

Can a sword-slashing virtual reality game help kids with dyspraxia move better?

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1 How the study worked?

Children with dyspraxia often find movement practice hard or boring, and immersive virtual reality (VR) hadn't been tested with them before.



27 children and adolescents with DCD (dyspraxia)



Ages 10-16 years



Done at home

DCD/probable DCD was identified using parent DCD-questionnaire screening, the movement ABC-3, and exclusion of other neurological or musculoskeletal diagnoses.

Same children tried both activities - one at a time



VR game
5 days
30 min/day



2+ weeks
break



Tablet game
5 days
30 min/day

i Order varied: some started with VR, others with tablet.

2 What was measured?

Overall motor skills

A standard test of hand control, aiming & catching, balance and moving around (the Movement ABC-3).

Enjoyment

A questionnaire asking how fun the activity was.

Hand speed and skill

How many small blocks a child could move, one by one, in 60 seconds (the Box and Block Test).

Motivation & mood

Rated by the child after each daily play session.

3 What did we find?

Hand speed improved more after VR than the tablet

Children moved roughly 5–6 more blocks per minute with each hand after the VR. After the tablet, there was essentially no change.

VR stayed fun, the tablet's appeal wore off

Enjoyment dropped noticeably with the tablet game, but stayed high and steady with VR.

More motivated, and in a better mood

Children reported feeling more motivated and happier on VR days than on tablet days.

Bigger-picture motor skills: promising, but not proven

On the broader motor test, VR scores nudged upward (hand control, balance and overall movement score), while the tablet did not. But the head-to-head difference wasn't strong enough to be certain — so treat this as an encouraging hint rather than firm proof.

4 What this could mean?

- VR games like this could be a fun way for kids to move more at home.
- Because kids actually enjoy it, they're more likely to keep playing.
- A few children found the headset heavy or uncomfortable. VR may not suit every child; game choice and comfort are significant factors.

5 Thinking of trying VR at home?

- An adult stays nearby
- Clear, open play space
- Keep sessions short
- Watch for motion sickness
- Stop if unwell or tired

6 What is next?



Test in larger and longer trials



Assess transfer to daily motor activities and sport participation

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- Scan to view full study details

