



Source: National down syndrome society, n.d)

The Importance of Early Intervention for Children with Down Syndrome



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Introduction

Down syndrome is a genetic condition that affects approximately 750 babies in the United Kingdom each year (Gee, 2016). Down syndrome is a developmental disorder affecting a person's learning abilities and intellectual development (Bull, 2020). It is one of the many additional learning needs that exist today. Centers for Disease Control and Prevention (CDC) defines Down syndrome as a condition in which a person has an extra chromosome. In contrast, the National Health Service (NHS) defines Down syndrome as when you are born with an extra chromosome. Alternatively, NHS Wales views Down syndrome as a genetic condition that occurs due to the presence of an extra chromosome 21 in some or all cells. In comparison, all definitions of Down syndrome agree that it is caused by an extra chromosome. There has been a need to highlight Down syndrome in the early years setting. For children with Down syndrome, early intervention is key to unlocking their full potential (Evans-Martin, 2008). By equipping educators with an understanding of their unique strengths and challenges, they can foster inclusive and supportive learning environments that encourage the development of social, emotional, and cognitive skills (Blewitt *et al.*, 2021). This, in turn, leads to positive outcomes both in and out of the classroom, boosting their self-esteem and confidence. This assignment will focus on :

- identifying and diagnosing
- barriers
- strategies

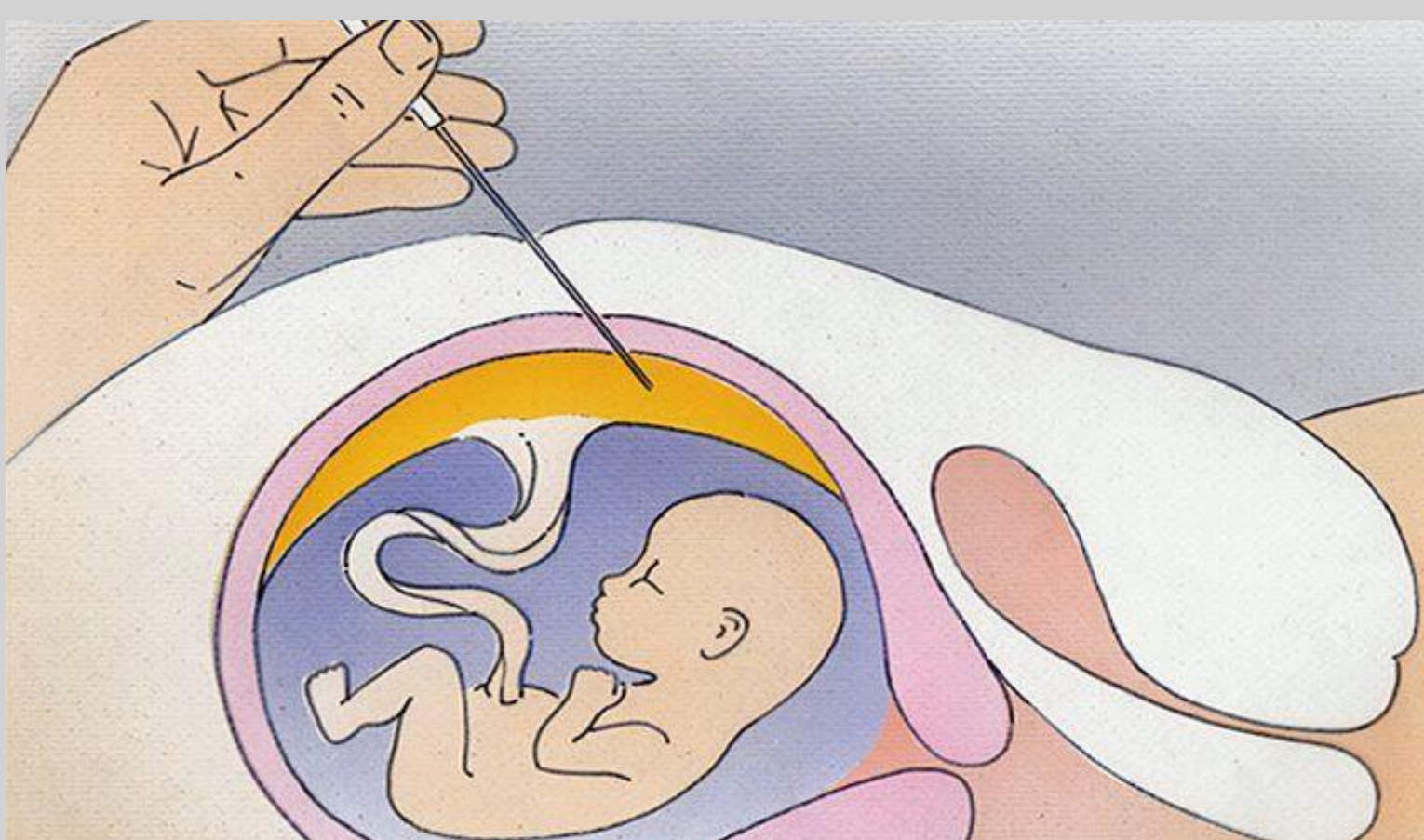
I am deeply interested in Down syndrome and want to learn more about identifying, diagnosing, and supporting individuals with the condition. I believe that by better understanding Down syndrome, we can create a more inclusive and supportive society for all.

Identifying and Diagnosing

Although Down syndrome is a common condition, many practitioners and parents still lack awareness and understanding of it. This can lead to delays in diagnosis and access to necessary resources and support. However, with early diagnosis this can lead to early intervention. According to the Centers for Disease Control and Prevention there are three types of Down Syndrome. These are:

- Trisomy 21
- Translocation Down syndrome
- Mosaic Down syndrome.

Antonarakis *et al.* (2020) states that Down syndrome is a genetic condition at birth that can be identified and confirmed through a blood test. It is usually diagnosed based on the observable characteristics of affected individuals. However, identifying the condition may pose challenges in situations like premature births, older patients, certain ethnic populations, or cases involving mosaicism (Agarwal Gupta and Kabra, 2014). Screening tests conducted during pregnancy, such as ultrasound scans, maternal serum screening, and non-invasive prenatal testing (NIPT), can provide valuable information regarding the likelihood of down syndrome in the unborn child (Löwy, 2022). Families might opt for a prenatal diagnostic test to obtain more precise information if a prenatal screening test reveals a high probability of Down syndrome (Bowden *et al.*, 2022). However, some parents may not receive early diagnosis and support for their child with Down syndrome due to a range of factors, such as financial constraints, lack of health insurance, or cultural barriers (Sapiets, Totsika and Hastings, 2021).

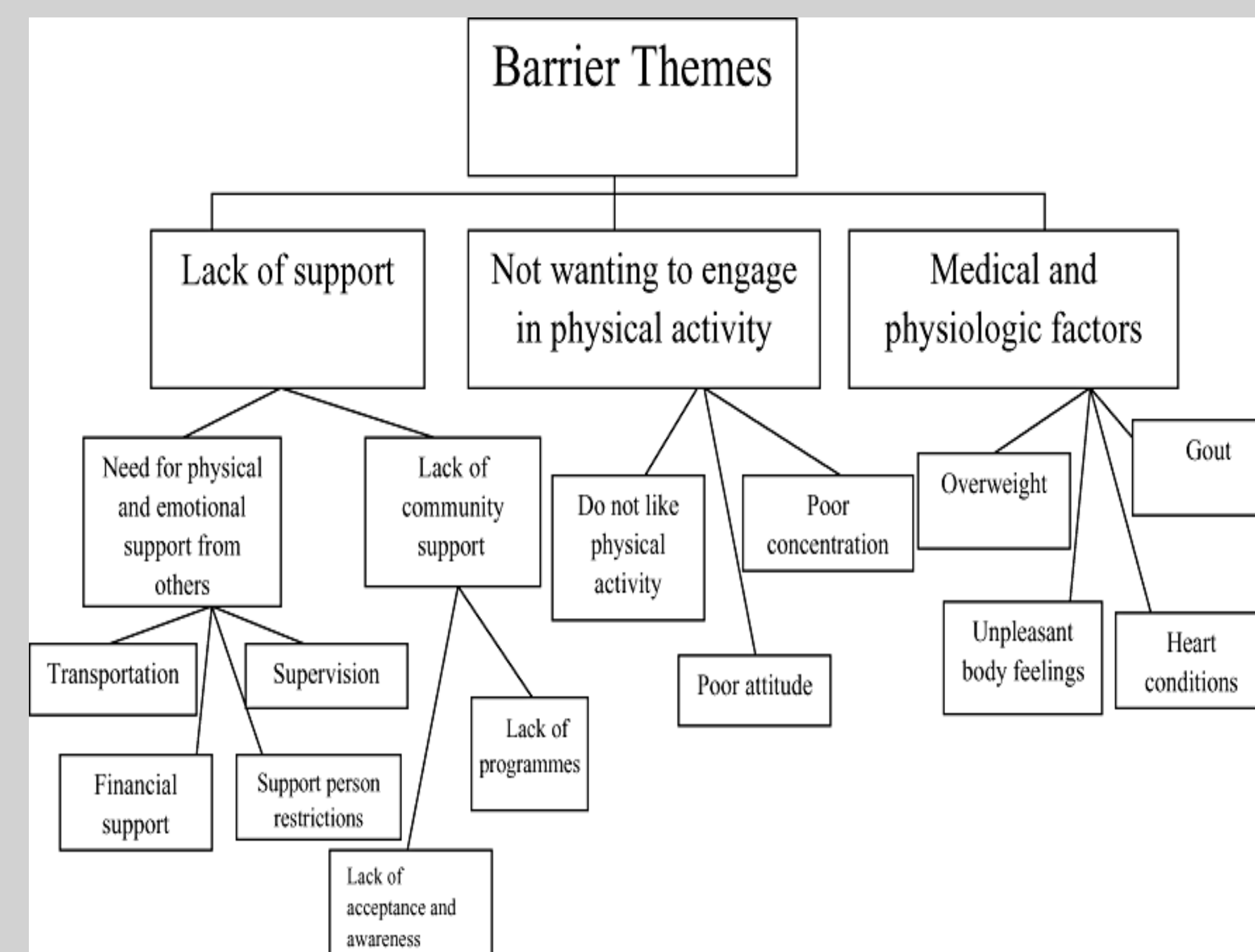


(Source: Heid, 2018)

Barriers

Children who have Down Syndrome often encounter difficulties in their communication due to their cognitive and physical limitations (Grieco *et al.*, 2015). These obstacles may impede their ability to express themselves effectively and interact with others. Studies indicate that speech and language delays are more prevalent among children with Down Syndrome, further exacerbating language barriers (Chapman, 1997; Hendrix *et al.*, 2021). Moreover, Down Syndrome is frequently linked to hearing loss, which can magnify communication difficulties (Karmiloff-Smith *et al.*, 2016; Nightengale *et al.*, 2017) However communication is considered crucial for social interaction, however, it can be challenging for individuals with Down Syndrome (Melvin, Meyer and Ryan, 2019). These challenges can lead to frustration, isolation, and a lower quality of life for both children with Down syndrome and their families (Caicedo, 2014). However, with early intervention and specialized therapy this can significantly help in overcoming these language barriers (Scanlon, Anderson and Sweeney, 2017). Speech and language therapy, for instance, can help children with Down Syndrome improve their communication skills, develop their vocabulary, and enhance their ability to express themselves (Ebbels *et al.*, 2019).

Children with Down syndrome often encounter negative attitudes, stereotypes, and a general lack of understanding in society (Ryan and Scior, 2014). They may experience discrimination and exclusion in various settings, including education, healthcare, and social interactions (MacMillan *et al.*, 2014). However, professionals who work with these children can benefit from specialized training programs that cover various topics, such as communication strategies and behavior management. Additionally, insufficient education and awareness about Down syndrome can contribute to social barriers, making it challenging for individuals with Down syndrome to access appropriate support and resources (Hodkinson, 2019). The lack of opportunities for inclusion in social and educational settings can also pose a significant barrier for these children. However, society needs to promote education and awareness about the condition, challenge negative attitudes and stereotypes, and provide opportunities for inclusion and participation in all aspects of society to build a more inclusive and supportive environment for individuals with Down syndrome (Seewooruttun and Scior, 2014; Juvonen *et al.*, 2019).



(Source: Mahy *et al.*, 2010)

Strategies

Hippotherapy, also known as equine-assisted therapy, involves using horseback riding as a treatment method for physical, occupational and speech language therapy (Osmann, 2015; Kaya, Saka and Tuncer, 2023). It may benefit children with Down syndrome by improving their balance, coordination, muscle strength, and overall physical fitness (Portaro *et al.*, 2020). Moreover, it can help improve their self-confidence, communication skills, and ability to form relationships (Jackson-Maldonado, 2021). However, Conroy *et al.* (2022) states that it is considered important to ensure that the hippotherapy is done under the guidance of a trained professional who can provide a safe and effective treatment program tailored to the individual needs of each child.

Hippotherapy has been proven to have numerous benefits for children with Down syndrome. Peek and Quinn (2016) states that some of the strengths of using hippotherapy are:

- Improved physical fitness: Riding a horse can improve balance, coordination, muscle strength, and overall physical fitness.
- Social and emotional benefits: The interaction with the horse and the therapist can enhance self-confidence, communication skills, and capacity to develop meaningful relationships with others.

However, Buchanan and Higgins (2023) states that there are also some potential weaknesses that should be considered:

- Cost: Hippotherapy can be expensive and may not be covered by insurance.
- Availability: Not all areas may have access to hippo therapy facilities or qualified professionals.



Conclusion

In summary, Down syndrome is a genetic disorder that affects many people worldwide. Early interventions are crucial to unlocking the full potential of those with Down syndrome. Inclusive and supportive environments are vital for their emotional, social, and cognitive growth. Additionally, therapeutic advancements may enhance their quality of life.