

What is cerebral palsy?

Cerebral Palsy is a neurodevelopment condition that begins in early childhood, which affects a person's ability to move freely and causes them to struggle to maintain their balance and posture. Cerebral Palsy is known as an 'umbrella term' that covers a group of non – progressive motor impairment syndromes of the brain which arise during early development states Mutch et al (1992). Cerebral palsy affects 18 million people worldwide and affects individuals in different ways, by affecting their movement, balance, posture, muscle control or reflex. Cerebral palsy is the most common lifelong physical disability in children, which occurs in 2 per 1000 births in the UK (Stavsky et al., 2017). It is a result of damage to the child's developing brain during pregnancy, birth or after birth.

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Identification and diagnosis

Cerebral palsy is a complex disability and diagnosis is not always an easy process. It is diagnosed when the child is 1 to 2 years old. Doctors may suspect early signs if a baby has slow motor development, has floppy muscle tone, or an unusual posture. This results in a lot of people with cerebral palsy to have issues walking as they tend to walk on their toes, heels or limp; which is a way to identify someone with cerebral palsy.

The diagnosis of cerebral palsy is often made through clinical observations. It can be frustrating for parents and families as sometimes a diagnosis can take a long period of time due to repeated tests and seeing specialists. This results in families anxiously waiting for the suspected diagnosis, however often it is too late for early intervention as it should be detected soon after birth using MRI scans.

75% of children with cerebral palsy experience pain and discomfort. It also affects children's education in school as they have difficulty with fine motor skills and activities that require precision, for example writing. A large proportion of children with cerebral palsy have learning difficulties, even though they have a similar range of intelligence as able-bodied children. Due to cerebral palsy affecting their movement, it limits the children to activities during school. Children might avoid daily activities that are important for independence, such as attending school and social events. For example, children with CP had lower participation levels in activities in the playground, which demands the highest level of physical abilities states Schenker, R (2005).

Barriers

Physiological barriers include pain as a result of movement or physical activity. This leads to them not taking part in social activities as they associate them to pain. Another physiological barrier is that they could feel uncomfortable or embarrassed taking part in physical activity in-front of others as they may feel the activity emphasises their body as dysfunctional. This relates to the social model of disability; how society views people. Body image is a big factor with individuals affected by cerebral palsy. Guevera (2021) states that body image creates a stigma that limits the values of individuals. Despite them still understanding their body, they are aware of body image in today's society from social media and magazines (United Nations, no date). There are also behavioural barriers, where children with cerebral palsy often show signs of behavioural challenges which could arise from their environment, relationships or physical impairments. This barrier makes it challenging for parents and teachers. Cognitive barriers surrounding cerebral palsy include depression or anxiety. This could develop through the child not participating in social activities due to the pain from movement or lack of confidence, which results in them not forming strong relationships with friends in school, therefore making them feel isolated and lonely; leading to depression. Deci & Ryan (2000) support this by suggesting that individuals have a profound need to connect with others and be a part of social groups.

Strategy – Bobath therapy

Graham et al (2017) states that one of the most widely used therapy approaches for children with Cerebral palsy is Bobath therapy. The main goal of this approach is to facilitate controlled motor activity whilst support muscle tone, improve posture with specific handling techniques, work for better active participation and exercise specific and relevant functional skills. Bobath therapy has 3 main principles: facilitation, stimulation and inhibition. (Tekin et al., 2018) supports the use of Bobath therapy in education as it has a positive effect on postural control and balance disorders based on these 3 principles.

The Bobath therapy is an appropriate strategy when treating cerebral palsy as it helps manage the condition by focusing on the individual's movement, function and optimal use of the child's potential. According to a study conducted by Kavlak et al in 2018 Bobath therapy is considered appropriate to treat any motor control disorder within the Cerebral palsy spectrum. The Bobath therapy is an appropriate strategy to be used in education as research conducted by (Arı & Kerem Günel, 2017) states that an exercise program based on the Bobath method can improve functional balance as indicated by an increase in the Pediatric Berg Balance Scale (PBBS) score. Weakness in balance control is one of the most common problems encountered in children with Cerebral palsy. (Kavlak et al., 2018) states balance is a necessary ability to explore and interact with the environment and their surroundings. Better balance improves the quality of gait, which allows children with cerebral palsy to move more easily, helping them to achieve independence in daily activities and be able to play and form friendships during school.

A strength of using the Bobath therapy is the positive impact it has on a child's physical aspects, such as motor function, motor control and visual attention. Arshad et al (2018) supports this by stating that Bobath's therapy is an effective strategy and plays a big role in supporting children with cerebral palsy. Langhammer and Stanghelle (2003) and Platz et al. (2005) also agree as they discovered statistically significant impacts that support the Bobath concept as an effective therapy when treating cerebral palsy. Langhammer and Stanghelle (2003) discovered an improvement in posture control that was related to balance control and weight symmetric distribution.

A weakness of the Bobath therapy in education is that despite the widespread use of Bobath therapy to support cerebral palsy, there is not enough rigorous research into its clinical effectiveness. (Jung et al., 2017) states that there is a lack of evidence-based studies in the literature regarding Bobath therapy with infantile cerebral palsy. Bower and McLellan (1984) support this with their study where Bobath therapy was applied to 30 children, aged between 18 months – 8 years over a 6 month period, with spastic cerebral palsy. No statistically significant difference was observed in the children's gross motor skills.

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