

# SPEECH-LANGUAGE PATHOLOGY AND OCCUPATIONAL THERAPY: THE BENEFITS OF INTERPROFESSIONAL COLLABORATION IN TREATING PEOPLE WITH AUTISM

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## Abstract

Autism Spectrum Disorder is a neurodevelopmental disorder that causes deficits in various aspects of daily living. People with autism (PWA) often benefit from various forms of therapy to augment independent and functional daily living tasks as well as communication skills. Speech-Language Pathologists (SLP) and Occupational Therapists (OT) play a vital role in providing intervention to people with autism in order to promote independence. Although each profession encompasses a diverse realm of knowledge, there are several areas in which Speech Language Pathologists and Occupational Therapists can utilize interprofessional collaboration while providing intervention to an individual with autism. Various ways interprofessional collaboration can be used to benefit the individual are described and discussed.

## Key Words

Autism, speech-language pathology, occupational therapy, interprofessional, social communication, sensory

## Autism

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder that causes deficits in social communication, social interaction, repetitive or restrictive behaviors, and restrictive interests or activities (Kilroy, Aziz-Zadeh, Cermak, 2019). Based on recent research, the Centers of Disease Control and Prevention reported in 2019 that 1 in every 59 children in the United States have ASD, which is a 15% increase from previous reports (CDC, 2019). Previously, ASD affected 1 in every 69 children. Research has also shown that ASD is four times more common in boys than girls (CDC, 2019). More research is needed to understand why the prevalence has increased. The diagnosis of ASD now also includes a portion about sensory processing abnormalities because 90% of people with ASD have sensory processing abnormalities (Kilroy, Aziz-Zadeh, Cermak, 2019). This is another possible factor that may contribute to an increased prevalence. Prevalence has also been documented possibly due to an increase in knowledge regarding ASD. As a whole, the medical community has begun to identify under-identified populations and although it appears as if prevalence is increasing; it may simply be that there is an increased awareness of ASD and its signs and symptoms (ASHA, 2019).

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## Speech-Language Pathology

Speech Language Pathologists (SLPs) are licensed professionals in speech, language and communication. SLPs are experts in several types of communication and swallowing and are equipped to work with people with speech sound disorders, language, literacy, social communication, voice, fluency, cognition and feeding (ASHA, 2019).

## Communication and Social Interventions

|                                    |   |
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| <b>Self-Management</b>             | Self-management is an individual's ability to apply behavior changes in order to facilitate progress towards a desired behavior or termination of a behavior (Carr, 2016). The SLP may be involved in facilitating conversation about desired behaviors and helping the PWA understand why some behaviors are unacceptable and why it needs to change.  |
| <b>Peer-Mediated Interventions</b> | Peer mediated intervention is teaching typically developing peers ways to interact with and help learners with ASD learn and develop new or different behaviors, communication skills, and social skills. The SLP may hold group sessions with an integrated group of typically developing peers and PWA.   |
| <b>Social Narratives</b>           | Social narratives are written to explicitly highlight and explain desired behaviors in a specific event or activity (Zimmerman & Ledford, 2017). The narratives make features of the desired behavior more salient by providing a positive reinforcement after the behavior has been executed or met. The SLP should be involved in identifying the activities or situations when unwanted behaviors occur and the response the PWA often has during the situation. |
| <b>Scripting</b>                   | Scripting includes a written or verbal script discussing a skill or situation involving social interaction with peers or teachers. The SLP should be involved in identifying settings when the PWA struggles to communicate in an effective manner.   |
| <b>Visual Supports</b>             | Various types of visual supports include visual schedules, visual sequence charts, task analyses and visual reminders, scripts, social stories and mobile phone usage that can be easily seen or held in order to enhance the PWA's understanding of the environment and people around them (Rutherford, Baxter, Grayson, Johnston & O'Hare, 2019). The SLP should be involved in designing and implementing the visual supports for the PWA.                       |
| <b>Computer-aided instruction</b>  | Computer aided instruction provides an alternative manner of communication to help increase expressive language for students with ASD who are non-verbal or who experience great difficulty getting basic needs met (Hungate, Gardner, Tackett & Spencer, 2017). The SLP should be involved in using computers or other devices in a functional and purposeful manner.  |
| <b>Pivotal Response Training</b>   | PRT is an intervention best used for toddlers to middle school ages students with ASD in increasing social communication skills (Jiedi & Ventola, 2017). The SLP may be the person involved in providing cues and reinforcing requests to increase motivation to communicate.   |

## Behavior and Sensory Interventions

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| <b>Video Modeling</b>                    | Video modeling has strong evidence of support for demonstrating how to teach or model a positive target behavior. A video recording device is used to allow the student with ASD a visual model of a targeted behavior or skill. The SLP should be involved in helping model the desired behavior, prompting and reinforcing positive or desired targets, as well as reflecting and reviewing how the model can be improved for the future. |
| <b>Functional Communication Training</b> | FTC is an intervention that has been used to decrease challenging behaviors by first assessing the function of the problem behavior then implementing a socially acceptable and alternative communicative response that provides the individual with the same function (Chehan, Wolfe, & Drasgow, 2018). The SLP will assist in implementing the socially acceptable and alternative communicative response for the PWA.                    |
| <b>Parent Training</b>                   | In PT, parents attend 10-20 sessions and are coached in specific techniques to reduce disruptive behavior, reduce parental stress levels, and improve treatment outcomes in children (Black, Therrien, & Cook, 2018). SLPs play an important role in training and assisting parents in using therapeutic strategies and techniques in the home (Black, Therrien, & Cook, 2018).   |

## Occupational Therapy

Occupational therapy (OT) is a specialized practice that aims to support an individual's health and participation in life by engaging in various occupations and daily routines (Tomcheck, LaVasser & Watling, 2010). OT's define "occupations" as activities that are meaningful and support the health, well-being, and development of an individual.

## Communication and Social Interventions

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| <b>Group-Based Social Skills Training</b> | A group-based skills training program includes a therapist working with a group of PWA in a structured curriculum and training program focused on improving social skills. The OT should focus on the RRBs, how they affect solitary play, and the manner in which they can help facilitate more participation (Tanner, Hand, O'Toole & Lane, 2015).  |
| <b>Activity-based Interventions</b>       | Activity-based interventions incorporate physical movement or collaborative tasks to be completed as a group in order to improve social skills in PWA (Tanner, Hand, O'Toole & Lane, 2015). The OT may provide cues in how to participate and how to engage in social interactions in a positive manner.  |
| <b>Social Narrative</b>                   | Social narratives provide descriptive, directive, and affirmative statements on how to teach a positive or desired behavior. The OT can specifically use a social narrative intervention approach by providing a direct and personal approach on how to teach a socially appropriate behavior and how it can explicitly improve the child's active participation in a social setting (Case-Smith & Arbesman, 2008).         |
| <b>Joint Attention Intervention</b>       | Joint attention intervention has been used successfully to develop social interactions, receptive and expressive language, social motivation, social relationships, and formal quality friendships. The OT can help increase a child's occupational participation, which is primarily play, by using joint attention intervention to aid in reciprocal interactions, play and social skills (Eschenfelder & Gavalas, 2017). |
| <b>Parent-mediated Intervention</b>       | Parent mediated intervention occurs in three steps and it includes a parent, their child with ASD, and a therapist. Parents and the OT identify potential interventions suited for the child, implement the intervention, and discuss what worked, what did not work, and how things can change (Althoff, Dammann, Hope & Ausderau, 2019).  |

## Behavior and Sensory Interventions

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| <b>Sensory Integration Therapy (SIT)</b> | SIT is a clinic-based intervention that incorporates play-based activities as well as sensory enhanced interactions to stimulate a response from the child (Case-Smith, Weaver & Fristad, 2015). The clinician places demand on the child that engages the child, but also challenges the sensory processing and motor planning skills of the child. The goal of SIT is to increase the child's ability to integrate sensory information in order to increase joint attention, social skills, motor planning, and perceptual skills (Case-Smith, Weaver & Fristad, 2015). The OT is involved in each aspect of the STI framework because they implement the activity and challenging skill for the child. |
| <b>Sensory-Based Intervention (SBI)</b>  | SBI's are adult directed sensory modalities that help a PWA improve challenging behaviors by helping regulate the sensory system. Techniques used in SBI includes deep touch, weighted blankets, rocking, brushing, massage, swinging, bouncing on a therapy ball, and wearing a weighted vest (Case-Smith, Weaver & Fristad, 2015). The OT is involved in identifying the modalities that can be used and implementing it into the routine of the PWA.   |

## Areas for Overlap

| Intervention Area | Definition  | SLP and OT Collaboration   |
|-------------------|---|--|
| Feeding           | Up to 89% of individuals with ASD experience feeding problems such as a restricted diet, poor dietary intake, difficult mealtime behaviors, rigid eating patterns, and food refusal (Muldoon & Cosbey, 2018).   | The SLP has the ability to work with feeding because not only do they work with the oral preparatory phase, the oral transit phase, and the pharyngeal phase but also with aspects of feeding related to opportunities for communication and social experiences (ASHA, 2019). Meal time is a highly social event for humans, and for PWA, they may miss out of this social interaction if they present with maladaptive behaviors at mealtime (ASHA, 2019). The OT also plays an important role in feeding in because they can help address the sensory aspect of feeding, especially in PWA. The sensory aversions PWA present with food may include the texture of mushy foods, the texture of crunchy foods, the smell of foods, and the taste of food. |
| Communication     | According to the American Speech and Hearing Association (date), social communication is defined as the use of language in social contexts that encompasses social interaction, social cognition, and pragmatics. Social communication requires a level of social competency including self-regulation, social-emotional learning, executive functioning, perspective taking, and social problem solving (Winner & Crooke, 2019). | OTs and SLPs may also experience overlap in the area of social communication when working with PWA. According to the American Speech and Hearing Association (date), social communication is defined as the use of language in social contexts that encompasses social interaction, social cognition, and pragmatics. Social communication requires a level of social competency including self-regulation, social-emotional learning, executive functioning, perspective taking, and social problem solving (Winner & Crooke, 2019).  |

## Benefits of Collaboration

In PWA, there are several factors that contribute to one's inability to independently function in daily life. The manner in which PWA socially interact, functionally communicate and independently process sensory information all impact their daily functioning. By utilizing the practice of occupational therapy and speech therapy, PWA may greatly benefit. The OT can implement sensory based interventions to help regulate the sensory system, so the SLP can then teach effective communication and social interventions. As the PWA learns how to regulate their sensory system as well as how to communicate, they begin to increase independence in daily functioning skills. Successful therapeutic interventions often require interprofessional work because PWA present with a variety of strengths and areas of need which stretch across an array of professional's expertise. Because autism is a complex disorder, and there is no one specific identified intervention that will work to increase the independent functioning and communication for every person with ASD. By working collaboratively, SLPs and OTs have the opportunity to provide specific and productive therapeutic interventions for PWA because each professional has the ability to contribute specific areas of knowledge based on his or her background.

Based on the literature in healthcare, there are several benefits when professionals work interprofessionally. Benefits include efficiency of care, decreased costs, and a more holistic approach to care (Goldsberry, 2018). Studies have also shown that when interprofessional collaboration is utilized, it has increased patient outcomes (Goldsberry, 2018). Although SLPs and OTs may experience collaborative work settings different than the medical field, patient outcomes and effective collaborative work can still be measured. Unfortunately, more research is needed to address how effective collaborative work is and instances where interprofessional work has been most effective, not only for the medical field, but also for SLPs and OTs working in various settings.

## Conclusions

Based on the current understanding of autism and the wide range of functional abilities that PWA have, it is clear that a variety of interventions may be utilized to meet the needs of each individual. There is also a deeper understanding about the roles and responsibilities of the SLP and OT in the intervention process and how important each professional is in addressing an individual's specific needs. Although each professional practice has its respective goals, the holistic goal is to increase the independent functioning of the PWA. In order for an individual to make maximal gains provided his or her current level of functioning, the SLPs and OTs require aspects of one another's practice in order to obtain the greatest gains. Each individual with autism is unique and special in his or how own way. By OTs and SLPs providing more interprofessional intervention, the individual has the opportunity to make maximal gains in order to reach his or her full potential.

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