

**Supplementary Table S1.** Performance among NDD children/adolescents as a whole group and controls

Conditions	Area (mm <sup>2</sup> )		Perimeter (mm)		APAV (mm/sec)		LAV (mm/sec)	
	Controls	NDD	Controls	NDD	Controls	NDD	Controls	NDD
<b>Median (IQR)</b>								
SOT1-EO	30 (21-63)	79 (46-143)	123 (92-140)	156 (120-194)	3 (2-4)	4 (3-5)	2 (2-3)	4 (3-4)
SOT2-EC	58 (47-91)	164 (78-285)	157 (132-204)	242 (167-290)	4 (4-6)	7 (5-9)	3 (3-4)	5 (3-6)
SOT3-SV	66 (35-93)	166 (96-275)	150 (117-177)	210 (168-288)	4 (3-5)	6 (5-8)	3 (2-4)	5 (3-6)
SOT4-EOSS	62 (42-96)	132 (92-223)	173 (144-221)	240 (182-297)	5 (4-6)	7 (5-8)	4 (4-5)	6 (4-7)
SOT5-ECSS	189 (134-264)	400 (238-562)	299 (234-346)	421 (302-505)	8 (7-10)	11 (9-15)	7 (5-8)	9 (7-12)
SOT6-SVSS	190 (132-294)	490 (702-299)	299 (212-343)	409 (301-510)	8 (6-10)	11 (8-14)	7 (5-7)	9 (7-12)

NDD, Neurodevelopmental Disorders; APAV, Anterior-Posterior Average Velocity; LAV, Lateral Average Velocity; IQR, interquartile range; SOT, Sensory Organization Test; EO, Eyes Open; EC, Eyes Closed; SV, Sway-referenced Vision; EOSS, Eyes Open Sway-referenced Support; ECSS, Eyes Closed Sway-referenced Support; SVSS, Sway-referenced Vision Sway-referenced Support

**Supplementary Table S2.** Performance in the Area parameter among NDD and controls

Conditions	ASD	ADHD	TS	Controls
	<b>Median (IQR)</b>			
SOT1-EO	122.5 (78.5-191)	68 (46-151)	62.5 (38-147.5)	30 (21-63)
SOT2-EC	265.5 (103-395)	170 (86-330)	97 (66-250)	58 (47-91)
SOT3-SV	214 (141.5-302.5)	178 (104-351)	123 (56-241)	66 (35-93)
SOT4-EOSS	149 (95.5-296)	142 (78-259)	116.5 (97-187)	62 (42-96)
SOT5-ECSS	430 (313-712)	469 (280-567)	273 (202-487)	189 (134-264)
SOT6-SVSS	575 (297.5-708)	552 (381-716)	355.5 (252-640)	190 (132-294)

NDD, Neurodevelopmental Disorders; ASD, Autism Spectrum Disorder; ADHD, Attention Deficit Hyperactivity Disorder; TS, Tourette Syndrome; IQR, interquartile range; SOT, Sensory Organization Test; EO, Eyes Open; EC, Eyes Closed; SV, Sway-referenced Vision; EOSS, Eyes Open Sway-referenced Support; ECSS, Eyes Closed Sway-referenced Support; SVSS, Sway-referenced Vision Sway-referenced Support

**Supplementary Table S3.** Performance in the Perimeter parameter among NDD and controls

Conditions	ASD	ADHD	TS	Controls
	<b>Median (IQR)</b>			
SOT1-EO	182.5 (126.5-233)	161 (120-196)	140.5 (112-178)	123 (92-140)
SOT2-EC	288.5 (203-326.5)	260 (172-336)	217.5 (150-256)	157 (132-204)
SOT3-SV	238 (177-321.5)	242 (181-303)	181.5 (154-233)	150 (117-177)
SOT4-EOSS	243.5 (184-292.5)	268 (193-360)	232.5 (172-283)	173 (144-221)
SOT5-ECSS	428 (300.5-539.5)	446 (326-568)	343.5 (287-471)	299 (234-346)
SOT6-SVSS	425.5 (303.5-554)	464 (337-530)	346 (297-464)	299 (212-343)

NDD, Neurodevelopmental Disorders; ASD, Autism Spectrum Disorder; ADHD, Attention Deficit Hyperactivity Disorder; TS, Tourette Syndrome; IQR, interquartile range; SOT, Sensory Organization Test; EO, Eyes Open; EC, Eyes

Closed; SV, Sway-referenced Vision; EOSS, Eyes Open Sway-referenced Support; ECSS, Eyes Closed Sway-referenced Support; SVSS, Sway-referenced Vision Sway-referenced Support

**Supplementary Table S4.** Performance in the APAV parameter among NDD and controls

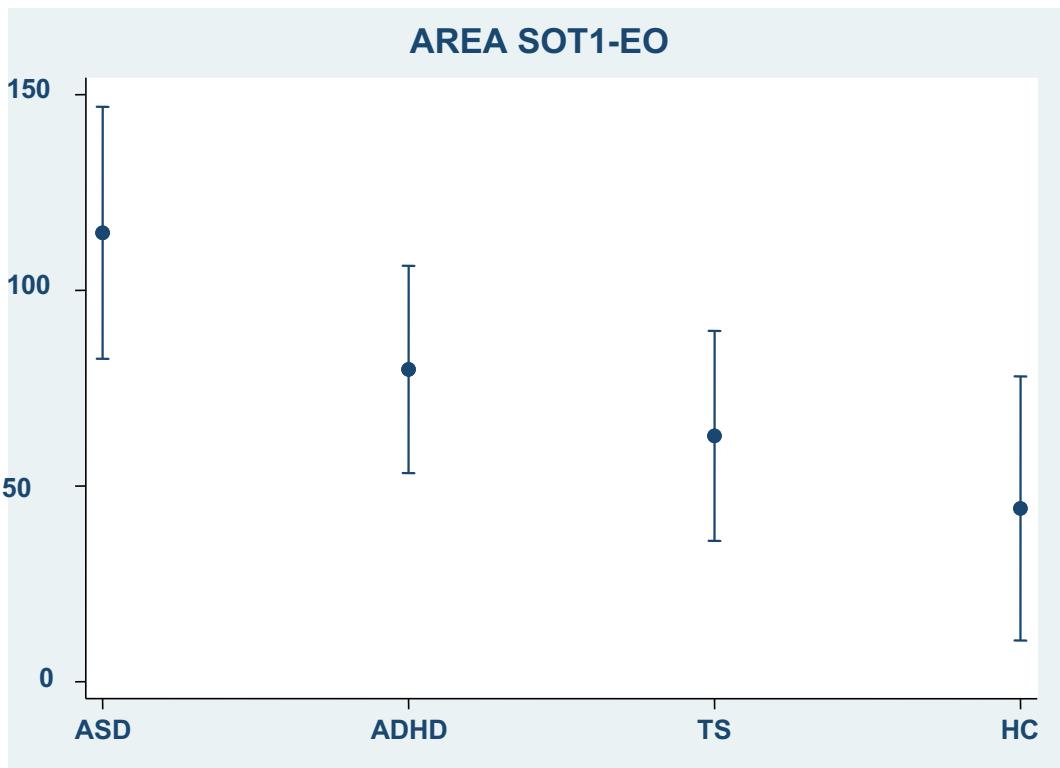
Conditions	ASD	ADHD	TS	Healthy
<b>Median (IQR)</b>				
<b>SOT1-EO</b>	5 (3.5-6.5)	4 (3-5)	4 (3-5)	3 (2-4)
<b>SOT2-EC</b>	9 (5-9.5)	7 (5-10)	6.5 (4-7)	4 (4-6)
<b>SOT3-SV</b>	6.5 (5-9)	7 (5-8)	5 (4-7)	4 (3-5)
<b>SOT4-EOSS</b>	6.5 (5.5-7.5)	8 (6-10)	6 (4-8)	5 (4-6)
<b>SOT5-ECSS</b>	12 (8-16)	12 (9-15)	10 (9-13)	8 (7-10)
<b>SOT6-SVSS</b>	11 (8.5-15.5)	12 (10-15)	9.5 (8-13)	8 (6-10)

APAV, Anterior-Posterior Average Velocity; NDD, Neurodevelopmental Disorders; ASD, Autism Spectrum Disorder; ADHD, Attention Deficit Hyperactivity Disorder; TS, Tourette Syndrome; IQR, interquartile range; SOT, Sensory Organization Test; EO, Eyes Open; EC, Eyes Closed; SV, Sway-referenced Vision; EOSS, Eyes Open Sway-referenced Support; ECSS, Eyes Closed Sway-referenced Support; SVSS, Sway-referenced Vision Sway-referenced Support

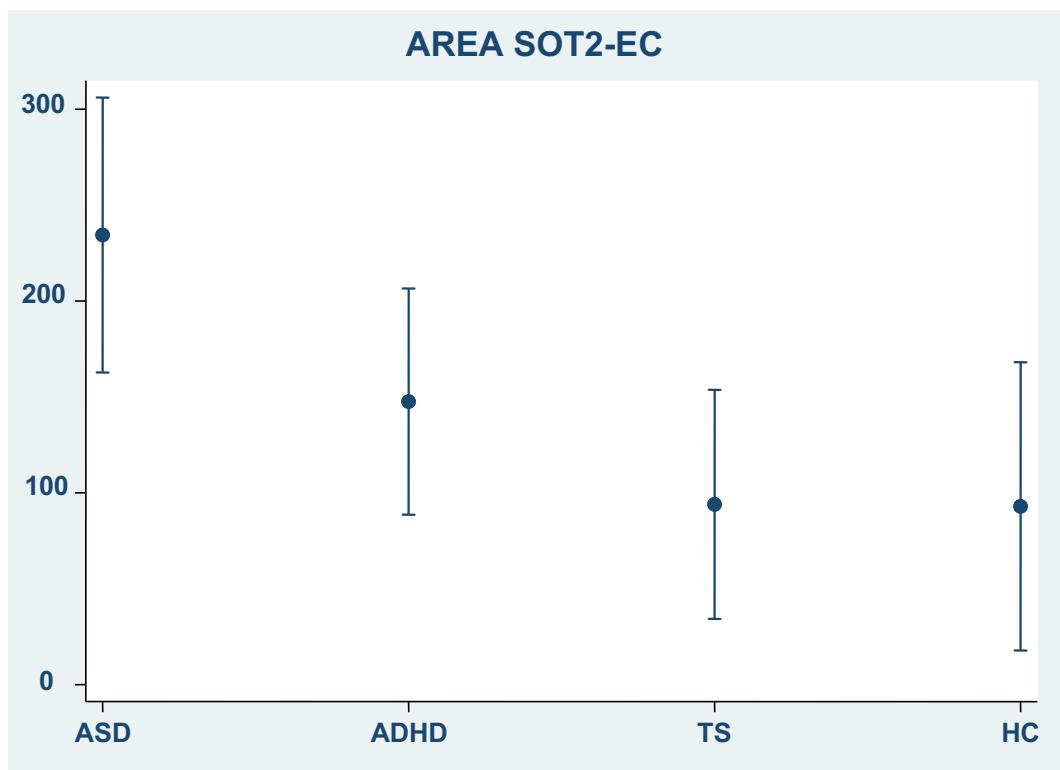
**Supplementary Table S5.** Performance in the LAV parameter among NDD and controls

Conditions	ASD	ADHD	TS	Healthy
<b>Median (IQR)</b>				
<b>SOT1-EO</b>	4(3-5)	3(3-4)	3(3-4)	2(2-3)
<b>SOT2-EC</b>	6(4.5-6.5)	6(3-7)	4(3-5)	3(3-4)
<b>SOT3-SV</b>	5(4-6.5)	5(3-6)	4(3-5)	3(2-4)
<b>SOT4-EOSS</b>	6(4-7)	6(4-8)	5.5(4-6)	4(4-5)
<b>SOT5-ECSS</b>	10(7-12)	10(8-12)	8(6-11)	7(5-8)
<b>SOT6-SVSS</b>	10(7-12.5)	10(7-13)	8(7-11)	7(5-7)

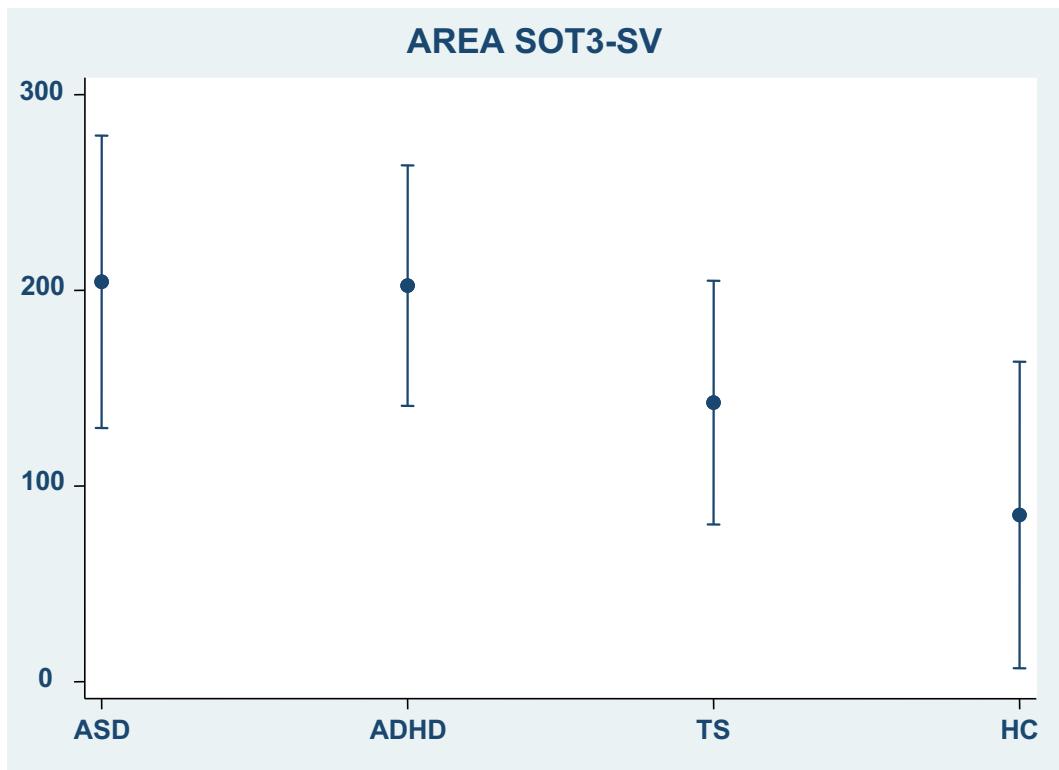
LAV, Lateral Average Velocity; NDD, Neurodevelopmental Disorders; ASD, Autism Spectrum Disorder; ADHD, Attention Deficit Hyperactivity Disorder; TS, Tourette Syndrome; IQR, interquartile range; SOT, Sensory Organization Test; EO, Eyes Open; EC, Eyes Closed; SV, Sway-referenced Vision; EOSS, Eyes Open Sway-referenced Support; ECSS, Eyes Closed Sway-referenced Support; SVSS, Sway-referenced Vision Sway-referenced Support



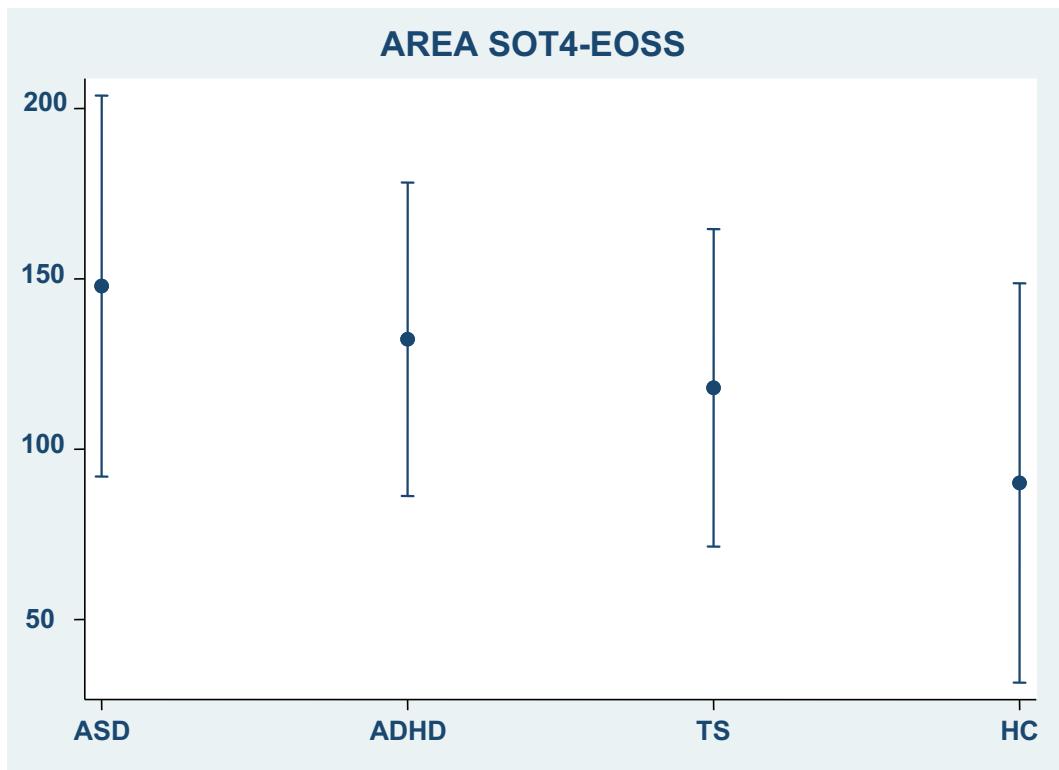
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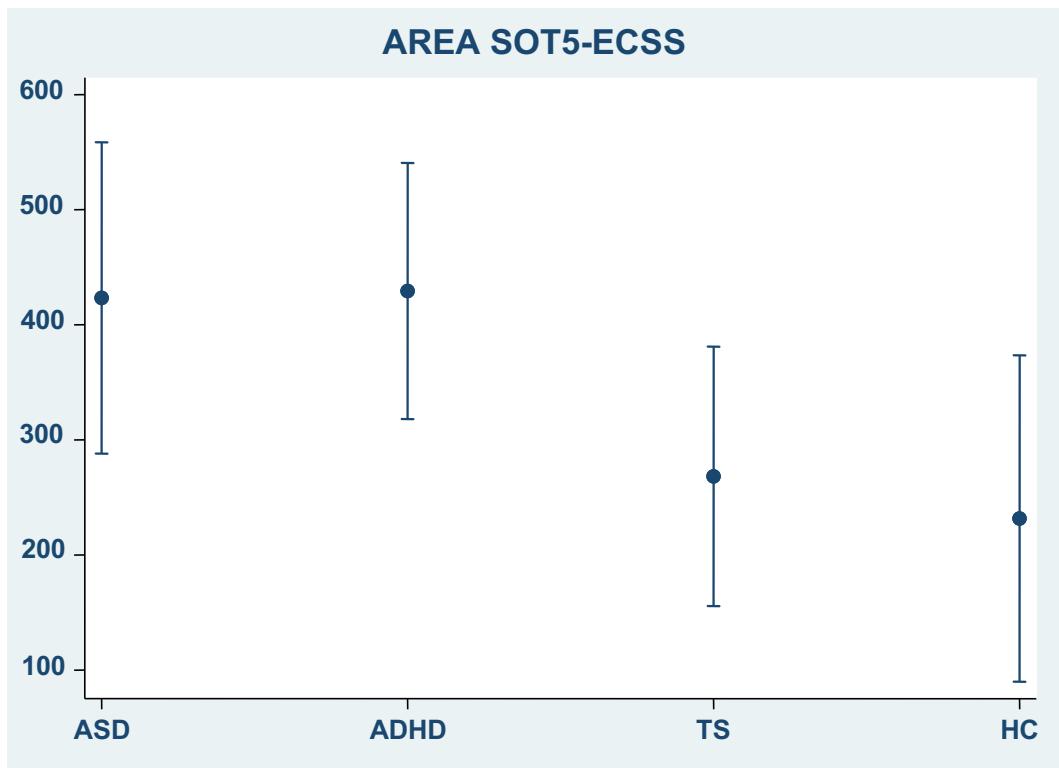
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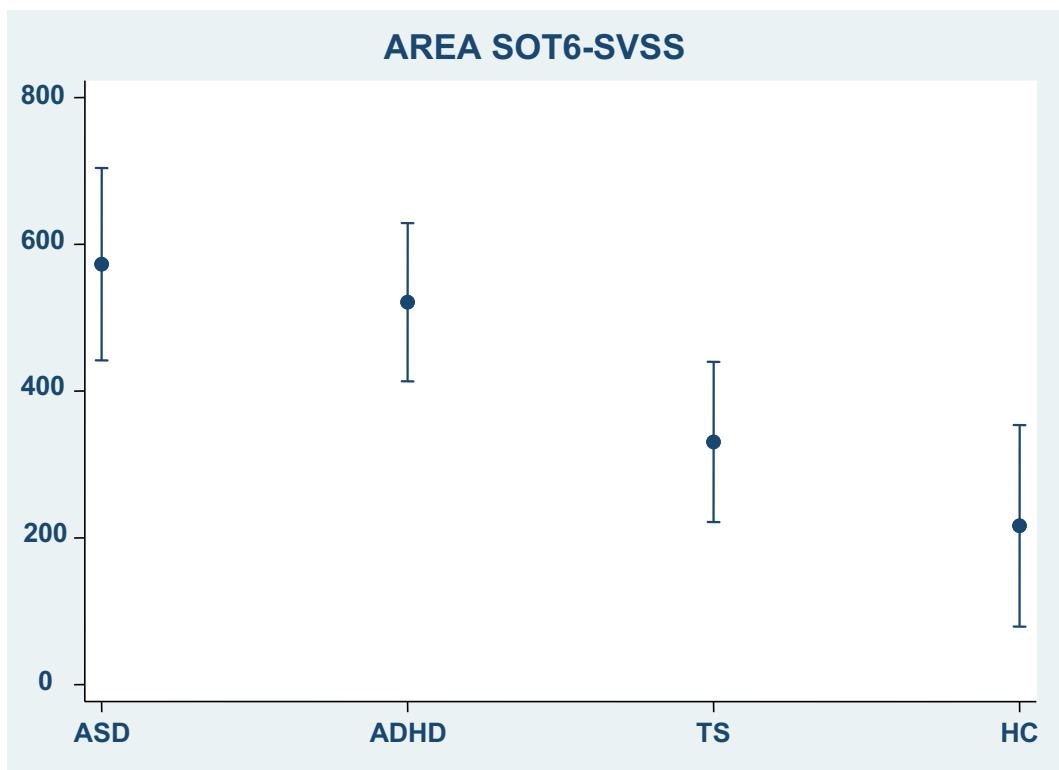
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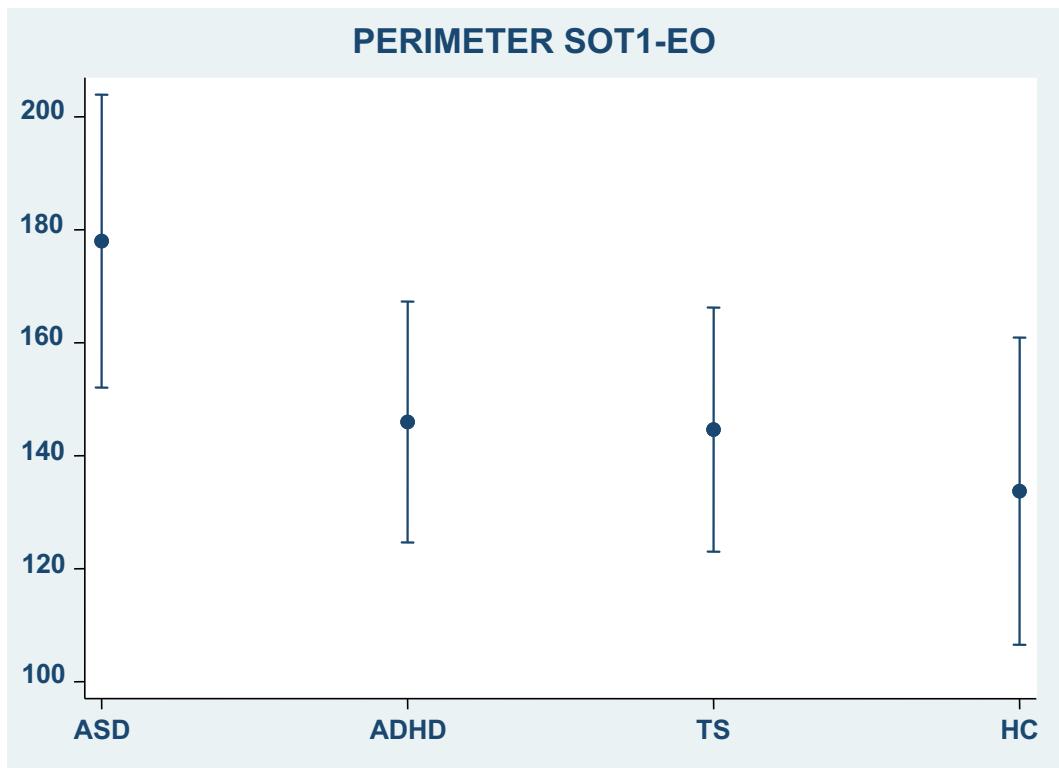


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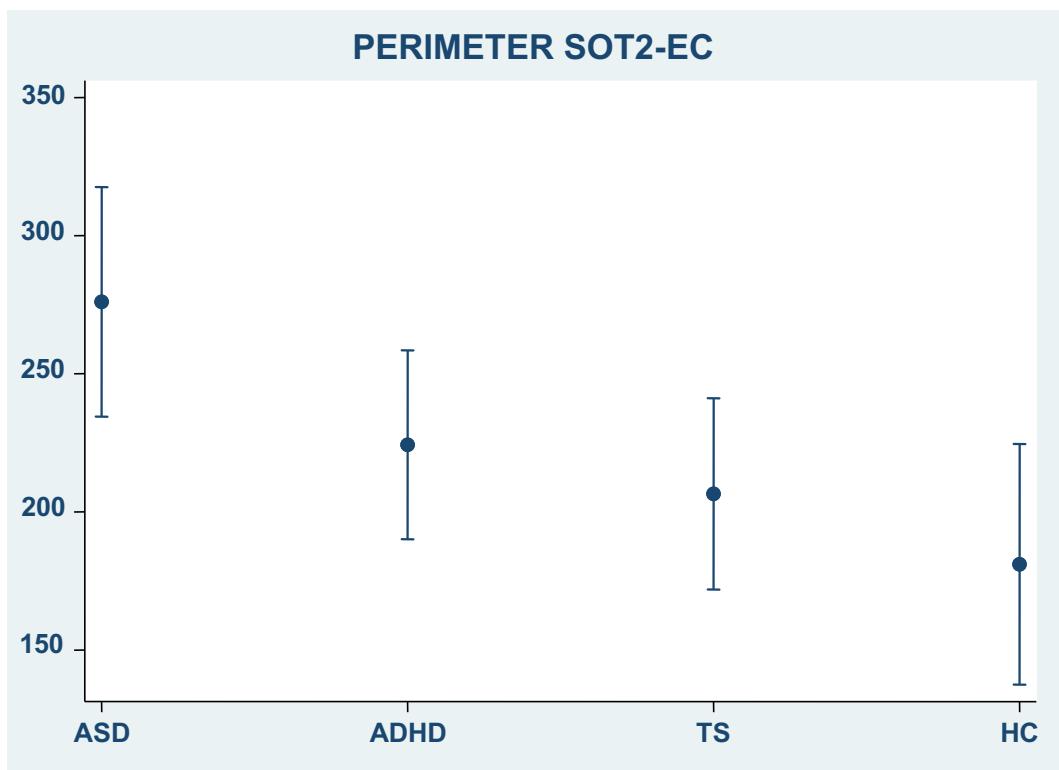


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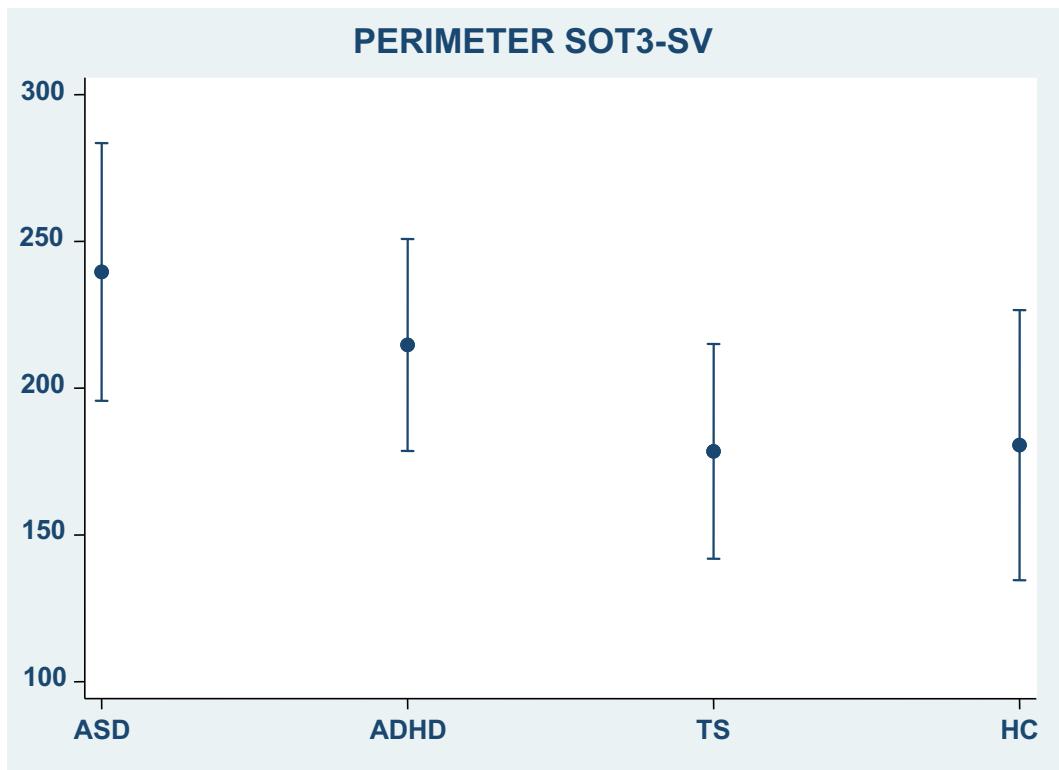
**Supplementary Figure S1.** The figure shows performance in the Area parameter among neurodevelopmental disorders and controls and bars show medians adjusted for gender and age. (a) SOT, Sensory Organization Test; EO, Eyes Open; (b) EC, Eyes Closed; (c) SV, Sway-referenced Vision; (d) EOSS, Eyes Open Sway-referenced Support; (e) ECSS, Eyes Closed Sway-referenced Support; (f) SVSS, Sway-referenced Vision Sway-referenced Support; ASD, Autism Spectrum Disorder; ADHD, Attention Deficit Hyperactivity Disorder; TS, Tourette Syndrome; HC, Healthy Controls.



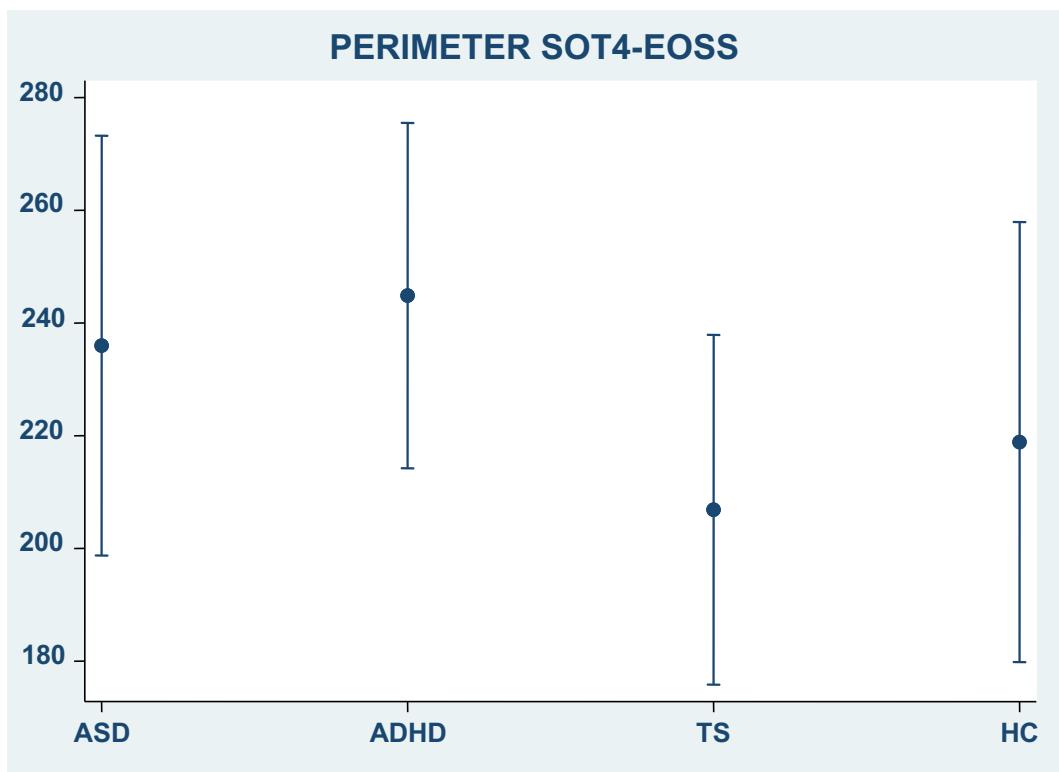
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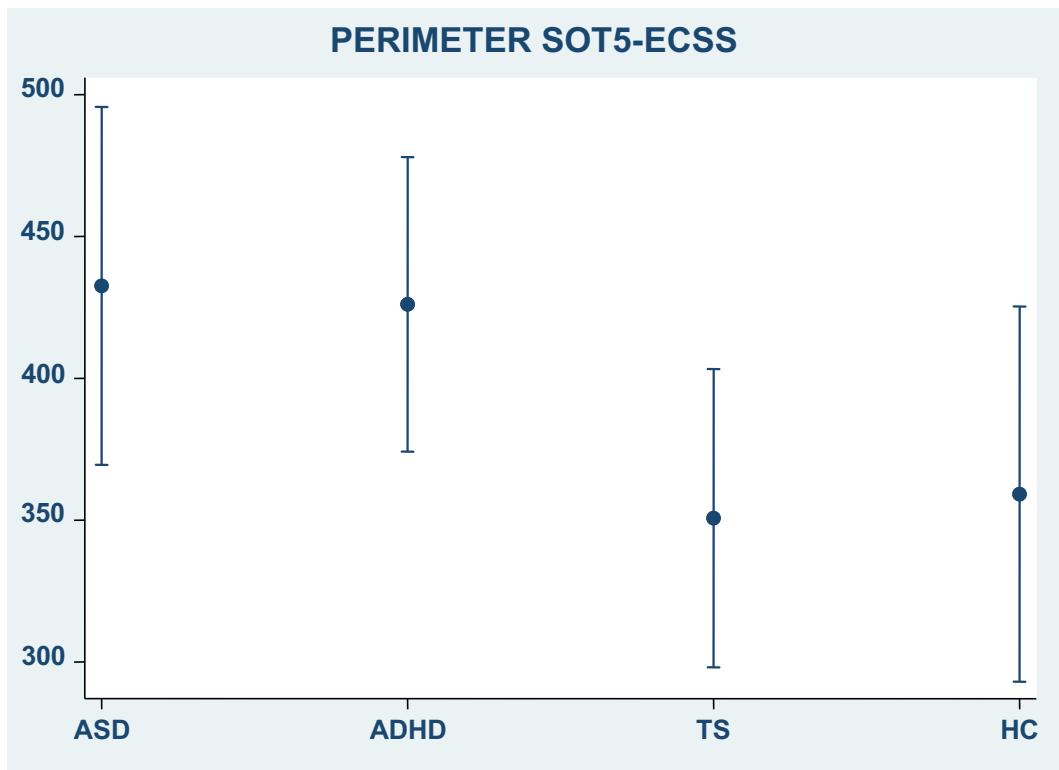
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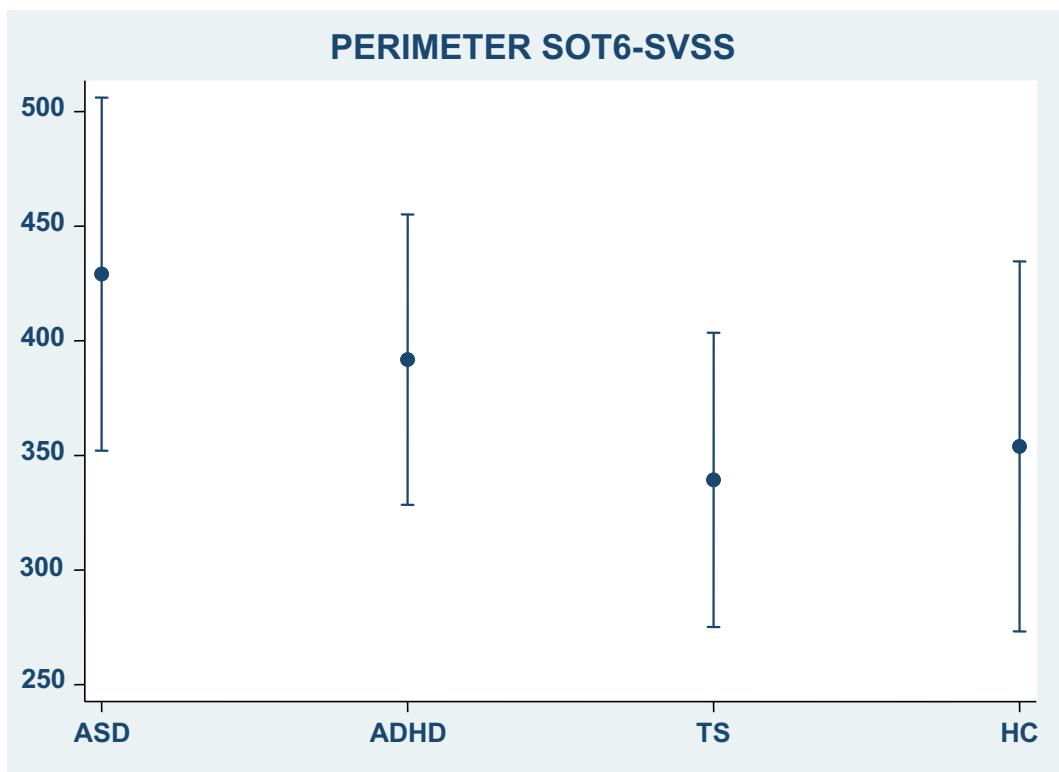
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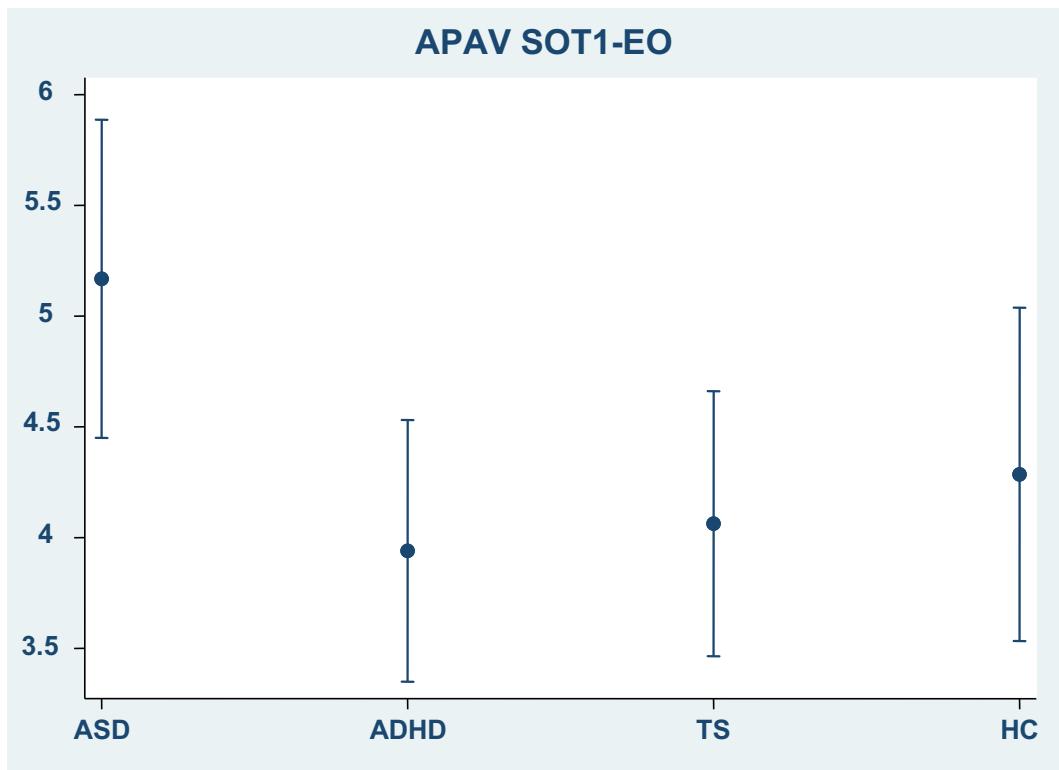


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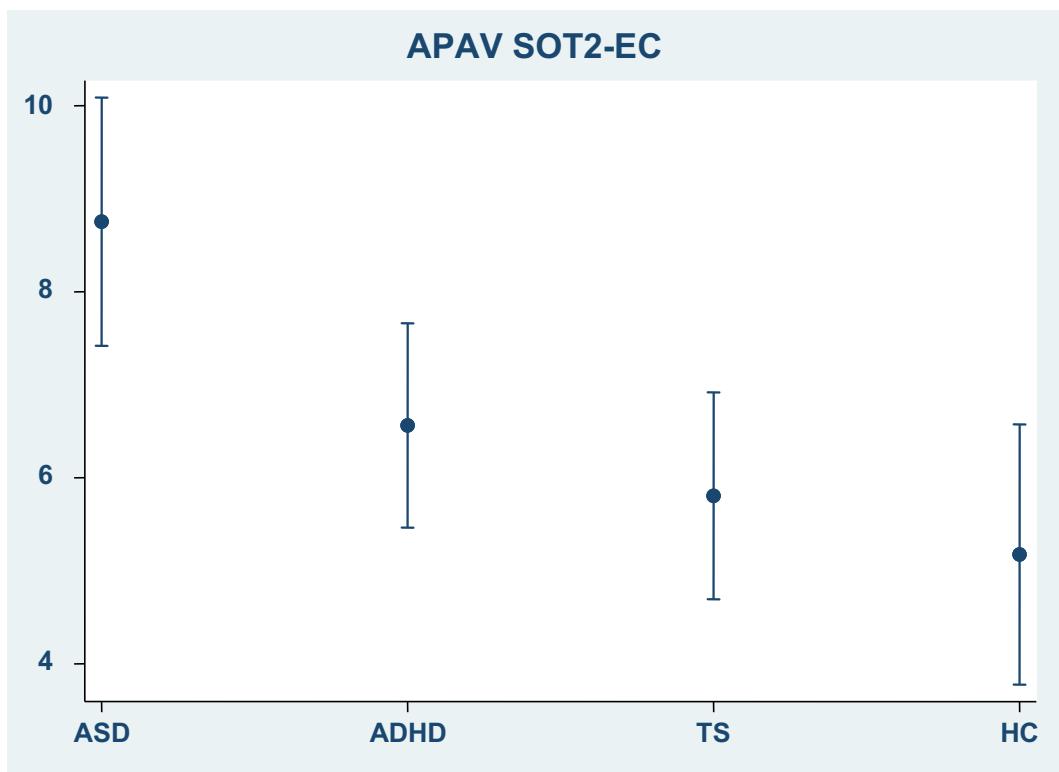


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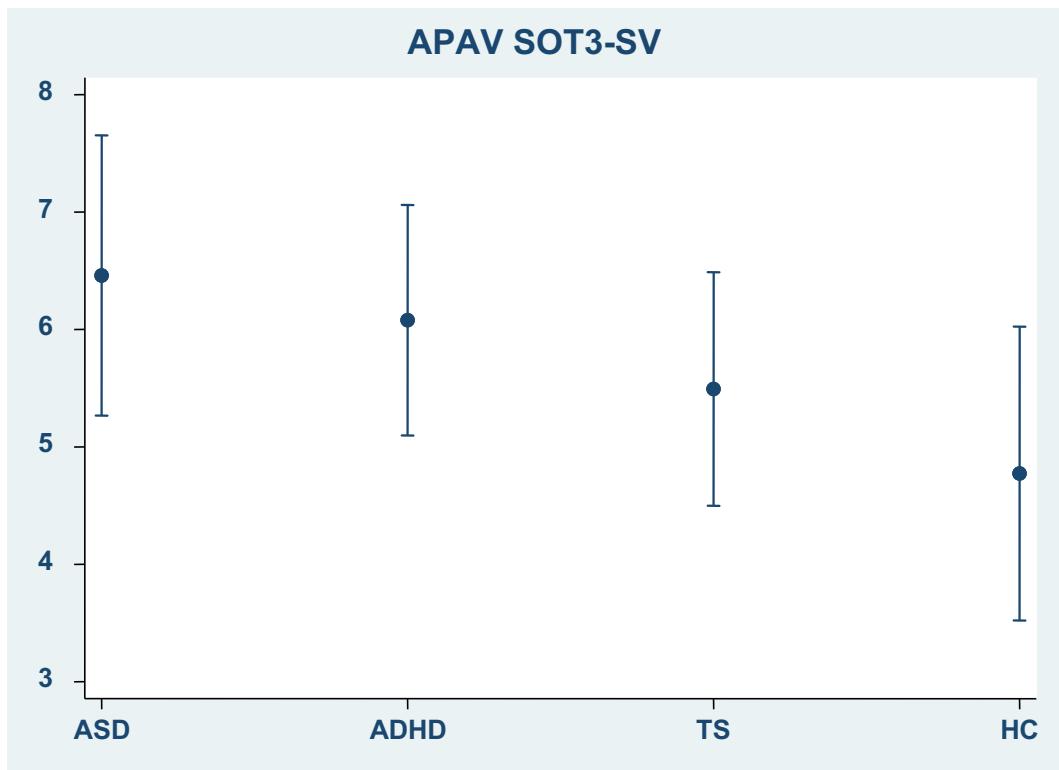
**Supplementary Figure S2.** The figure shows performance in the Perimeter parameter among neurodevelopmental disorders and controls and bars show medians adjusted for gender and age. (a) SOT, Sensory Organization Test; EO, Eyes Open; (b) EC, Eyes Closed; (c) SV, Sway-referenced Vision; (d) EOSS, Eyes Open Sway-referenced Support; (e) ECSS, Eyes Closed Sway-referenced Support; (f) SVSS, Sway-referenced Vision Sway-referenced Support; ASD, Autism Spectrum Disorder; ADHD, Attention Deficit Hyperactivity Disorder; TS, Tourette Syndrome; HC, Healthy Controls.



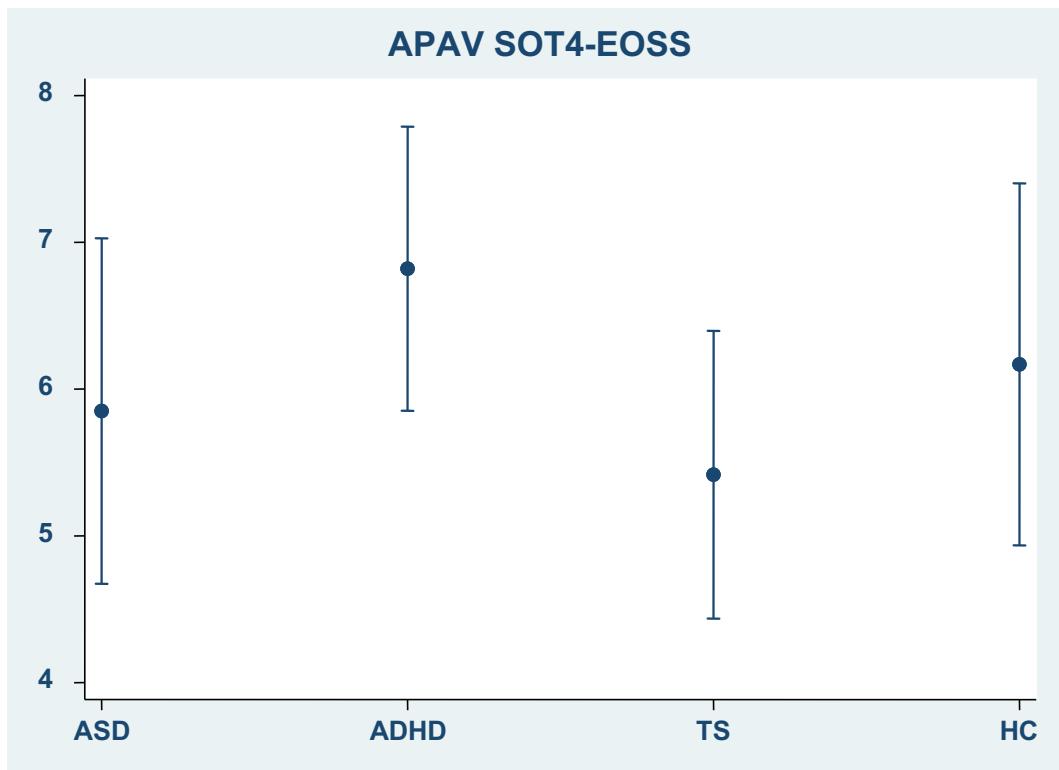
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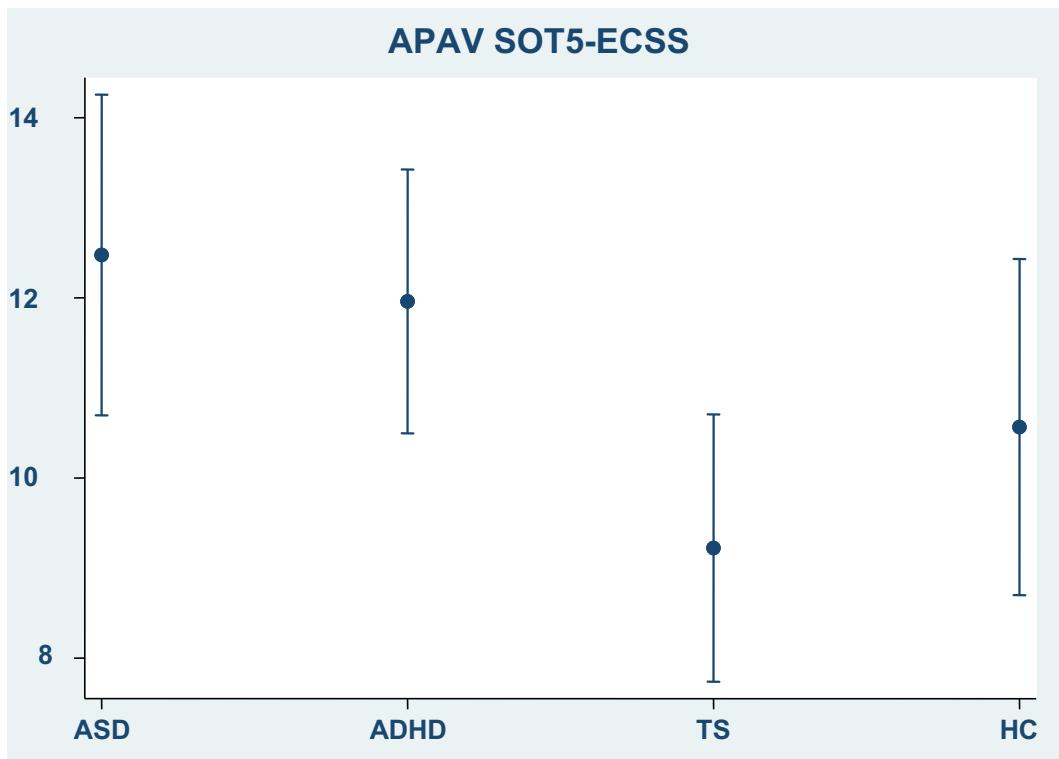
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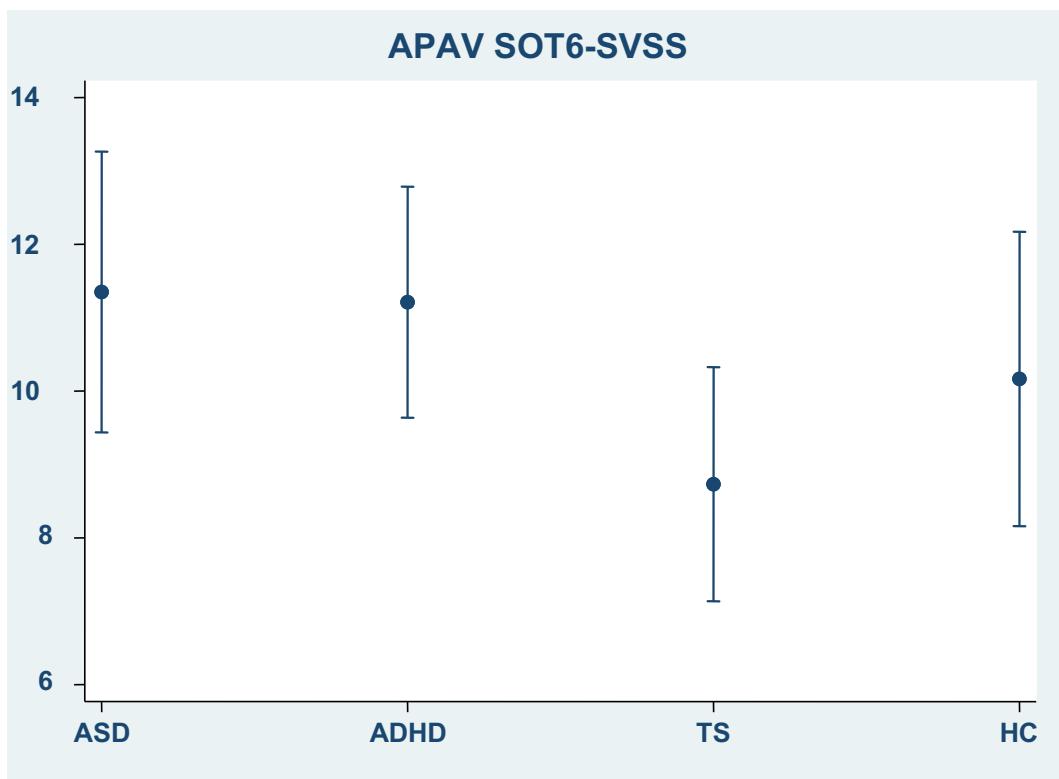
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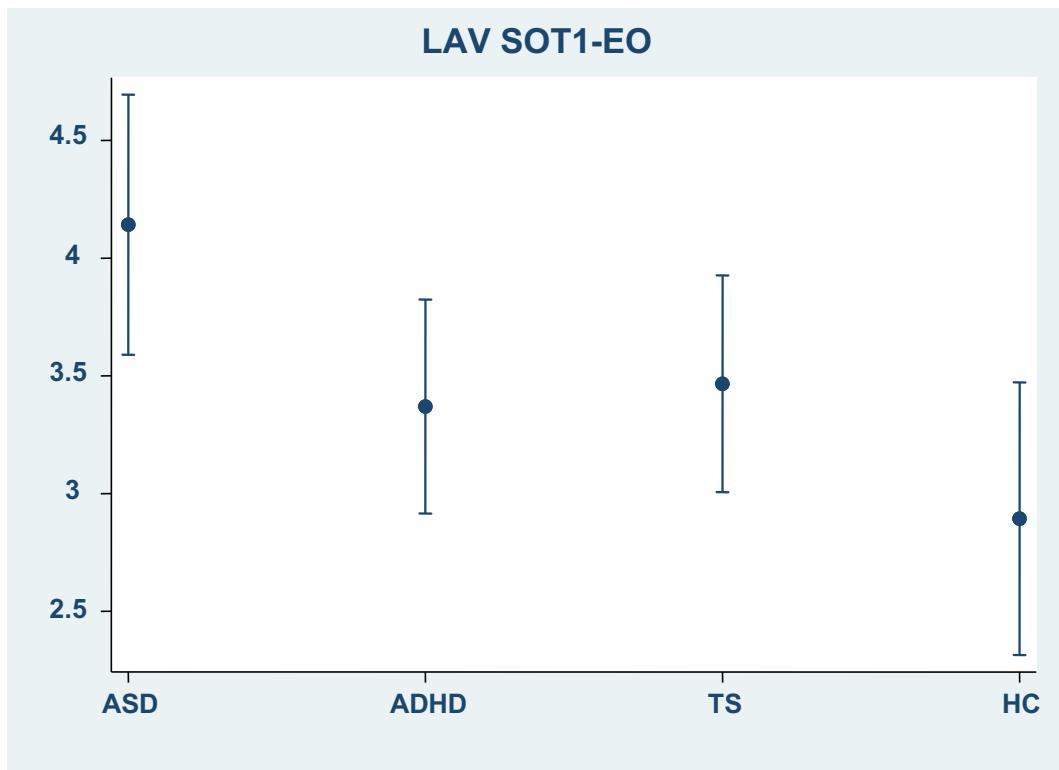


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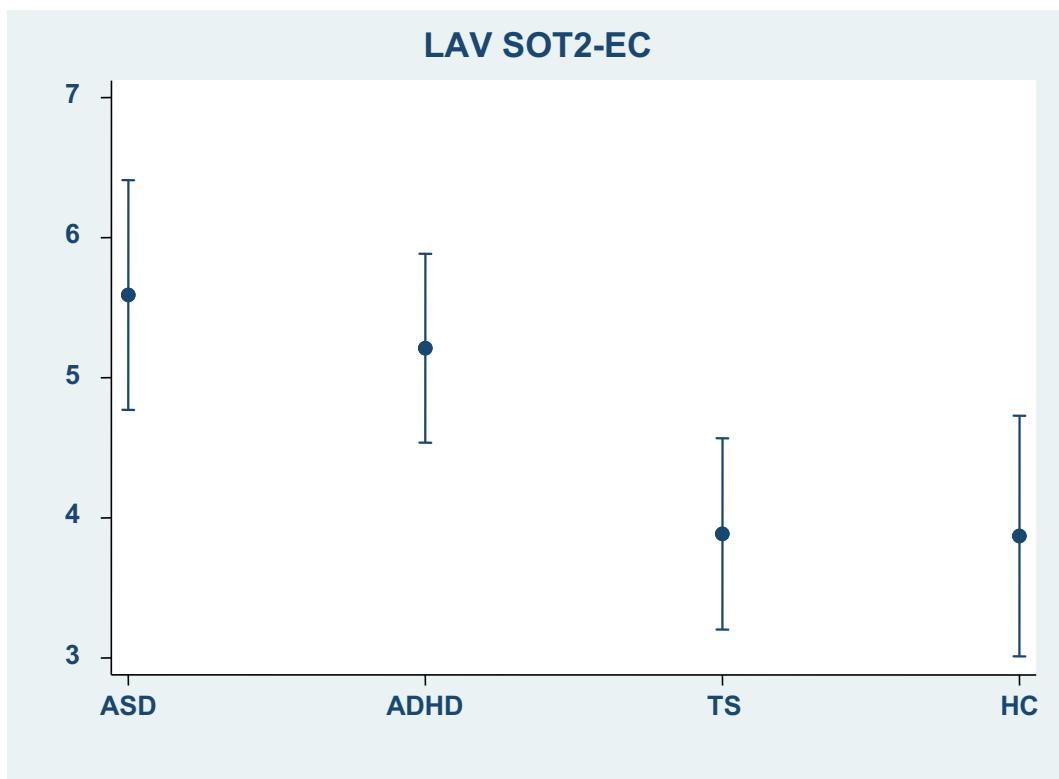


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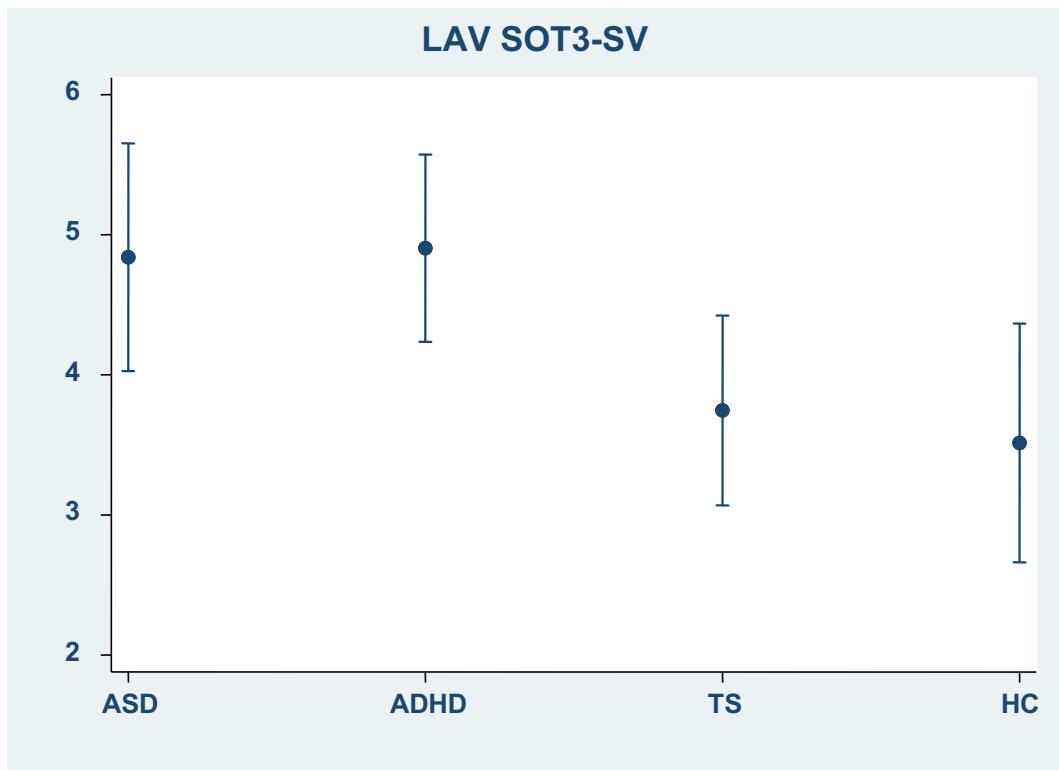
**Supplementary Figure S3.** The figure shows performance in the Anterior-Posterior Average Velocity parameter among neurodevelopmental disorders and controls and bars show medians adjusted for gender and age. (a) APAV, Anterior-Posterior Average Velocity; SOT, Sensory Organization Test; EO, Eyes Open; (b) EC, Eyes Closed; (c) SV, Sway-referenced Vision; (d) EOSS, Eyes Open Sway-referenced Support; (e) ECSS, Eyes Closed Sway-referenced Support; (f) SVSS, Sway-referenced Vision Sway-referenced Support; ASD, Autism Spectrum Disorder; ADHD, Attention Deficit Hyperactivity Disorder; TS, Tourette Syndrome; HC, Healthy Controls.



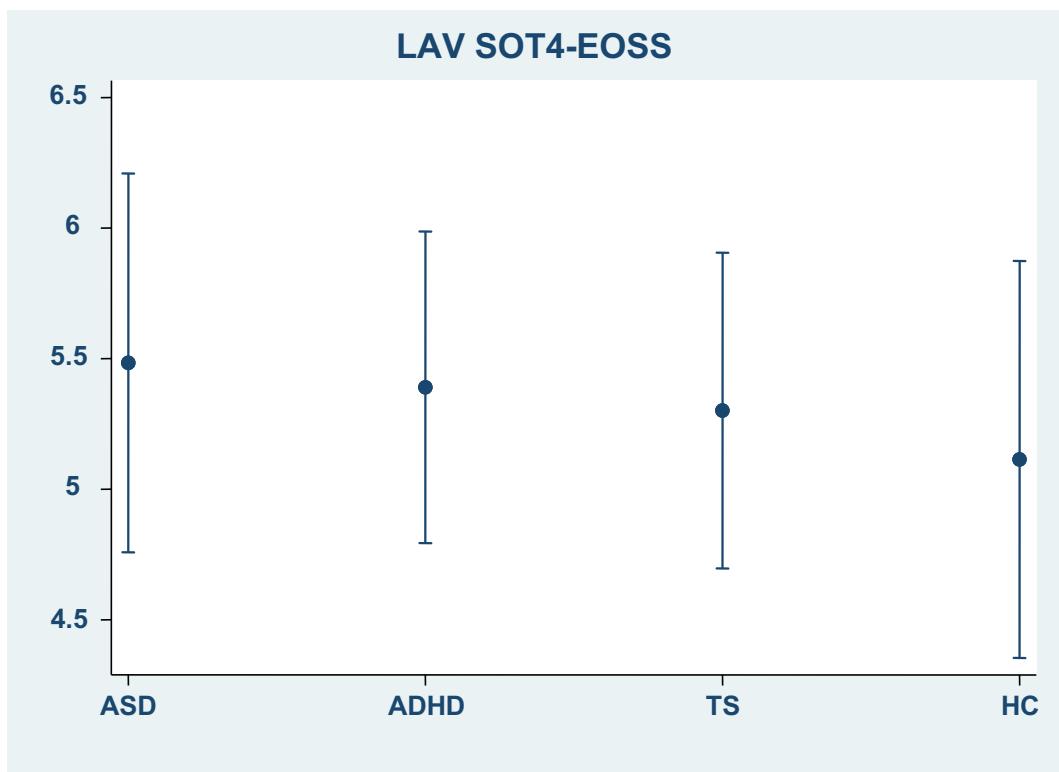
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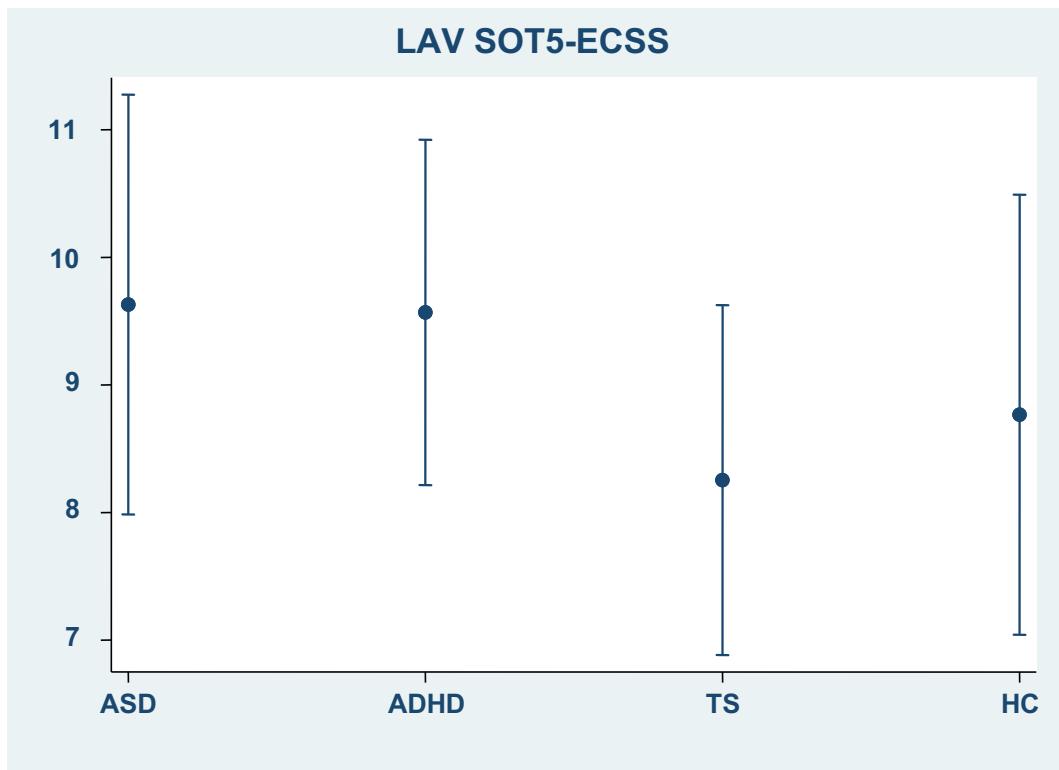
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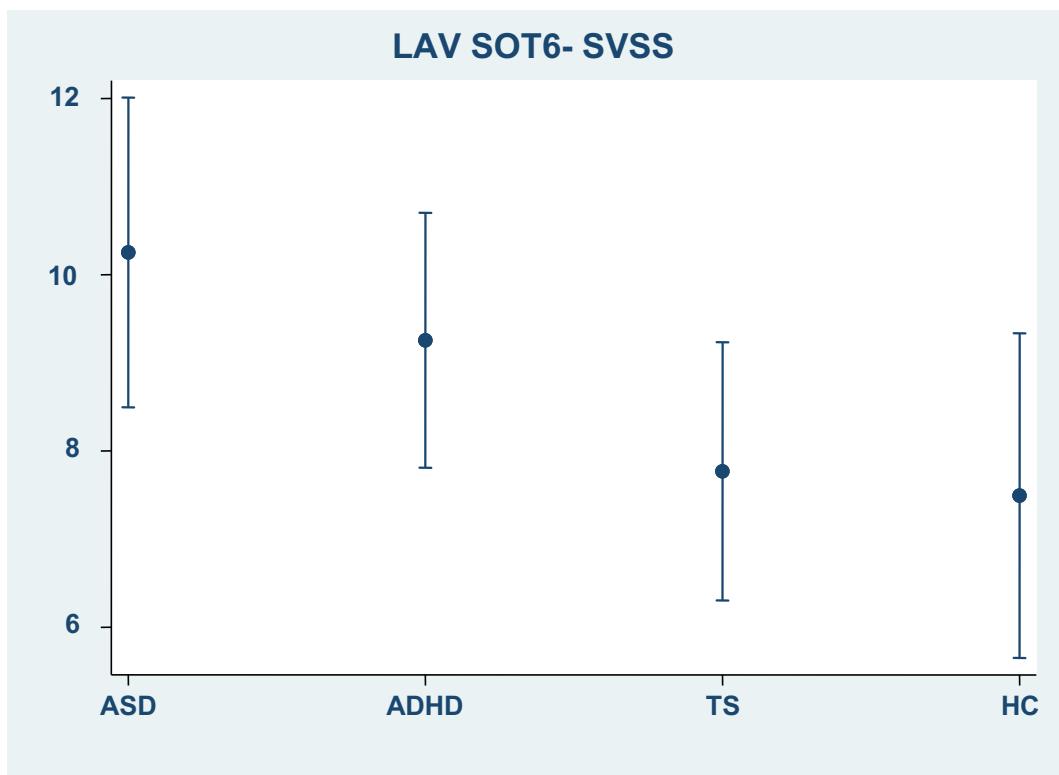
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**Supplementary Figure S4.** The figure shows performance in the Lateral Average Velocity parameter among neurodevelopmental disorders and controls and bars show medians adjusted for gender and age. (a) LAV, Lateral Average Velocity; SOT, Sensory Organization Test; EO, Eyes Open; (b) EC, Eyes Closed; (c) SV, Sway-referenced Vision; (d) EOSS, Eyes Open Sway-referenced Support; (e) ECSS, Eyes Closed Sway-referenced Support; (f) SVSS, Sway-referenced Vision Sway-referenced Support; ASD, Autism Spectrum Disorder; ADHD, Attention Deficit Hyperactivity Disorder; TS, Tourette Syndrome; HC, Healthy Controls.