

CONTINUING EDUCATION ARTICLE

Occupational Therapy and Autistic Females

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ABSTRACT

As a spectrum disorder, autism varies from person to person and demonstrates different characteristics between males and females. Autistic females are less frequently identified, and knowledge surrounding their experience is limited. It is critical that providers have a strong understanding of the experience of autistic females. This article discusses common occupational performance concerns of autistic females, provides considerations for evaluation, and describes several evidence-based intervention strategies that have been studied with autistic females.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. Describe the differences in symptoms of autistic females and autistic males that may affect occupational engagement, within the context of heterogeneity across the autism spectrum
2. Identify considerations for compiling an occupational profile and completing the evaluation process with autistic females

3. Determine occupational therapy interventions that will support occupational participation of autistic females.

INTRODUCTION

Approximately 1 in 54 children in the United States has a diagnosis of autism spectrum disorder, with an average male-to-female diagnosis ratio of approximately 4.3 males for every 1 female (Maenner et al., 2020). However, there are factors that may lead to fewer females receiving an autism diagnosis, such as diagnostic methodology that was established with a predominantly male sample, as well as fewer autistic females being included in research studies (Frazier et al., 2014; Halladay et al., 2015; Hiller et al., 2014; Ratto et al., 2018). Autistic females are often diagnosed later than autistic males (Begeer et al., 2013). As a result of these differences in intervention needs in autistic females compared with autistic males, it is essential to be aware of evidence-based intervention strategies for autistic females. The purpose of this article is to provide information on how differences between autistic females and autistic males may require additional consideration surrounding evaluation and intervention and to describe currently available evidence-based intervention strategies that may apply to autistic females.

OCCUPATIONAL PROFILE/ASSESSMENTS

The development of an occupational profile is a critical component of the occupational therapy evaluation and intervention process (American Occupational Therapy Association [AOTA], 2020). Outcomes of occupational therapy vary greatly but include occupational performance, improvement, enhancement, prevention, health and wellness, quality of life, participation, role competence, well-being, and occupational justice (AOTA, 2020). It is important to keep in mind that autistic females and autistic males might experience varied occupational performance concerns, and that it is important to remain consistent in providing individualized, client-centered care. Several assessments that are appropriate and recommended for use within the autistic population, including autistic females, can be found in Table 1.

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OVERLAP AND DIFFERENCES IN SYMPTOM PRESENTATION IN AUTISTIC FEMALES COMPARED WITH AUTISTIC MALES

It is important that as part of client-centered care, occupational therapy practitioners focus on the individual client but are aware of the potential for differences in autistic females and males. Although there is substantial overlap between autistic females and males in a number of domains (i.e., social communication symptoms [Briot et al., 2020; Kelly et al., 2018], executive function [Gardiner & Iarocci, 2018], and quality of life [Ayres et al., 2018; Tobin et al., 2014; van Heijst & Geurts, 2015]), autistic females may show a reduction of externalizing signs of these behaviors due to camouflaging or masking (imitating peer behavior to make their autism less obvious) in an effort to “fit in,” a common compensatory strategy for autistic individuals (Hull et al., 2017; Livingston et al., 2020; Tierney et al., 2016). Although language processing difficulties may be more prevalent in autistic females in childhood (Øien, 2018), autistic females demonstrate lower repetitive behavior frequency (Kaat et al., 2021; Szatmari et al., 2011), and clinicians may perceive autistic females’ restricted and repetitive behaviors as more subtle (Jamison et al., 2017; Mandy et al., 2012). Because restricted and repetitive behaviors are a core feature of the diagnostic criteria for autism spectrum disorder (American Psychiatric Association, 2013), more subtle or fewer restricted and repetitive behaviors, in addition to the aforementioned compensatory strategies, could contribute to lower diagnostic rates and/or later diagnoses for autistic females (Kirkovski et al., 2013).

Another potential gender difference is that autistic females may be more likely to present as having anxiety or depression compared with autistic males, whereas autistic males may be more likely to exhibit externalizing behaviors (Mandy et al., 2012). This reduction in externalizing behaviors and increase in internalizing symptoms mirrors gender differences observed in non-autistic populations (Van Oort et al., 2009). While one study found no gender differences in internalizing or externalizing behaviors in a sample of 6- to 12-year-olds (Nasca et al., 2020), depressive symptoms were more common in autistic females, especially in adolescence (Oswald et al., 2016). Therefore, the presence of less noticeable internalizing mental health concerns should be considered when working with an autistic female client (particularly during adolescence), and it may be beneficial to use assessment tools that focus more on internal states than on external behaviors.

In young children (average age of 28 months), autistic females demonstrated decreased motor skills compared with autistic males (Carter et al., 2007). Gender differences were not found in auditory sensitivities and gross motor skills in school-aged children (Mandy et al., 2012). School-aged autistic females demonstrated reduced sensory symptoms (Øien et al., 2018) and improved fine motor skills (Mandy et al., 2012) compared with autistic males, suggesting that autistic females may not be as likely to be referred for sensory and motor interventions. The total number of autistic participants in these studies had an average age of 5.77 years (Øien et al., 2018), and the autistic female participants had an average age of 10.2 years (Mandy et

Table 1: Autism-Related Assessment Tools

Name of Tool	Publisher
Canadian Occupational Performance Measure (COPM)	COPM, Inc.
Sensory Profile-2	Pearson
Sensory Processing Measure	WPS
Bruininks-Oseretsky Test of Motor Proficiency, 2nd Edition (BOT-2)	Pearson
Miller Function and Participation Scales (M-Fun)	Pearson ^e
Pediatric Evaluation of Disability Inventory-Computer Adaptive Test (PEDI-CAT)*	Pearson
Pediatric Quality of Life (PedsQL 4.0)	Mapi Research Trust
World Health Organization Quality of Life-Brief Version (WHOQOL-BREF)	World Health Organization
World Health Organization Disabilities Module	World Health Organization
Autism Quality of Life Measure (ASQoL)	Newcastle University Autism Research Team
Weekly Calendar Planning Activity (WCPA)	AOTA Press

***Note: The Pediatric Evaluation of Disability Inventory-Patient Reported Outcome is currently in development.*

al., 2012). Of note, autistic females demonstrate higher sensory symptoms in self-reported measures occurring in adulthood (Lai et al., 2011). As such, with these differing results, age may play a role in the degree of participation impacts for these areas.

Because client-centered care is a central tenet of occupational therapy practice (AOTA, 2020), it is important to assess the particular needs of each individual client, and it should not be automatically assumed that sensory- or motor-based interventions will benefit all individuals across the autism spectrum.

EVIDENCE-BASED INTERVENTIONS FOR AUTISTIC INDIVIDUALS

Occupational therapy interventions include occupations and activities, interventions to support occupations, education and training, advocacy, group interventions, and virtual interventions (AOTA, 2020). It is important to note that although specific intervention areas are described in this article, this is not an all-encompassing list, nor should it be used as an exclusive list for determining intervention priorities.

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The following sections discuss evidence-based interventions that are supported for use with autistic individuals (as studied with samples that included autistic females as participants). However, to the best of our knowledge, none of the interventions was developed in collaboration with autistic females, which is a key area for future research.

Ayres Sensory Integration (ASI)[®]

A systematic review completed by Schoen and colleagues (2019) examined ASI as an evidence-based intervention for autistic children between the ages of 4 and 12 years. Unfortunately, this systematic review did not include the proportions of males to females in the samples of included studies. It is important to note that the evidence-based nature of ASI applies only to this specific methodology, not to sensory interventions as a whole, which continue to need more rigorous research to qualify as evidence-based interventions. In line with the Choosing Wisely[®] campaign (ABIM Foundation, 2018), sensory-based interventions (in this case, ASI) should only be addressed when a client presents with documented and assessed sensory processing differences that affect occupational performance. In addition, occupational therapy providers should ensure adequate training in ASI to provide competent clinical care and ensure that their interventions are focused on occupational performance.

Mindfulness Interventions

Hartley and colleagues (2019) published a meta analysis of mindfulness interventions for autistic children, adults, and caregivers of autistic individuals. Results of this meta analysis were promising: All participants who received mindfulness interventions had improved well-being. Importantly, the interventions were either mindfulness-based stress reduction (Kabat-Zinn, 1990) or mindfulness-based cognitive therapy (Segal et al., 2004), and this should be considered in terms of an evidence-based mindfulness intervention. Occupational therapy providers can use mindfulness interventions in the context of occupation to promote well-being.

Let's Get Organized

The Let's Get Organized (LGO; Holmefur et al., 2019) program is a two-phased, 16-session intervention to promote development in the areas of time management, planning, and organization. Phase 1 of the intervention (10 sessions) focused on time management. Phase 2 of the intervention focused on organization and planning. In this study, 15 out of 55 total participants were autistic. The results of this study indicated that time management skills improved, as did satisfaction in completing daily occupations. Time management skill improvements were still present at testing 3 months post-intervention. These improvements are important to occupational engagement and could be relevant to goals related to work, leisure, household management, school, and beyond.

Cognitive Orientation to Daily Occupational Performance

The Cognitive Orientation to daily Occupational Performance (CO-OP) approach is a metacognitive intervention emphasis-

ing client-centered and client-identified goals (Polatajko et al., 2001). CO-OP integrates a global strategy (Goal-Plan-Do-Check) and numerous domain-specific strategies. Research on CO-OP and autism is promising, particularly for improving motor skills (Rodger & Brandenburg, 2009). Autistic individuals reported that CO-OP promoted self-reflection and self-awareness, accountability, a sense of belonging, and a focus on action, and that the variety of learning tools were beneficial (Wilson et al., 2018). However, both studies had small sample sizes, which is a limitation. The CO-OP approach has a number of courses available for continuing education, which clinicians can take to become a certified CO-OP therapist and ensure treatment fidelity.

Mentoring

Siew and colleagues (2017) developed a peer mentoring group for autistic college students, matching them with non-autistic peers with the goals of improving well-being, academic success, and college retention through weekly hour-long meetings over a semester. Post-intervention scores indicated significant improvement in positive social support and decreased communication apprehension, and participants expressed satisfaction with the program.

Wentz and colleagues (2012) developed an 8-week Internet support program used by 10 individuals with a variety of conditions that included autistic participants (15 to 26 years old). In this program, individuals self-selected areas for improvement, such as study or daily living skills. This program improved both self-esteem and quality of life for participants (Wentz et al., 2012).

Curtin and colleagues (2016) developed a 6-month individualized mentoring program matching autistic teens ages 13 to 18 years and young adult mentors who were typically in college or graduate school. Pairs met weekly for 2 hours to work on goals related to self-esteem, relationships, independent living skills, community involvement, and work or school. Although statistical analysis was prevented by the small sample (N=9), participants indicated general improvements in quality of life, self-esteem, and social skills, as well as satisfaction with the mentoring program.

Nadig and colleagues (2018) developed a transition program for autistic adults ages 18 to 29 years, focused on social communication, self-determination, and working with others, with groups taking place for 2 hours per session, once per week, for 10 weeks. Participants all demonstrated improvement in social skills, self-determination, and quality of life. Peer mentoring can be an important consideration for occupational therapy providers, such as when clients are approaching discharge, as mentoring allows for continuation of skill development outside of structured services.

EVIDENCE-BASED INTERVENTIONS FOR AUTISTIC FEMALES

Menstruation

Larson and colleagues (2021) found that fewer than 20% of occupational therapy providers address menstruation, with only 3% of occupational therapy curricula including information on puberty training. Behavioral, social learning, and parent

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training are the most common intervention approaches used for menstruation (Larson et al., 2021). Cridland and colleagues (2014) described several strategies for addressing menstrual care and hygiene with autistic females, including being factual about what is happening and why, explicitly explaining that menstruation is considered private, and developing hygiene routines, such as indications that a pad needs to be changed, and how often to do so. Eriksen (2016) indicated that menstrual cycle symptoms can result in stronger behavioral and emotional symptoms in autistic females than non-autistic females. It is important that training, strategies, and recommendations focus on providing dignity and respect, and that these are developed on an individual basis, rather than in a class, because class-based instruction can be difficult for some autistic females (Cummins et al., 2020; Wilbur et al., 2019). Cummins and colleagues (2020) explained that autistic females should be taught how to put on and take off menstrual pads prior to their first menses.

Cummins and colleagues (2020) support Cridland et al.'s (2014) recommendation of the need for open communication and using proper language for both genitalia and the menstrual cycle. They also recommend the use of *messy* versus *dirty*, because *dirty* can have negative connotations that should not be aligned with menstruation. Cummins and colleagues described a number of strategies for maintaining proper menstrual hygiene, such as calendars, vibrating watches to remind an autistic female when she might need to change her menstrual product, and step-by-step instructions for how to change her selected product, because there needs to be a successful match of menstrual product to consumer use (Wilbur et al., 2019). Amaze.org provides short videos geared toward a variety of ages on many topics, such as menstruation, menstrual products, and reproduction.

Occupational therapy practitioners can support their autistic clients in learning about menstruation in an appropriate, individualized manner, whether through introducing videos and options for menstrual products prior to a client's first period, supporting families with developing routines related to changing menstrual products, or addressing client concerns of menstruation side effects, such as cramping or mood changes, so clients can improve their occupational participation by addressing these challenges.

Dating and Relationships

Dating and relationships can be a particularly difficult area for autistic females. They are more likely to report more sexual experiences than autistic males, with a risk of negative sexual experiences due to unwanted sexual advances or behaviors (Pecora et al., 2019), despite a stereotype of asexuality (McClanahan, 2006). Mothers report that their autistic adolescent daughters appear to have little interest in romantic relationships, that boundaries can become a place for misunderstandings, and that their daughters find it difficult to recognize flirting (Cridland et al., 2014).

It is important to recognize the risk of sexual exploitation, a noted concern by several mothers (Cridland et al., 2014), and it is important to recognize the need for individualized conver-

sations and education in this area for autistic females (Travers & Tincani, 2010) during occupational therapy services, such as how to recognize unwanted sexual advances or exploitation, and self-advocacy.

Friendships

Sedgewick and colleagues (2019) found that autistic and non-autistic females have similar friendships and social experiences, although autistic girls demonstrate more conflict in their friendships, which is difficult to manage. This finding does not occur in autistic males—another difference between autistic females and autistic males. The authors of this article do not necessarily recommend social skills interventions (for further reading, we recommend a blog post by Julie Roberts, MS, CCC-SLP, of the Therapist Neurodiversity Collective, “Nothing About Social Skills Training is Neurodivergence-Affirming—Absolutely Nothing,” <https://therapistndc.org/nothing-about-social-skills-training-is-neurodivergence-affirming/>).

Decreased friendships may result from stigma or autistic females having different interests than their non-autistic female peers, leading to autistic females masking (Cridland et al., 2014). Autistic females express that back-and-forth conversations, passive personalities, and their desire to maintain consistency and routines make friendships particularly difficult (Kanfischer et al., 2017), which affirms the importance of promoting self-esteem, identity, and autonomy in opportunities to collaborate with autistic females during the occupational therapy intervention process.

Girls Night Out

The Girls Night Out (GNO; Jamison & Schuttler, 2017) program emphasizes social and self-care development for autistic adolescent females, with non-autistic female peers serving as mentors. GNO sessions take place over 12 to 16 weeks, and each session is approximately 2 hours in length. Curriculum domains include relating to others, self-care, and self-determination in the context of social competence and self-perception. Autistic adolescent females 14 to 19 years of age indicated enjoyment of the program, felt that their social competence improved, indicated improved quality of life, and perceived that their internalizing symptoms had decreased. Further research is necessary, though the program may be advantageous for use in the clinic setting and is available to purchase through the University of Kansas Medical Center. Occupational therapy providers may find the program appealing, with its multiple-domain nature and the autistic females' enjoyment of it, which may lead to better client engagement.

Case Example 1: Angelina

Angelina was an 11-year-old female diagnosed with attention-deficit hyperactivity disorder (ADHD) 5 years earlier and autism spectrum disorder 3 years earlier. Angelina's primary occupational performance challenges were a result of executive functioning difficulties, namely time management, planning, shifting attention, and self- and task-monitoring, as well as

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internalizing mental health concerns. Visual prompts had been implemented in the past, but their impact was inconsistent, mainly when there were exceptions to a rule, such as needing to add an extra step to a task or feeling the need to do an additional unlisted task.

Angelina was particularly intent on her belongings being tidy, leading to delays in being ready for school in the morning. In addition, if she was asked to pause in the middle of a task before she could complete it to move to another activity, Angelina demonstrated anxiety, such as apologizing (something she does when demonstrating hypervigilance in response to anxiety, per discussion with occupational therapist), a distressed facial expression, and attempts to rapidly complete the initial task. During the coronavirus pandemic, Angelina attended in-person school 5 days per week, with a 2-week shift to virtual school occurring when any school community member had contact with a coronavirus case or after all holidays. Although apprehensive at the start of the 2020–2021 school year, particularly about wearing a mask all day, Angelina was happy to return to school after a challenging time with virtual school in spring 2020. Angelina did not receive any school-based services but had an accommodation plan through her school to provide supports in the areas of weekly individual reading and math instruction, and the option to take tests in a separate room with extra time.

Angelina had 14 students in her class. There were three instances of a shift to virtual instruction in the 2020–2021 school year. The first shift was particularly challenging, resulting in her occupational therapy services being scheduled during her virtual school day. This schedule was followed in subsequent virtual instruction shifts. Both Angelina and her parents were emphatic about the benefits of having this support. Angelina's school used the Google Classroom platform and Zoom for virtual school. Each individual class (e.g., math, science) had its own "classroom" with Zoom links and subject work posted in the specific classroom, with formatting depending on the individual instructor.

At the start of the first virtual school occupational therapy session, Angelina and her parents expressed that it was challenging to know what she needed to do and when to do it. During this session, a number of problem-solving strategies for work completion were developed, but two were found to be most successful. Each morning of virtual school, Angelina was asked to log into her Google Classroom account and go into each subject classroom. Angelina had a smartphone for emergencies and was able to get parental permission to use the reminder feature on her phone for meeting times. Angelina independently came up with this idea, adding in her reminders each morning for all class Zoom meetings that day, including setting the reminder for a few minutes before the class was to begin and including the class subject.

The second strategy developed by Angelina and the OT was a written daily list of each subject, and what Angelina needed to do for that class. During the second week of the first virtual school 2-week period, Angelina was able to make this task list

independently on 2 out of 5 days and add Zoom meetings to her phone for all 5 days. This supported Angelina's ability to manage her anxiety and promote concentration during the school day through providing more predictability and foreshadowing.

To address Angelina's developing social skills, especially recognizing when comments were appropriate to share rather than keeping them to herself, Angelina and her OT discussed the "mute" feature on Zoom, so Angelina could focus on attending to instruction, rather than monitoring herself when she perceived that peers were "being annoying." This strategy was effective, and Angelina was able to rapidly generalize this for independent use.

More recently, Angelina, her mother, and her OT began discussions on puberty, particularly in consideration of menstruation and mood changes. Angelina had previously demonstrated emotional responses to any conversation about this area. She often struggled when things were messy, out of place, or related to bodily fluids. As such, menstruation became a fearful concept for Angelina. As a team, Angelina, her mother, and her OT discussed how long her period might last per cycle, the different menstrual products Angelina could use once she began menstruating, and how often she might need to change each product and its "perceived cleanliness factor," as described by Angelina. Although Angelina had not made a final decision on what product she might want to use initially, she narrowed down her choices and had a plan for what would happen if she got her first period at school.

To support Angelina further, her mother purchased a notebook that Angelina could use to write any questions she had, and her mother would write back. Angelina could use this for discussing other things that she felt more comfortable writing than talking about, such as friendship difficulties and things that upset her at home.

Case Example 2: Lauren

Lauren was a 16-year-old autistic female, diagnosed with autism spectrum disorder 10 years earlier, as well as generalized anxiety disorder diagnosed 8 years earlier. Lauren's primary occupational performance challenges were a result of social anxiety, and executive functioning and sensory processing difficulties. More specifically, it was difficult for Lauren to manage executive functioning, sensory processing, and social demands when socializing with peers in a group setting.

Lauren was working on developing daily living skills, including some prevocational skills to transition into the community in another 2 years when she completed high school. Lauren was not part of any social clubs in school and was hesitant to participate in extracurricular activities. She had received support from an individualized education program (IEP) throughout her years in public school and had made great progress with therapy and counseling. Lauren's current IEP emphasized transition planning for after high school. Lauren accommodated her sensory processing and executive functioning issues through various strategies, including using apps on her smartphone.

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The previous spring, Lauren had finally started adjusting to her high school, but because of the coronavirus pandemic, her school transitioned to online instruction. Without her routine and daily structure, her ability to cope with anxiety, executive functioning, and sensory processing difficulties began to present a challenge. Lauren was referred to outpatient occupational therapy during the summer by her neuropsychologist to reestablish her skills, address concerns with her education on a virtual platform, and continue developing her transition skills.

Lauren was familiar with her treating OT from the school setting and had previously used visual cognitive strategies and individualized mentoring to promote her success. Independent living skills (as a part of transition planning) was a novel area of intervention for Lauren and her family, as this had not been a priority area during past occupational therapy services.

Lauren indicated that she would like to attend college for an associate's or bachelor's degree and live on her own. The COPM was used to determine Lauren's self-rated top five intervention priorities, resulting in the occupations of cooking, shopping, socializing with peers, driving, and applying for college. In consideration of her current performance of these tasks, Lauren rated her cooking at a 5, shopping at a 4, socializing with peers a 3, and both driving and applying for college at a 1, with a total performance score of 2.8, indicating difficulty in occupational participation. Her satisfaction score for cooking and shopping were both a 3, and the remaining satisfaction scores were a 1, which indicated a satisfaction total score of 1.8, or low satisfaction with her current performance. Lauren indicated a desire to prioritize cooking and shopping, with sessions being a mix of telehealth and face-to-face visits.

After detailed performance analysis of each task through semi-structured interviewing with Lauren and her parents, Lauren was able to identify some mindfulness-based cognitive strategies (Segal et al., 2004), along with environmental modification of her space at home, and strategies to break down the shopping list to help her achieve the goals she wished to accomplish. Parent support and coaching were instrumental in her progress.

With therapist mentoring (Siew et al., 2017), Lauren indicated cooking as her top preferred occupation and priority. She planned to make a recipe book with five menus each for lunches and dinners, which she could select to cook for herself and her family. During each session, she would select a menu and prepare the shopping list to use at the store with her parents. At the following session, she would prepare one item from the menu to evaluate readiness and implement problem-solving strategies, such as simplifying the written instructions, color-coding measurements, and labeling drawers to decrease her frustration in looking for items.

Lauren found that a picture system was most helpful to follow the recipe, so laminated cards for ingredients were placed in a binder for each recipe and cards were removed as needed to create her shopping list. Lauren continued to have difficulty completing grocery shopping independently but could manage

a list of up to 10 items independently, with her parents there solely for support. Lauren continued to develop strategies for this area with her OT.

Most recently, Lauren prepared a chicken pot pie for six people after a trial run during an occupational therapy session. Lauren planned to socialize with one or two peers while shopping or eating at a restaurant in the coming months but expressed concerns regarding her increased anxiety during social outings. As a result, anxiety management will become a primary focus of intervention in the coming months through development of self-monitoring and support through mentoring.

CONCLUSION

Ultimately, the heterogeneity of autism in terms of diagnostic and gender differences results in a wider variety of occupational performance concerns. Autistic females experience later diagnostic identification and can have a varied presentation of autistic symptoms than autistic males. Using evidence-based assessments and interventions is critical to promoting quality of life in autistic people. Many of the intervention strategies are based on evidence and show improvements in occupational performance in autistic people. The authors acknowledge the spectrum of gender identity and the prevalence of gender identity differences in the autistic community (Brunissen et al., 2021; Warrier et al., 2020) and the need for more research involving this group, which remains a gap in knowledge.

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RELATED READINGS

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- Simone, R. (2010). *Aspergirls: Empowering females with Asperger syndrome*. Jessica Kingsley.
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RESOURCES

- The Vanderbilt Kennedy Center Self-Determination Toolkit (McDonald et al., 2020) provides structure and scripts for recommended dialogue to set self-determined goals, primarily geared toward autistic adolescents and young adults.
- The Autism Healthcare Accommodations Toolkit (AHAT; Academic Autism Spectrum Partnership in Research and Education, 2021) is an online system that allows autistic adults to create a Personalized Accommodations Report that can be given to their health care providers, including things such as sensory or communication accommodations, as well as access a number of checklists and worksheets for health care, such as how to make a medical appointment. The AHAT was developed with a sample that included autistic females (Nicolaidis et al., 2016).
- The Autistic Self-Advocacy Network (ASAN) has a number of plain-language resources for autistic individuals and their families. These include a guide for parents of autistic children, policy toolkits, transitions, and the use of identity-first language.

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How to Apply for Continuing Education Credit

- A. To get pricing information and to register to take the exam online for the article **Occupational Therapy and Autistic Females**, go to <http://store.aota.org>, or call toll-free 800-729-2682.
- B. Once registered and payment received, you will receive instant email confirmation.
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Final Exam

Article Code CEA0821

Ethical Telehealth Practice

To receive CE credit, exam must be completed by August 31, 2024

Learning Level: Introductory

Target Audience: Occupational Therapists and Occupational Therapy Assistants

Content Focus: Category 1: Domain of Occupational Therapy; Areas of Occupation
Category 2: Occupational Therapy Process; Evaluation, Intervention, and Outcomes

1. **What is the currently accepted ratio of autistic males to autistic females?**
 - A. 3.4 males: 1 female
 - B. 4.3 males: 1 female
 - C. 5.2 males: 1 female
 - D. 4.9 males: 1 female
2. **Which of the following is a key gap of the interventions described in the article?**
 - A. None of the interventions were developed in collaboration with autistic females.
 - B. None of the interventions were tested with autistic females.
 - C. None of the interventions had occupational therapy providers on their teams.
 - D. None of the interventions were focused on quality-of-life improvements.
3. **Ayres Sensory Integration® is an evidence-based intervention for autistic children in which age group?**
 - A. 0–12 years old
 - B. 4–21 years old
 - C. 8–12 years old
 - D. 4–12 years old
4. **The Let's Get Organized program improved which of the following areas in autistic participants?**
 - A. Organization of materials
 - B. Satisfaction in completing daily occupations
 - C. Social skills
 - D. Planning an event
5. **Which of the following is a toolkit that can be used to support autistic individuals in a health care setting?**
 - A. Let's Get Organized (LGO)
 - B. Canadian Occupational Performance Measure (COPM)
 - C. Autism Healthcare Accommodations Toolkit (AHAT)
 - D. Vanderbilt Kennedy Center Self-Determination Toolkit
6. **Which of the following interventions was specifically designed for use with autistic females?**
 - A. Cognitive Orientation to daily Occupational Performance (CO-OP)
 - B. LGO
 - C. Girls Night Out (GNO)
 - D. Ayres Sensory Integration (ASI)®
7. **School-aged autistic females experience which of the following compared with autistic males?**
 - A. Increased repetitive behaviors
 - B. Increased externalizing mental health difficulties
 - C. Reduced internalizing mental health difficulties
 - D. Reduced sensory symptoms
8. **Mindfulness interventions were found to impact which of the following in autistic individuals and caregivers of autistic individuals?**
 - A. Well-being
 - B. Motor skills
 - C. Anxiety
 - D. Sensory processing

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9. Which of the following is identified as a potential reason for the discrepancies in gender differences for sensory symptoms between autistic females and autistic males?
- A. Parent education level
 - B. Co-occurring diagnoses
 - C. Age
 - D. Socioeconomic status
10. Mentoring was found to improve all of the following *except*:
- A. Social support
 - B. Time management
 - C. Self-esteem
 - D. Quality of life
11. The LGO program demonstrated maintained improvements in which of the following areas when tested 3 months after the intervention?
- A. Planning
 - B. Organization
 - C. Satisfaction with daily occupations
 - D. Time management
12. The GNO program includes curriculum domains of all of the following *except*:
- A. Leisure participation
 - B. Relating to others
 - C. Self-determination
 - D. Self-care skills

Now that you have selected your answers, you are only one step away from earning your CE credit.



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