

I have not used AI in this assignment.

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Script

Hello my name is Claire Monaghan I am a teaching assistant. My discussion is going to be focus on a learning disability called dyscalculia.

A particular type of learning disability called dyscalculia affects a person's capacity to fully understand and manipulate numbers and mathematical concepts. According to Cleveland Clinic (2022) without impairing overall intellect, dyscalculia is a learning condition that affects mathematical skills, such as comprehending numbers, making calculations, and absorbing numerical concepts. It is frequently called 'math dyslexia', but because the underlying cognitive processes are different, this comparison may be deceptive. Dyscalculia may appear in childhood, frequently when children start learning fundamental maths, although it can sometimes go undetected until adulthood.

According to View (2025) Dyscalculia symptoms are not usually obvious, not every child occasionally struggles with maths. However, children with dyscalculia face far more challenges than children of the same age. Math anxiety is not the same as dyscalculia. However, children with dyscalculia frequently experience intense feelings related to maths. For instance, when they play board games, they may become upset or frustrated.

About six out of every 100 people suffer from dyscalculia according to Sayers (2025) since up to 25 out of 100 people (or 25% of the population) struggle with mathematics, it can be challenging to diagnose dyscalculia. However, dyscalculia is a unique and persistent challenge that impacts both adults and children. The degree to which it impacts people differs from person to person and can change throughout the course of your life based on factors such as your age, opportunities, and experience. How dyscalculia impacts you can also depend on your living circumstances and whether you have any other learning challenges.

However, Sayers (2025) suggests you may struggle with maths at any level due to dyscalculia, from learning how to add up as a child to learning algebra. It might also be difficult to understand concepts like quantity, making daily chores difficult.

This term is significant because it implies that dyscalculia is at the extreme end of a continuum of mathematics learning difficulties Ferrie (2022) suggests to put it another way, many people may struggle to learn maths because of other disorders like dyslexia, which has major problems with working memory, information retrieval, processing speed, and sequencing that affect learning maths. Math learning will also be impacted by dyspraxia-related issues with spatial awareness, lateral thinking, and visual perception. Additionally, other significant problems like anxiety about maths, which is an actual condition that causes the brain to freeze, as well as environmental and societal concerns including school absence, stereotyping, culture, math curriculum, and teaching methods, can all have an impact.

Identification and Diagnosis of Dyscalculia

Differentiating dyscalculia from ordinary math learning challenges can be challenging according to Hornigold and Chinn (2023) where does one start and the other finish? External factors like frequent absences from school or poor instruction are more likely to be blamed for general mathematical difficulties. Internal variables, or variations in the brain's wiring, are the cause of dyscalculia. It can be more difficult to determine whether a student has dyscalculia because some students may have both internal and environmental factors at work. Keeping an eye out for any unexpected mathematical difficulties, such as a child who is doing well in every other subject but struggles with basic maths.

However, Hornigold and Chinn (2023) claims some students may have little trouble with some mathematical concepts, such as shape and space, yet struggle greatly with number work and fact recall.

Children with dyscalculia find it difficult to understand what quantity means according to Lucangeli (2020) for example, they could not comprehend that the number 8 represents eight items in any collection, like eight balls or eight oranges. They frequently struggle to understand the difference between biggest and smallest or more and less. Additionally, children might not comprehend the meaning or functioning of the numbers. Additionally, these children might be much slower on dot enumeration.

According to Kailey (2025) a qualified psychologist or educational specialist will identify dyscalculia in children through a comprehensive assessment that includes clinical interviews, standard tests, and observation of math-related abilities.

Barriers

In early years, children with dyscalculia may face barriers, according to Puffin Maths (2024) delayed learning of number concepts, children with dyscalculia frequently have difficulty obtaining fundamental mathematics and number concepts, which may delay their progress in other mathematical areas. According to Jennings (2024) mathematics anxiety is a psychological and emotional reaction to maths that frequently arises because of pressure, bad experiences, or frequent failure. It could affect a child's performance on exams or in educational environments.

How ever, Jennings (2024) suggest not being able to subitise even very little amounts, poor numerical sense, difficulty calculating or understanding patterns, unable to determine whether a response is reasonable, a slow rate of processing and Immature tactics, such as counting in ones.

Poor recall of procedures and information Jennings (2024) also claims weak at drawing connections, such as $4 + 4 = 8$, so $14 + 4 = 18$, fear of dealing with numbers, short-term and long-term memory difficulties and inability to count backwards and counting errors (70, 80, 90, 20).

Strategies

Math learning may be challenging for children with dyscalculia, according to View (2025) but with determination, support, and particular strategies, children can gain confidence and develop key numerical abilities. Consult educational experts for assistance and direction if you think your child may have dyscalculia. However, View (2025) suggests Play games and engage in practical exercises

Maths may be less scary and more enjoyable with games, try to practice counting, play board games like snakes and ladder's and to enhance understanding of numbers, play card games like go fish with number pairings, use dice games to practice multiplication, subtraction, and addition.

Link mathematics to everyday life show children how maths is used on an everyday basis. View (2025) also, suggests maths is frequently best learned by children when it is applied to real-world scenarios. Engage them when shopping, counting money, while cooking, measuring ingredients, making travel plans using maps and distances.

Conclusion

Although there isn't a single cure for dyscalculia, there are some very successful intervention techniques that can help people improve their mathematical abilities and self-assurance. Age, degree of impairment, and learning environment all influence the appropriate strategy.

An assessment is the only way to determine whether the child has dyscalculia according to view (2025) one can be completed for free in school. They can be carried out in private as well. The assessor will look at other areas of learning in addition to using a series of tests developed especially for dyscalculia. In this process, you will be able identify the child's areas of difficulty. Additionally, you will learn about the child's strengths. Children's strengths can be utilized by the school to help them improve. Depending on whether the child has a private or school evaluation, you could hear different terms. Conditions are not diagnosed by schools. Learning disabilities are identified by them. You may be informed that the child has a maths learning difficulty. Additionally, you may hear that the child has dyscalculia.

Answers:

Hannah – Anxiety related barriers

According to Luttenberger et al (2018) maths anxiety, frustration and avoidance behaviours are frequently caused by early delays in number understanding.

Anxiety significantly slows down mathematical performance because it takes up limited working memory resources.

Children may have a negative view of themselves when it comes to maths, which lowers engagement and delays the development of new skills.

Ria - Dyscalculia's social barriers in an early childhood environment

According to Geary (2017) In early childhood settings, children with dyscalculia may encounter social obstacles such as avoiding math-related games, having low self-esteem because of ongoing math difficulties, being made fun of or having trouble with basic abilities, and finding it difficult to participate in group activities. Their general wellbeing and social connections may be impacted by these obstacles. To help these children overcome these obstacles and develop their social skills, it is important to offer them understanding and support.

Questions:

Ria – What other strategies can you implement to support non-verbal children communicate?

Hannah – Is there enough evidence that behavioural parent training is successful?

I definitely feel like I have a greater understanding of the additional learning needs that we have mentioned during this webinar.

No, Thank you!

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