dressing self), meal preparation, developing social skills to make friends, and finding a job. The Adolescent/Adult Sensory Profile

(Brown & Dunn, 2002) revealed that Jimmy scored much higher than most people on Low Registration, higher than most people in Sensory Seeking, and lower than most people on Sensory Sensitivity and Sensory Avoiding.

Other assessments included the Parent and Teacher forms of the Behavior Rating Inventory of Executive Functioning (BRIEF; Gioia, Inquish, Guy, & Kenworthy, 2013) and the Career Interests, Preferences, and Strengths Inventory (CIPSI; Clark, Synatschk, Patton, & Steel, 2012). Results indicated strengths in Jimmy's emotional and behavioral regulation (90th percentile on the composite Behavioral Regulation Index). His score in the 20th percentile on the Metacognition Index of the BRIEF reflected particular challenges on the Working Memory, Plan/Organize, Organization of Materials, and Monitor subscales. Findings on the CIPSI indicated Jimmy preferred careers in the food resources and hospitality/tourism clusters, with a common theme of occupations in restaurant contexts.

Nadia also reviewed the current transition plan and the Transition Planning Inventory—Second Edition (Clark & Patton, 2014) that was completed at age 16 yr. Jimmy's goals of independent living, vocational training, and full- or part-time employment served as the focus of intervention planning. Nadia reviewed the evidence from the September/October 2015 issue of the *American Journal of Occupational Therapy* (Kuhaneck & Watling, 2015) and also read the recommendations from the *Occupational Therapy Practice Guidelines for Individuals With Autism Spectrum Disorder* (Tomchek & Patten Koenig, 2016). She found the following evidence to use as she planned her intervention:

- Strong evidence for group-based social skills training to enhance social skills
- Strong evidence for video modeling, technology-enhanced visual supports, and prompting to increase functional independence in activities of daily living (ADLs) and work performance
- Moderate evidence supporting cognitive-behavioral approaches to improve function in ADL and instrumental activity of daily living (IADL) occupations
- Promising evidence to support the use of interest-based clubs to improve social engagement and interaction.

## Occupational Therapy Intervention

Nadia provided individual sessions 3 times per month that included instructions in executive function such as organization and time management skills. Video modeling was incorporated to improve ADLs and IADLs and prevocational skills to support future employment. She also consulted

with the home economics teacher who ran the culinary club. Strategies included use of visual supports for Jimmy during the culinary lessons. The culinary club provided an important opportunity to explore future employment options, leverage Jimmy's interests, and contribute to his overall well-being (Hough & Koenig, 2014a, 2014b).

### *Sample Intervention 1*

Jimmy expressed interest in the culinary club but had difficulty organizing himself to regularly attend. On the basis of evidence supporting the use of technology (Gentry, Lau, Molinelli, Fallen, & Kriner, 2012), Nadia and Jimmy used an app on his iPhone to improve his organization and independence. They found the "Remember the Milk" app, and Nadia coached Jimmy in setting it up and included reminders and tasks related to culinary club. Nadia also had Jimmy complete a Modified Barth Time Construction Assessment to have Jimmy gain insight into how he was using his time and how culinary club could fit into his schedule.

### *Sample Intervention 2*

Nadia worked with the home economics teacher to get lesson plans of the simple meal preparation activities the club would be doing. She discussed using Jimmy's strength and interest in recipes and planned on Jimmy being responsible for handing out the weekly recipe to the group. Having read the evidence that technology-enhanced visual supports improved the amount of steps one could do independently (Bereznak, Ayres, Alexander, & Mechling, 2012), Nadia worked with Jimmy to use simple iPhone prompts to increase Jimmy's independence with meal preparation. She also coached the home economics teacher and Jimmy to solve issues related to improving his organization and safety.

### *Sample Intervention 3*

Nadia worked with Jimmy to set specific goals for ADL and IADL performance using the *Cognitive Orientation to daily Occupational Performance* (CO-OP) approach and instructed him in the Goal-Plan-Do-Check method with visual supports for his ADLs and IADLs with video modeling related to his morning routine that he was instructed to use at home. The video modeling showed the sequencing of a teenager's morning routine including hygiene, shaving, and dressing appropriately for the weather because studies have shown that video modeling (Phelan, Steinke, & Mandich, 2009; Rodger, Ireland, & Vun, 2008; Rodger, Springfield, & Polatajko, 2007) has positive outcomes in skill development, including improved morning routines.

## Sample Intervention 4

Nadia worked with three other boys in the social skills group that she developed (Bellini, Peters, Benner, & Hopf, 2007; Chan et al., 2009) in which Jimmy was also a participant. The group also included two peer tutors to incorporate peer-mediated interventions (Chan et al., 2009; Zhang & Wheeler, 2011). The group met during study hall for 10 wk, with each member taking the lead in selecting the topic, organizing the daily activity, and facilitating the group discussion and task participation. Nadia used guided questioning and ongoing feedback to provide correction, prompts, or redirection. These strategies have shown positive outcomes to initiate interaction, respond socially, read nonverbal communication, and sustain interaction on a variety of topics.

## Conclusion

Through the use of evidence-based, occupation-focused, and client-centered occupational therapy interventions, Jimmy was able to increase his attendance at the culinary club from 25% in the previous semester to 90% in the current semester. He can now independently prepare a meal and has been assigned to an internship during the school day in the food industry. He was paired on the internship with a member of the social group because they began to form a friendship around similar interests, restaurants, and travel. ▲

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