

U09A01: Discipline and Practice of School Psychology

Megan M. Haverstock

Capella University

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Dr. Barclay

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Abstract

The purpose of this paper is to inform the audience about the disability of Cerebral Palsy and what schools are doing to accommodate and/or provide appropriate interventions for academics and psychological health for best success. Schools may lack in awareness of chronic health accommodations and creation of interventions for improvement, leading to an increase in concern and distress of parents and children. Those with chronic health conditions, like Cerebral Palsy undergo many social-emotional difficulties that others might not think about. When entering a school, starting school, or transitioning back to school as an individual with a chronic health condition, it is important to consider all social, emotional, behavioral, physical, mental, and academic needs. For children, it is also important to ensure the child's parent(s) or guardian(s) have the needs to support their child while they are going to school. These accommodations might be supplying local resources for reliable transportation, doctors that are closer to a certain part of town, or counseling support. The focus of this paper includes information on school functioning with Cerebral Palsy, social and psychological needs of students with Cerebral Palsy, description and diagnostic criteria of Cerebral Palsy, effective academic and psychological interventions, how Cerebral Palsy affects the family dynamic, assessment tools used to identify students with Cerebral Palsy, and legal and ethical considerations. The conclusion of this paper will help determine appropriate and adequate accommodations and interventions for students with the disability of Cerebral Palsy and inform others what students with Cerebral Palsy experience socially, emotionally, physically, and psychologically.

Key Words: school psychologist, Cerebral Palsy, disability, intervention

Cerebral Palsy and School Performance

Performance in school can be determined by multiple factors such as a student's environment, mental health diagnosis, learning style, ability to focus, or even a specific type of illness or disability. Cerebral Palsy is "a complex neuromotor disorder that has a defining feature, very early onset motor impairment, secondary to an underlying neuropathology" (Hustad et al., 2019). According to the statistics found in the article, *Differentiating Typical from Atypical Speech Production in 5-Year-Old Child with Cerebral Palsy*, Cerebral Palsy has a prevalence of "3.1 per 1,000 children identified at 8 years of age, in the United States" (Hustad et al., 2019). The authors continued to research and found that children who have Cerebral Palsy are "at risk" for speech, language, and communication problems such as- a language delay, dysarthria, impairments while incorporating gestures, or a combination of all.

Children with Cerebral Palsy may struggle primarily with speech deficits and motor impairments; however, it can be difficult to determine both- especially at a young age. One reason that the determination of a speech diagnosis or deficit is difficult to diagnose for Cerebral Palsy is "dysarthria in children is confounded by the fact that dysarthric speech features are similar to", as well as overlap with "typical developmental speech features" (Hustad et al., 2019). Hustad et al. (2019) continued researching and found that children with Cerebral Palsy can produce clear speech, also known as "frank dysarthria." This may lead to a combination of- articulatory imprecision, hypernasality, short breath groups, weak/breathy voice, variations in loudness, reduced intelligibility, and reduced speech rate (Hustad et al., 2019). The features presented are the features that are also considered "typical" for development in speech; however, the difference between a speech diagnosis that can affect a child's daily functioning or future and a speech development "problem or issue" is that the speech development "problem or issue" will

resolve over time, while a speech deficit will continue throughout the child's life. This will cause impairments throughout school, socialization, learning styles, and even views of oneself (i.e., self-esteem).

Some children with Cerebral Palsy may not appear to have clinical speech-motor impairments as it was found that children who identify without those specific impairments perform at the "above average level" and have "excellent receptive language skills" (Hustad et al., 2019). The domain that seems to need improvement is executive functioning as children without clinical speech-motor impairments have a performance level that is below their peers. Children with Cerebral Palsy in the school system will not have the level of functioning as the authors pointed out in their research. Hustad et al. (2019) separated their findings into groups and defined the research into broad terms of "typical" and "atypical" domains relating to this specific disability. This shows that when focusing on Cerebral Palsy, the definition of the diagnosis or disability will remain the same (unless a child has a specific kind or another diagnosis added to this disability) but, the performance levels will differ.

It is important to note that children with Cerebral Palsy need specific intervention plans; just as students without disabilities need. Children with Cerebral Palsy can have range regarding their performance level with speech motor impairments; meaning, one child might be able to perform without any assistance, while the other child might need several interventions for speech and physical needs (i.e., therapy). Either way, this disability is something that clinicians, school psychologists, administrators, school staff, etc., should look at individually as well as look at the child individually to help them succeed in the best way possible.

Social and Psychological Needs of Cerebral Palsy

In the paragraph above, one can learn how children with the diagnosis of Cerebral Palsy may impact school performance (i.e., speech motor impairment(s) of different levels, etc.). With that information alone, social, and psychological needs of children with Cerebral Palsy in the school system need to be individualized, consistent, goal-oriented, and safe for the child's specific disability. With continued research, authors- Pahlman, Gillberg, and Himmelmann (2020) study children that have the diagnosis of Cerebral Palsy and other impairments/diagnosis that might accompany them. The authors found that neuropsychiatric disorders such as Autism Spectrum Disorder (ASD) and Attention-Deficit/Hyperactivity Disorder (ADHD) “are more common in children with Cerebral Palsy than in typically developing children” (Pahlman, Gillberg, & Himmelmann., 2020). The Gross Motor Function Classification System (GMFCS) was used throughout the study as measurement (Levels I-II = Mild and Levels III-IV = Moderate-Severe); GMFCS skills can include “whole body functions” such as: walking upstairs, muscles for stability (for everyday functioning), or running. GMFCS showed more prevalence with Autism at Levels II and V rather than Level I; while GMFCS showed low prevalence with ADHD at Levels IV and V (Pahlman, Gillberg, & Himmelmann., 2020). The children in both categories had a moderate-severe intellectual disability with additional children performing at an even lower level (Pahlman, Gillberg, & Himmelmann., 2020).

As stated previously, Cerebral Palsy may have different forms; research conducted in the article, *Autism and Attention-Deficit/Hyperactivity Disorder in Children with Cerebral Palsy* discusses some of them. Dyskinetic Cerebral Palsy (athetoid) is caused by damage to the brain's basal ganglia and “sends messages” throughout the body releasing involuntary movements (Pahlman, Gillberg, & Himmelmann., 2020). These movements may consist of twitching or squinting eyes and can lead to developmental delays that others may see in the school system

like problems with eating or drinking at lunch, difficulty grasping small objects (i.e., pencils/pens), or grimacing or drooling (due to lack of facial muscle control) (Pahlman, Gillberg, & Himmelmann., 2020). Ataxic Cerebral Palsy is caused by damage to the center of the brain (cerebellum) and is when children have trouble with coordination or balancing such as with walking, gestures, or academics (i.e., writing) (Pahlman, Gillberg, & Himmelmann., 2020). This form is difficult for children focusing on “precision and stability;” therefore, writing, physical activity, or even common interaction with others could be considered difficult as movements may “jerk” and appear “not smooth” (Pahlman, Gillberg, & Himmelmann., 2020). Spastic Cerebral Palsy is caused by a brain injury during or near birth; this is most common form of Cerebral Palsy, and it causes movement and balance disorders that develop overtime (Pahlman, Gillberg, & Himmelmann., 2020). Bilateral Spastic Cerebral Palsy is caused by brain damage on the motor cortex, basal ganglia, and corticospinal tract; muscles are unable to form and work properly to create muscle tone (Pahlman, Gillberg, & Himmelmann., 2020). The final form discussed is Unilateral Spastic Cerebral Palsy, which affects muscle functions and control on one side of the body (Pahlman, Gillberg, & Himmelmann., 2020). With this form of Cerebral Palsy, if one side of the brain is affected, the other side will be too.

The importance of knowing the different types of Cerebral Palsy, what is affected, the symptoms, and how this might be displayed in the school system is important for intervention and medical purposes but, also for social, emotional, and psychological purposes. Referring to Dyskinetic Cerebral Palsy (athetoid), a child may begin to drool due to the inability to control his/her facial muscles. Depending on his/her plan, the child could be in a general education classroom or a special education classroom. Some children in the special education classroom may have similar symptoms with other diagnosis’ but, that does not take away from feelings of a

child. This remains the same for if the child was in a general education classroom; how would other children act? School psychologists can promote a positive atmosphere and a “no bullying zone” by talking at assembly’s or to classes (one-on-one). This helps spread awareness and incorporates a new way of learning; incorporation of an outside, educational “no bullying” program could also be integrated as well (similar to “Just Say No to Drugs” platform). Schools also provide support services such as: IEP’s (Individualized Education Program), physical therapy, counseling services, technology, mobility assistance, and transportation assistance (Stern PLLC., 2021). All services can be tailored to the child’s specific and individual needs regarding his/her diagnosis to help in the best possible way.

According to Stern Law PLLC (2021), it is important for children with Cerebral Palsy to have appropriate educational services for those with disabilities, provide opportunities for success alongside peers, discover new ways to identify undiagnosed disabilities to demonstrate successful educational experiences, and secure resources with the public school system for families. Continuing with educational data for children with Cerebral Palsy in the school system, special education services are provided in multiple setting to assure students and families that those with Cerebral Palsy (if SPED services are needed), will have an opportunity to learn, prosper and succeed. Stern PLLC (2021), found that placing students with Cerebral Palsy into general education has become “an increasing aspect of many special education programs;” providing interventions and programs for those with Cerebral Palsy to experience both general and special education. If a child with Cerebral Palsy is unable to make it to school or go to school due to the severity of his/her condition, the child can receive school services from his/her home or facility as protected by the Disabilities Education Act and IDEA (Stern PLLC, 2021).

Characteristics of Effective Academic/Behavior Interventions

Creating interventions for students contributes to their academics and behavior. When considering interventions for students with Cerebral Palsy, it is important to consider- early intervention techniques (i.e., Pre-K programs) and special education programming/services, interventions that provide academic help in muscular functioning (i.e., penmanship, if there is a computer class- help with typing, etc.), physical therapy or replacement interventions for physical education (i.e., if the student cannot run but can walk slowly with assistance, provide an aide so the student can receive physical education just as every student does), interventions for speech therapy (i.e., either at school or provide an outside speech/language therapist that could be beneficial for the students' diagnosis), incorporation of social and sensory therapies (to help become familiar with others and allow their muscles, senses, etc., to slowly become introduced into school, home, or other environments), and play therapy with the school counselor is beneficial for young children to help express emotions as children learn and express emotions through play- those that are not a candidate for play therapy can either do behavior therapy with the school counselor, skills training, or small group counseling (depending on the severity of their diagnosis) (Stern PLLC, 2021).

Gillian et al. (2021) research Cerebral Palsy in children over the age of two in low-income and middle-income countries; specially Africa. The authors found that this disability/diagnosis puts an abundance of stress or a “heavy burden” on families mentally, emotionally, physically, and financially. Gillian et al., (2021) found that children with Cerebral Palsy living in low-middle income countries in Africa had little access to rehabilitation resources at home or at school/while receiving school resources. The Akwenda Cerebral Palsy Program was created as a result for “low-resource setting and to aim at improving participation with motor functioning and daily activities for children with Cerebral Palsy, improve the quality of

life, stress, and knowledge for caregivers, and help with knowledge and attitudes towards children with Cerebral Palsy in the communities” (Gillian et al., 2021). The intervention provided caregiver training workshops, therapist-led practical groups, goal setting sessions, technical assistance devices, and communication advocacy (for caregivers/stakeholders). This intervention provides services in and out of school, is cost efficient, provides a holistic approach, allows caregivers and children to work together, and provides interventions services for those with Cerebral Palsy up to the age of 23 (Gillian et al., 2021). As most interventions stop at age 18 because that is the legal age for adulthood, some programs provide additional help for “transitioning to adulthood” as having a severe disability or diagnosis can be a hard transition. Transitioning from a child to an adult is difficult, having a disability that can be extremely debilitating might make a child feel self-conscious, alone, afraid, etc. Another aspect to consider is if the child’s cognition is at his/her current age level. For instance- If the child is 17 years old, the cognition level may be of a 13-year-old due to brain impairments. An intervention program like the one described above is beneficial because it goes on longer than the “expected” age of 18 and can help those that need it.

At the beginning of this section, some interventions were provided for children with Cerebral Palsy. Those listed could be provided in school or referral-based outside of school; however, what about the children that are too sick or immobile? How about the children that can barely make it to school for academics but, need interventions for speech, socialization, emotions, or physical therapy but, they’re in too much pain to leave their home or the hospital when not attending school? Pennington et al. (2019) researched a specific type of therapy that could bring awareness to others and create a trend. The authors studied internet delivery of intensive speech and language therapy for children with Cerebral Palsy. The intervention was

comprised of the child's speech therapy/dysarthria therapy from a therapist for 6 weeks through the Skype platform, session frequency varied, dysarthria sessions focused on breath control and phonation of clear speech (i.e., steady rate), and was comprised of three 40-minute sessions weekly for six weeks (Pennington et al., 2019). The outcome presented found that families and children were happy with results, felt there was no difficulties building rapport with therapists, there was no loss of precision, and could aid in child development with Cerebral Palsy (Pennington et al., 2019). The only limitations discussed were internet connection, concentration of the child, and length of session; this can get better with time (Pennington et al., 2019).

Pool & Elliot (2021) research a "goal directed, activity-based and interdisciplinary program to support school-readiness in preschool aged children with Cerebral Palsy and like conditions that rely on physical assistance and equipment. The authors found that children with Cerebral Palsy are at risk with performing below their peers who do not have this diagnosis/disability. With that said, they created an intervention program called "Kindy Moves," Which focuses on floor-based activities, locomotor training, overground walking, and tabletop activities (Pool & Elliot, 2021). Kindy Moves is made up of three, 2-hour sessions per week for 4 weeks that is 24 hours long. The sessions are purposely scheduled to make sure that 2 days are consecutive (i.e., Tuesday, Thursday, & Friday), no more than four children with the similar goals/age are assigned to each group, group setting/environment is to mimic Kindergarten context, standard care should not be interrupted with this intervention process (Pool & Elliot, 2021). This intervention has been created for the future to help children in the school system with Cerebral Palsy; it has been approved and is waiting to be integrated into schools. The purpose of including this study is to show that Cerebral Palsy is ongoing, and interventions need

to be in the school system. Researchers, doctors, and psychologists are searching for the best ways in the most specific ways possible to help each child.

Family Impact

Some might say the statement- “I rather hurt or have a problem than have my child, spouse, or someone I love have to go through the pain and suffering.” This is not the case for every family member, parent, or guardian but, most parents that have a child or children with the diagnosis of Cerebral Palsy, often feel that way. At times, parents are unable to control certain emotions especially if their child or loved one is in pain, experiencing something uncommon, or if the parent does not understand what is going on (i.e., they cannot help). Whittingham et al. (2019) research parental responses and emotions to children with Cerebral Palsy to see if it contributes to a child’s behavior or psychological well-being. The authors found that when a parent displays a behavior that is classified as being not “psychologically flexible,” it could tend to alert the child. An example is- Over reactivity; this would be classified as Dysfunctional Parenting Behavior (Whittingham et al., 2019). As a result of this behavior from the parent, the child could pick up on it, adapt to it, learn it, and display it, creating a cycle of dysfunction. In a family, this can lead to excessive stress, anger, continuous dysfunctional cycles, and even lack of adequate care for all children in the household but, specifically treatment for the child or children with Cerebral Palsy (Whittingham et al., 2019). If situations like this continue, the parent(s) and/or family may continue down a path that would need serious psychological interventions and even medical interventions for treatment with severe disabilities and diagnosis.

Prajakta, John, & Rajashekhar (2020) researched parents’ perspectives of the quality of life in adolescents with Cerebral Palsy. The authors complete individualized well-being assessments across areas of life. Quality of life is defined by the authors as “the value that an

individual assigns to the duration of life as modified by impairment, functional states, perceptions, and social opportunities that are influenced by disease, injury, treatment, or policy” (Prajakta, John, & Rajashekhar., 2020). The parental role in contribution to this study provided insight on their (the family as a unit) life (while a family member has Cerebral Palsy).

Parents reported overall dissatisfaction with medical services, as well as stress and worry about finances, a decline in socialization with others, a lack of freedom, and an increased feeling of carrying for their child with the specific disability (Prajakta, John, & Rajashekhar., 2020). Although majority of children and adolescents with the disability of Cerebral Palsy typically have speech motor impairments, parents in this study reported a high quality of life for their children in the “social well-being domain” and a low quality of life in the “feelings about functioning domain” (Prajakta, John, & Rajashekhar., 2020). The parents that reported a high quality of life in the social well-being domain are also the same parents promoting a nurturing and balance environment at home, ensuring their child that their disability is not limiting or putting a burden on them (even if they are stressed with finances, emotionally drained, etc.) (Prajakta, John, & Rajashekhar., 2020). As a result, the parents that reported this outcome have a close family bond that allows sibling relationships to grow, the child with Cerebral Palsy to feel as if he/she belongs and creates a positive outlook when facing the public (Prajakta, John, & Rajashekhar., 2020). Throughout the study, the authors report that stress, socioeconomic factors, and health affect the overall well-being of the family and child but, majority of the responses from the parents are in attempt to maintain stability for the best interest of their child/children and family dynamic (Prajakta, John, & Rajashekhar., 2020).

Diagnostic Criteria and Assessment Tools

According to Paleeri (2021), Cerebral Palsy in the educational setting is defined as “a severe non-verbal learning disorder and 8-12 out of every 1,000 births are diagnosed with mild or severe Cerebral Palsy. Paleeri (2021) then provides the medical definition of Cerebral Palsy as, “a stagnant physical and neurological disorder, a static encephalopathy, it is the name for a collection of movement disorders caused by brain damage that occurs before, during or shortly after birth. The author continues to add to this definition with Cerebral Palsy is “caused by damage to the motor control center of the brain,” if neurons are then damaged, signals are unable to be sent to be able to control muscles (Paleeri, 2021). As Paleeri (2021) is correct and goes into detail into the diagnostic criteria of Cerebral Palsy an important and key feature to note is that this diagnosis has specific types of Cerebral Palsy. *Types were discussed in the Social and Psychological affects paragraph of this paper by authors, Pahlman, Gillberg, & Himmelmann., 2020.*

Assessment tools are based off age, ability, symptoms, etc. When assessing any child or client it is always important to explain to them that they are supported. With a child who has a physical disability or any disability it is also important to provide the needed accommodations for the assessment. Examples might be- larger font packets, an aide for reading, or someone who is available for holding pictures/bubbling answer choices. When considering a diagnosis, it is crucial that one considers all outcomes and factors of the client/student. For example- If a child and family is complaining and discussing problems with decrease in muscle tone, muscle spasming, pain, etc. It could likely be Cerebral Palsy; however, it is always a good idea to follow-up with questions such as: “Have you experienced any jerking movements or eye twitching?” or “Do you ever feel like it’s just on one side or do you notice muscle pain on both sides of your body?” If the child responds like: “No, just this side” and points to one side; it

could be Unilateral Spastic Cerebral Palsy as this focuses on Cerebral Palsy on only one side. Specifying a “type” of disability allows for treatment plans to have more precision and focus for success rates.

Legalities and Conclusion

School psychologists are to always remain ethical as well as, follow all laws. According to the Professional Standards of The National Association of School Psychologists, school psychologists are to advocate for students with disabilities and make sure that those students as well as all students are receiving adequate and proper care (2020). Schools may also have Special Education laws that the school psychologists are to follow to ensure students with disabilities are receiving proper services. These laws may include ADA- Americans with Disabilities Act: protects individuals with disabilities in schools and the workforce, FAPE- Free Appropriate Public Education: Ensures all disabled students have a right to free public school through the age of 21 (without charge) 504 Accommodation is also under this tier as well, IDEA- Individuals with Disabilities Education Act: Law for Special Education in the US, IEE- Independent Education Evaluation: For parents to request if they dispute initial evaluation results, IEP- Individualized Education Plan: Outline of accommodations/services that can/will be provided to students with special education needs, and LRE- Least Restrictive Environment: Allows special education students to be alongside other students to achieve the greatest degree possible (Stern PLLC., 2021). With the special education laws in place, interventions that have been created, new interventions that are awaiting approval, and passion lying in the hearts of future school psychologists, helping students with the disability of Cerebral Palsy will become second nature. This is our future!

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