<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>Children with autism spectrum disorders have altered postural control strategies and standing balance performance: Implications for training</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Author(s)</strong></td>
<td>Fong, SM</td>
</tr>
<tr>
<td><strong>Citation</strong></td>
<td>Hong Kong ASD Conference 2017: Family Support and Development, Hong Kong, 9 January 2017</td>
</tr>
<tr>
<td><strong>Issued Date</strong></td>
<td>2017</td>
</tr>
<tr>
<td><strong>URL</strong></td>
<td><a href="http://hdl.handle.net/10722/246546">http://hdl.handle.net/10722/246546</a></td>
</tr>
<tr>
<td><strong>Rights</strong></td>
<td>This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.</td>
</tr>
</tbody>
</table>
Children with autism spectrum disorders have altered postural control strategies and standing balance performance: Implications for training

Shirley S.M. Fong
School of Public Health, The University of Hong Kong, Hong Kong

**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 ± SD = 6.8 ± 1.1 years; 25 boys and 4 girls) and 94 children with typical motor development (mean age ± SD = 6.8 ± 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.

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

**Acknowledgement:**
This study was partially supported by a Health and Medical Research Fund (13142081) from the Food and Health Bureau of Hong Kong.

**Contact person:**
Shirley S.M. Fong, PT, PhD (smfong@hku.hk)

**Key references:**