



Children with **autism spectrum disorders** have altered **postural control strategies** and **standing balance performance**: Implications for **training**

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Background:

Motor control deficits in children with autism spectrum disorders (ASD) have been widely acknowledged.

However, no study has specifically examined the **postural control strategies** in these children thus far.

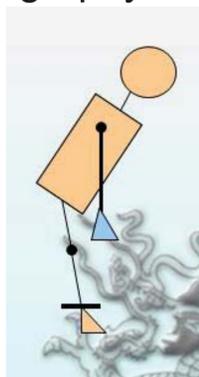
Objectives:

To compare the **postural control strategies** and **standing balance performance** of **children with and without ASD**.

Method:

Twenty-nine children with ASD and without developmental coordination disorder (mean age \pm SD = 6.8 \pm 1.1 years; 25 boys and 4 girls) and 94 children with typical motor development (mean age \pm SD = 6.8 \pm 1.2 years; 71 boys and 23 girls) participated in the study voluntarily.

Postural control strategies and **standing balance performance** were evaluated with the **sensory organization test (SOT)** of a computerized dynamic posturography machine.



Results:

Results revealed that the **ASD group** had significantly **lower SOT condition 4** ($p = 0.003$) and **condition 6** ($p = 0.007$) **strategy scores** and **SOT composite equilibrium score** ($p = 0.007$) than the control group, by 4.0%, 5.2% and 11.1%, respectively.

Conclusion:

Children with ASD over relied on hip strategy to maintain postural stability in sensory challenging environments.

Their overall standing balance performance was **inferior to their typically-developing peers**.

Therefore, postural control training should be factored into rehabilitation treatments or school physical education programmes for children with ASD.

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