

Supporting Children With Downs Syndrome

What is Down Syndrome?

Antonarakis et al., (2020) states that Down syndrome is a genetic condition caused by an extra copy of chromosome 21, leading to physical features, developmental delays, and intellectual disability. Early diagnosis and intervention are crucial for supporting development and inclusion (Tollan et al., 2023). Kazemi, Salehi and Majid Kheirollahi, (2016), implies that there are three types of Down’s syndromes: **Trisomy 21** (95% of cases), **Mosaic Down syndrome** (2%, often harder to detect), and **Translocation Down syndrome**, which is the only type that can be inherited. The others result from random cell division errors (Asim et al., 2015).

Identification

Grieco et al., (2015), suggests that Down syndrome can be identified before or at birth, but if undiagnosed, early years practitioners may spot signs such as developmental delays, distinctive facial features, low muscle tone, or unusual social interactions (Antonarakis et al., 2020b). Begenisic et al., (2015) explains that while practitioners cannot diagnose, they play a key role in raising concerns and initiating referrals. Arumugam et al., (2015) discussed that diagnosis typically occurs either **prenatally** through screening and diagnostic tests (e.g. CVS or amniocentesis), or **postnatally** via physical observations confirmed by a genetic blood test called a **karyotype**, which detects the extra chromosome 21 (Grane et al., 2022).

Impact

Children and adults with Down syndrome often face health issues like heart defects, hearing and vision problems, and thyroid conditions, along with cognitive delays in areas such as speech and memory (Valentini et al., 2021). Lagan et al., (2020), states that educational progress is slower, and access to individualised support varies. Social integration can be difficult due to communication challenges and stigma (Michael and Marder, 2021). Bills and Mills (2020), implies that despite laws promoting inclusion, barriers like inadequate educator training, limited resources, and societal discrimination persist in education, healthcare, and employment. Adults with Down syndrome often struggle to find jobs due to lack of accommodations and negative perceptions. Improving outcomes requires a coordinated, multidisciplinary effort involving families, professionals, and society, along with greater public awareness, support services, and policy enforcement (Windsperger and Hoehl, 2021).

Support

Polly et al., (2017) suggests that children with Down syndrome have unique strengths, such as strong social skills, emotional awareness, and visual learning preferences, that can be nurtured through supportive environments. Norlaili et al., (2024), suggests that early intervention, inclusive education, therapy, and strong family and community support are key to their development.

Educational theories reinforce this:

Vygotsky highlights the value of social interaction and guided learning.

Gardner supports diverse teaching approaches that match individual strengths.

Bronfenbrenner emphasizes the role of interconnected environments.

Maslow stresses meeting basic needs for optimal learning.

Together, these frameworks help create inclusive, empowering settings where children with Down syndrome can thrive (Agbadjé et al., 2021).

Resources

Gray (2015), claimed that supporting children with Down syndrome requires a wide range of resources across education, healthcare, family, and community. Sheppard and Moran (2021), implies that key supports include IEPs, trained educators, inclusive classrooms, therapies, regular health checks, family counseling, financial aid (like Medicaid and SSI), and inclusive social programs. These resources promote academic, emotional, and social development (Fredes, Astudillo and Lizama, 2021).

Educational theories support this approach:

- Vygotsky emphasizes guided learning and early intervention.
- Gardner encourages using diverse, strength-based teaching methods.
- Bronfenbrenner highlights the importance of collaboration across family, school, and healthcare.
- Maslow stresses that children’s basic needs must be met to enable learning and growth.

By applying these theories, educators and caregivers can create more inclusive, responsive, and empowering frameworks that help children with Down syndrome thrive across all aspects of life (Khan, Zarga and Najar, 2020).

Down syndrome is a genetic condition that occurs in approximately **1 in every 700 live births**, making it the most common chromosomal disorder worldwide (Ahmed and Tamim, 2025). It is caused by the presence of an extra copy of chromosome 21, a condition known as **trisomy 21**. About **95%** of cases are due to this full trisomy, while the remaining involve translocation or mosaicism (Papavassiliou et al., 2017). The risk of having a child with Down syndrome increases with maternal age, particularly after age 35 (Trimble, Baird and Opitz, 2019). Around **50%** of babies born with Down syndrome have **congenital heart defects**, and many also experience health issues such as **hearing loss (up to 75%)**, **vision problems (up to 60%)**, and **thyroid disorders (15–20%) (Roizen, 2018)**. Despite developmental delays, early intervention and support services significantly improve quality of life, and with advances in healthcare, the **average life expectancy** for individuals with Down syndrome has risen to around **60 years**, compared to just 25 years in 1983 (Antonarakis et al., 2020c).



Understanding Down syndrome and the critical role early years practitioners play in the identification and support process is fundamental to fostering inclusive and developmentally responsive environments. Through early recognition of key indicators, practitioners are positioned to facilitate timely referrals and access to appropriate interventions, thereby enhancing developmental outcomes and well-being for affected children. Although children with Down syndrome often experience a range of cognitive, medical, and social challenges, they also demonstrate distinct strengths that can be effectively supported through informed, inclusive, and empathetic practice.

The application of developmental and educational theories including those of Vygotsky, Gardner, Bronfenbrenner, and Maslow offers a robust theoretical framework for constructing holistic and individualised support systems. These perspectives underscore the importance of social interaction, multiple intelligences, ecological interdependence, and the fulfilment of fundamental needs in promoting meaningful learning and participation. Ultimately, the integration of interdisciplinary collaboration, coordinated resources, and a sustained commitment to inclusion is essential in ensuring that children with Down syndrome are not only adequately supported but are empowered to realise their full potential from the earliest stages of their educational journey.



(Syndrome Uk, 2024)

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