

# Occupational therapy and intellectual developmental disabilities



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Occupational therapy is a relatively new health profession that has become an essential component to healthcare. Due to the field's new upbringing, many are unaware of what an occupational therapist does or what their practice involves. Occupational therapy assists individuals across the lifespan through therapeutic participation in everyday activities (occupations). This profession aids in all aspects of people's environment, as well as their physical, psychological, and cognitive functions (Duncan & Townsend, 2012). Occupational therapy is useful for many health-related conditions, one in particular, being intellectual and developmental disabilities (IDD). The National Institutes of Health [NIH] (2016) explains that the definition of IDD is often based off of a broader category of lifelong disability that can be physical, intellectual, or both. Previously, the term mental retardation was used to describe these disabilities (Carulla et al., 2011). Some of the most common intellectual and developmental disabilities include but are not limited to cerebral palsy, down syndrome, and autism (Boyle et al., 2011). Although occupational therapy is a recent practice, implementation of various therapy methods can be beneficial to those who suffer from IDD such as autism, down syndrome, and cerebral palsy.

To begin, one primary role for an occupational therapist is early detection of autism and the ability to make service recommendations for a positive life outcome. Autism, or autism spectrum disorder (ASD), refers to a vast range of conditions based on challenges with speech or nonverbal communication, social skills, or repetitive behaviors (Copeland, 2018). Autism is referred to as a developmental phenomenon which simply means that autism begins in utero and has a prevalent impact on overall development, throughout the

entire lifespan. It is usually diagnosed during childhood, with many obvious signs presenting around 2-3 years of age. A recent study showed that ASD prevalence was 16.8 per 1,000 (one in 59) children aged 8 years (Baio et al., 2018). Behaviors of children with ASD include those such as hand flapping, withdrawing, spinning, rocking back and forth, covering of ears, and starting. Further investigations lead to differences in sensory responding among those with ASD and are categorized as hyperresponsiveness, hyporesponsiveness, and paradoxical or fluctuating sensory responsiveness (Watling & Hauer, 2015). Increased observation of sensory features related to ASD allowed for a better understanding of the impact of these behaviors in the daily life of individuals (Watling & Hauer, 2015). One of the most common approaches used by OTs include Ayres Sensory Integration (ASI) and Sensory-Based Interventions (SBIs). OTs implement sensory interventions to aid in central nervous system organization, modifying sensory information, and formulating an organized response to various sensory stimuli (Watling & Hauer, 2015). Although these two forms of treatment are normally used together, they differ in various ways. For instance, ASI is a play-based approach in which there is engagement in activities that elicit adaptive responses and allow for an individual to perform successfully in their environment. This is purposeful in altering neurophysiological processing, including sensory responsiveness and functional behavior. On the other hand, SBIs include the use of sensory modalities, normally in the natural environment, in response to behavioral organization and self-regulation. Evidence from this study, and others, proves that intensive sensory integration can improve outcomes of individuals (Watling & Hauer, 2015).

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Additionally, occupational therapy has the ability to teach those with Down syndrome how to engage in their environment, improving their quality of life through independence. Down syndrome, or Trisomy 21, is defined as a disorder caused by the presence of all or part of an extra 21<sup>st</sup> chromosome (Centers for Disease Control and Prevention). In the United States alone, it remains the most common chromosomal condition with about 6,000 babies born with Down syndrome each year. This rounds out to about 1 out of every 700 babies born. Therapy for down syndrome begins like those for any other intellectual and developmental disability. OTs begin therapy by investigating each child's level of participation in daily activities. Due to their cognitive delays, repetition is key when working with those with Down syndrome. It is important to begin treatment during early childhood and is initially geared to focus on motor skills. A shift has commenced in which OTs are implementing new practices into sessions that are aimed at a newer generation (Berg, Becker, Martian, Danielle, & Wingen, 2012). Studies were conducted that looked at coordination, dexterity, balance, posture and stability.

Experimenters did so by allowing participants to repeatedly play a Wii console (bowling, baseball, rhythm boxing, and snowboarding) through an 8-week study. Results showed that participants had positive benefits in the specific areas such as increased enthusiasm and engagement in activities regardless of body function or ability (Berg, Becker, Martian, Danielle, & Wingen, 2012). Furthermore, therapy focuses on daily self-care skills like zipping a jacket or using scissors. This one-on-one engagement provides a comfortable setting for patients that allows for repetition of daily tasks. OTs try to keep activities within these sessions fun and incorporate them

according to patient age. With the help of occupational therapy, those with Down syndrome are able to learn new skills to better equip themselves in conjunction with the various cognitive delays of each individual.

While Cerebral palsy may be seen as a restraint for most, occupational therapists look at adapting to an individual's abilities, not limitations.

According to Centers for Disease Control and Prevention (2018), Cerebral palsy, or CP, is a group of heterogeneous disorders that affect the developing fetal or infant brain, impacting a person's ability to control their muscles.

It is considered the most common motor disability in childhood for the United States. Occupational therapy looks at a multitude of factors related to cerebral palsy such as range of motion, flexibility, visual perception, and memory sequencing. A fairly new approach to therapy for cerebral palsy includes hippotherapy; which facilitates perceived self-competence and participation. Hippotherapy is the use movements of a horse to establish motor and sensory input of patients (Koca & Ataseven, 2016). Recent studies have been conducted to look at the potential benefits of hippotherapy and CP. One study in particular involved hippotherapy twice a week, for 8 weeks with a total of 16 sessions focusing on postural control, trunk contraction, postural alignment, and extremity strength (Frank, McCloskey, & Dole, 2011). By the end of the intervention, the child was able to sit forward astride the horse while also maintaining control of posture. This is a helpful strategy because it allows therapists to work on improving performance, while the child is actively engaged in an activity they believe is fun.

Hippotherapy is a motivating intervention that provides the child with an

opportunity to challenge themselves to work harder than they would in a more traditional therapy setting.

Occupational therapy has shown that its implementation can be beneficial to those who have an IDD. Some of the most common IDD are autism, down syndrome, and cerebral palsy. Additional research should be conducted in hopes of finding additional therapy opportunities for these individuals.

## References

- Baio, J., Wiggins, L., Christensen, D. L., Maenner, M. J., Daniels, J., Warren, Z., ... & Durkin, M. S. (2018). Prevalence of autism spectrum disorder among children aged 8 years—Autism and developmental disabilities monitoring network, 11 Sites, United States, 2014. *MMWR Surveillance Summaries* , 67 (6), 1.
- Berg, P., Becker, T., Martian, A., Danielle, P. K., & Wingen, J. (2012). Motor control outcomes following Nintendo Wii use by a child with Down syndrome. *Pediatric Physical Therapy* , 24 (1), 78-84.
- Boyle, C. A., Boulet, S., Schieve, L. A., Cohen, R. A., Blumberg, S. J., Yeargin-Allsopp, M., ... & Kogan, M. D. (2011). Trends in the prevalence of developmental disabilities in US children, 1997–2008. *Pediatrics* , 127 (6). doi: 10. 1542/peds. 2010-2989d
- Carulla, L. S., Reed, G. M., Vaez-Azizi, L. M., Cooper, S. A., Leal, R. M., Bertelli, M., ... & Girimaji, S. C. (2011). Intellectual developmental disorders: Towards a new name, definition and framework for “ mental retardation/intellectual disability” in ICD-11. *World Psychiatry* , 10 (3), 175-180.

- Centers for Disease Control and Prevention. (2018). Basics about cerebral palsy. <https://www.cdc.gov/ncbddd/cp/facts.html>
- Centers for Disease Control and Prevention. (2018). Birth defects. <https://www.cdc.gov/ncbddd/birthdefects/downsyndrome.html>
- Copeland, N. J. (2018, August). American Psychiatric Association: Autism spectrum disorder. <https://www.psychiatry.org/patients-families/autism/what-is-autism-spectrum-disorder>
- Duncan, E. A., & Townsend, E. A. (2012). *Foundations for practice in occupational therapy*.
- Frank, A., McCloskey, S., & Dole, R. L. (2011). Effect of hippotherapy on perceived self-competence and participation in a child with cerebral palsy. *Pediatric Physical Therapy*, 23 (3), 301-308.
- Intellectual and Developmental Disabilities (IDDs): Condition information. (2016, January 12). <https://www.nichd.nih.gov/health/topics/idds/conditioninfo/default>
- Koca, T. T., & Ataseven, H. (2016). What is hippotherapy? The indications and effectiveness of hippotherapy. *Northern Clinics of Istanbul*. doi: 10. 14744/nci. 2016. 71601
- Oskoui, M., Coutinho, F., Dykeman, J., Jetté, N., & Pringsheim, T. (2013). An update on the prevalence of Cerebral Palsy: A systematic review and meta-analysis. *Developmental Medicine & Child Neurology*, 55 (6), 509-519.
- Watling, R., & Hauer, S. (2015). Effectiveness of ayres sensory integration® and sensory-based interventions for people with autism spectrum disorder: A systematic review. *American Journal of Occupational Therapy*, 69 (5). doi: 10. 5014/ajot. 2015. 018051