



ECEY6006 Supporting Children with Additional Learning Needs

0901804
0901804@student.uwtsd.ac.uk

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Basic Acknowledgement format of AI tool use:

I acknowledge the use of AI Tool throughout this study

I used the prompt(s):

1. Co-pilot, Google to find resources.
2. Co-pilot to create 2 images for the poster.
3. Co-pilot to summarise articles
4. Grammarly to check spelling and grammar, along with plagiarism.

I confirm that I have not presented any AI-generated text as my own work.

I confirm I have copies of my drafts, notes, and other resources I used before and after the use of AI tools, which I may be asked to provide in evidence.

Part A Webinar link

[Recap: ECEY6006 Supporting Children with Additional Learning Needs. 16 May | Meeting | Microsoft Teams](#)

Part B Webinar Script

Thank you, Nicola.

This presentation analyses Tourette syndrome as an additional learning need, focusing on its identification, diagnosis, challenges within healthcare and education systems, and the impact of inclusive support strategies.

Throughout the presentation, I will consider the extent to which the difficulties experienced by children with Tourette Syndrome arise from neurological differences themselves or from wider social and educational barriers.

What is Tourette Syndrome?

Tourettes Action (2026) and The Brain Charity (2022) both describe Tourette syndrome (TS) as a neurological condition or disorder, characterised by repeated, involuntary vocal sounds and physical movements, known as tics. However, the term '*disorder*' can carry negative implications.

Some researchers argue that describing TS as a 'disorder' may reinforce stigma and perceptions of abnormality, whereas terms such as 'condition' or 'syndrome' are often viewed as more neutral (Horwitz, 2017; Ferrie, Miller and Hunter, 2020; Wiltshire, 2024; UPMC, 2025).

TS is diagnosed clinically using DSM-5 (American Psychiatric Association, 2022) and ICD-11 criteria. Diagnosis requires:

- multiple motor tics
- at least one vocal tic persisting for over a year and before age 18, and
- not attributable to substances or other conditions (NHS, 2017; National Institute of Neurological Disorders and Stroke, 2026; Jones, Saylam and Ramphul, 2023).

Further tests mainly rule out other causes and co-occurring conditions, such as PANS, PANDAS, and OCD (True, 2021; Murgia *et al.*, 2026; Tourettes Action, 2026b). The ICD-11 is designed for broader use and more accurately aligns with the understanding that TS is neurological, rather than strictly psychological (Cavanna, Purpura and Nacinovich, 2022; CDC, 2026).

Importantly, TS exists on a neurodevelopmental spectrum. Some children experience mild tics with little disruption. Others have severe, more complex tics that significantly affect daily life (Great Ormond Street Hospital, 2019; Kurlan, 2004, pp. 3).

Many children with TS also experience co-occurring conditions, including ADHD, OCD, anxiety, autism, and sensory difficulties. This is important because co-occurring conditions often create greater barriers in education than tics themselves (McCracken, 2017; Albin, 2017).

Historical Background

Historically, TS was often misunderstood as a mental illness or behavioural deviance, contributing to stigma that still persists today (Tourette Association, 2010; Vipppa and Martindale, 2026). Contemporary media also overemphasise Coprolalia, despite its rarity, reinforcing stereotypes rather than an accurate understanding (Jankovic, 2012; Fat *et al.*, 2012; Kobierska *et al.*, 2014; Calder-Sprackman, Sutherland and Doja, 2014).

Identification and Diagnosis

TS is diagnosed clinically, as there is no single blood test or brain scan to confirm the condition. TS is not rare. TS affects approximately 1% of children worldwide, including 1 in 100 children in the UK. However, research suggests it may be under-recognised in some non-Western settings due to stigma, cultural beliefs, limited awareness and restricted access to specialist services (Robertson, Eapen and Cavanna, 2009; Clarke and Fry, 2024; Pring *et al.*, 2025; Tourettes Action, 2026a)

The diagnostic process begins when caregivers notice repetitive movements, behaviours, or when children become socially distressed (Tourettes Action, 2010).

Diagnosis usually involves:

- Developmental history
- Observation of tics
- Family interviews
- School/nursery reports
- And an assessment by a paediatrician or neurologist.

Symptoms commonly begin between the ages of 3 and 9 (Great Ormond Street Hospital, 2019; NHS, 2025; Centers for Disease Control and Prevention, 2026; NIH, 2026).

Boys vs Girls

Research consistently shows that boys are diagnosed with TS more frequently than girls, with 3 to 4 times higher rates (Rizzo *et al.*, 2012; Albin, 2017).

However, this does not necessarily mean TS is genuinely rarer in girls, as they may present differently and be more likely to mask symptoms or internalise distress. As a result, girls may be misdiagnosed, diagnosed later or overlooked entirely. (Gagnon *et al.*, 2024; Budman, 2024; Jaffe, 2025; Curb and Price, 2025)

Recent research has explored increases in functional tic-like behaviours among adolescent girls during COVID-19, raising concerns about the influence of social media and diagnostic confusion (Heyman, Liang, and Hedderly, 2021; Kale, 2021; Müller-Vahl *et al.*, 2022).

This raises questions about the presence of gender bias in diagnostic systems. Historically, most neurodevelopmental research has focused on boys. As a result, diagnostic criteria may reflect male presentations more than female (Garris and Quigg, 2021; Garcia-Delgar *et al.*, 2022; Baizabal-Carvallo and Jankovic, 2023)

This suggests that diagnosis can be influenced by social expectations surrounding gender and behaviours, rather than being entirely objective.

Barriers to Support and impact on the child

There are many barriers preventing children from receiving timely diagnosis and support. These barriers are shaped not only by medical systems. Wider social inequalities and attitudes also play a role.

One major barrier is fragmented healthcare services. Families are often passed between medical and mental health practitioners, especially for co-occurring conditions (Marino *et al.*, 2023; ACAMH, 2024; Jacobson, 2024).

In the UK, assessment waits can range from over one to more than three years, creating a postcode lottery for support (Babbage and Groom, 2024; Tourettes Action, 2026a). In Wales, insufficient specialist provision is also a concern (National Institute for Health and Care Research, 2026). In comparison, diagnosis in Jerusalem reportedly takes between 6 and 13 months (Shilon *et al.*, 2008), while Danish research found an average of 2.8 years (Mol Debes, Hjalgrim and Skov, 2008), raising questions about systemic delays in the UK.

These delays can significantly affect children's well-being. Delayed diagnosis can increase anxiety, exhaustion and educational difficulties for both children and families (Hedstrom *et al.*, 2026).

From a medical perspective, diagnosis is important because it enables access to treatment and support. However, the social model highlights how unequal systems, limited services, institutional barriers and diagnostic language can contribute to disability (Sample, 2024). The neurodiversity perspective further suggests that difficulties often arise not solely from the tics themselves, but from environments that fail to accommodate neurological differences (O'Hare *et al.*, 2015; Pring *et al.*, 2025).

Stigma remains another major barrier, as fear of judgement, cultural beliefs and biases in referral pathways may discourage help-seeking and contribute to underdiagnosis, particularly among girls and minority ethnic children. (Great Ormond Street, 2019; ACAMH, 2024; Scahill, Specht and Page, 2014)

The impact on children can be substantial, including social isolation, low self-esteem and reluctance to disclose symptoms. Research suggests that peer understanding and acceptance may reduce distress, whereas ridicule and exclusion can intensify emotional difficulties (Hanks *et al.*, 2016).

Different disability models offer contrasting explanations for challenges experienced by children with TS. The medical model focuses on diagnosis and treatment, whereas the social model highlights how stigma, exclusion and inflexible environments create disability (Zaks, 2024). The neurodiversity perspective argues

that neurological differences should be viewed as part of natural human diversity. However, this argument should be applied cautiously, as some research also recognises that tics themselves can be painful, distracting, and impairing for some. (Pring *et al.*, 2025; Eapen, Cavanna and Robertson, 2016)

Together, these perspectives suggest that children's experiences are shaped not only by neurological differences themselves, but also by how society responds to them (Vanaken *et al.*, 2025).

A further barrier is a lack of awareness among teachers and professionals. Increasingly, research suggests that children with TS may experience greater harm from inflexible environments, misunderstanding and stigma than from the tics themselves, because tics may be interpreted as disruptive, attention-seeking, anxiety, or behavioural difficulties (Kale, 2021; Müller-Vahl *et al.*, 2022). This misunderstanding can result in punishment, exclusion or inappropriate behavioural interventions.

Inclusive education frameworks such as the UNCRPD (United Nations, 2006) and the ALN Code for Wales (2021) (Welsh Government, 2021) emphasise schools' and childcare settings' responsibility to remove barriers and promote participation.

Support Strategy: Class Accommodations

Research identifies inclusive classroom accommodation as a highly effective support strategy for children with TS, with studies demonstrating its positive impact on children's engagement and well-being (Chaturvedi *et al.*, 2011; Welter, 2021; CDC, 2026a).

Effective accommodations may include

- movement breaks and reduced pressure to suppress tics can reduce physical discomfort and emotional fatigue
- flexible seating can improve regulation and participation
- access to quiet spaces can reduce overload and anxiety
- peer awareness strategies can reduce bullying and social isolation

Importantly, successful support focuses on reducing barriers rather than punishing differences (Pring *et al.*, 2025).

Support strategies must be tailored to each child. However, implementing individualised approaches can be difficult due to limited resources, time constraints, and the complexity of addressing co-occurring conditions, despite having ALN legislation and policies (Garcia-Melgar *et al.*, 2022; Nelis, Pedaste and Šuman, 2023). This means inclusive policies do not always translate into inclusive practices.

These challenges highlight the importance of ongoing professional development, multi-agency collaboration and strong leadership to promote an inclusive culture within educational settings (Ainscow and Sandill, 2010; Ludlow, Cutler and Keville, 2022)

Bronfenbrenner's (1986) Ecological Systems Theory emphasises the importance of collaboration between families, educators, and professionals in supporting children with TS.

Conclusion

To conclude, although Tourette syndrome is a neurological condition, many difficulties experienced by children are intensified by stigma, misunderstanding and inflexible educational systems. This highlights the importance of inclusive practice that focuses not only on treatment, but also on participation and acceptance.

Ultimately, children with TS are often disabled as much by environmental barriers as by the condition itself, raising questions about whether education systems should prioritise changing the child or the environment around them.

Thank you for listening. Does anyone have any questions?

Question 1

You shared the classroom environment strategy. Are there other strategies to support children with Tourette syndrome?

Yes, I came across Comprehensive Behavioural Intervention for Tics, known as C-BIT, which is a non-medication approach that help children, usually around the age of 10, recognise the urge before a tic, and use strategies to manage it. e.g. shoulder jerking tics may be reduced by teaching the child to gently press their arms down and relax their shoulders (CDC, 2026a)

There is also the medication, however McCracken, (2017) argues when TS co-occurs with conditions such as ADHD, some medications may potentially worsen tics. More recent approaches are being explored, such as ORBIT, an online behavioural therapy programme, and a wrist-worn device called Neupulse, which is currently being tested to help reduce tic severity.

In preschool setting, support focuses more on awareness and environmental strategies because TS can be difficult to diagnose early due to co-occurring conditions such as ADHD and OCD. (Manbeck, Johnson and Sharp, 2023)

Practitioners can help by recognising triggers, reducing stress and overstimulation, providing movement or sensory breaks and creating calm predictable routines with visual timetables and quiet spaces.

It is also important not to draw attention to tics, as anxiety and tiredness can make them worse. When practitioners respond with empathy and consistency, it creates a safe, secure environment for the child to thrive, which links to Bowlby's attachment theory.

Question 2

During your research, did you find the cause for Tourette syndrome?

Well, the basal ganglia, a group of brain structures responsible for voluntary movement, are believed to play a key role in Tourette syndrome and tic disorders.

The causes of Tourette syndrome still remain complex and not fully understood, involving genetic and environmental influences (Fernandez, 2025; Albin, 2017; NHS, 2017; VJNeurology, 2022).

However, I came across a large-scale study (Mathews *et al.*, 2014) of over 6000 pregnant mothers that found that prenatal alcohol exposure raised the risk of TS and chronic tic disorders. The researchers also identified several other prenatal factors that had not been previously explored. However, later reviews have argued that the relationship is not definite. Some research finds that only a small percentage inherit the condition (Fernandez, 2025; Albin, 2017; NHS, 2017). Others argue the association between prenatal alcohol exposure and TS may reflect compounding factors, not a direct cause. Literature reviews of literature highlight inconsistent

findings and major methodological weaknesses across studies (Chao, Hu and Pringsheim, 2014; Benefunder, 2015; VJNeurology, 2022; Tourettes Action, 2026).

Thank you, that is the end of the questions. I would like to pass you back to Nicola.

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