# CORE AUTISM TRAITS, ASSOCIATED SYMPTOMS AND QUALITY OF LIFE: SUPPLEMENTARY MATERIAL

## Supplementary Table 1.

Effect sizes for differences between published scores on the WHOQoL-BREF (20-to-29-years; Hawthorne, Herrman, & Murphy, 2006)/ CHIP-CE (John Hopkins University, 2001) and our comparison group.

		Published Norms	<b>Comparison Group</b>	
	Physical Health	85.40 (10.90)	83.13 (9.96)	(
WHOQoL-BREF M (SD)	Psychological Health	71.40 (17.50)	71.38 (14.14)	0
WHOQOL-BREF M (3D)	Social Relationships	72.90 (18.80)	73.35 (17.43)	-(
	Environment	74.30 (14.00)	71.81 (15.59)	(
	Satisfaction	4.26 (0.64)	4.04 (0.47)	
	Comfort	3.93 (0.70)	4.53 (0.43)	-(
CHIP-CE M (SD)	Resilience	3.97 (0.70)	4.05 (0.45)	-(
	<b>Risk Avoidance</b>	4.37 (0.67)	4.38 (0.42)	-(
	Achievement	4.22 (0.63)	3.72 (0.57)	(

Note: WHOQoL-BREF=World Health Organisation Quality of Life – Brief instrument; CHIP-CE=Child Health and Illness Profile; d=Cohen's d effect size [95% confidence intervals].

d [95% CI]	
0.22 [-0.14, 0.58]	
0.001 [-0.35, 0.36]	
-0.03 [-0.38, 0.33]	
0.17 [-0.24, 0.57]	
0.35 [0.22, 0.49]	
-0.89 [-1.03, -0.75]	
-0.12 [-0.25, 0.02]	
-0.02 [-0.15, 0.12]	
0.80 [0.66, 0.94]	

## Supplementary Table 2.

Descriptives and group comparisons for autistic individuals who scored within/ above, as compared to below, 1 standard deviation from the comparison group mean across domains from: a) WHOQoL-BREF for

adults 18-30-years, and; b) CHIP-CE for children/ adolescents 6-17-years.

	a) WHOQoL-BREF (Adults 18-30-years)														
	Physical Health			Psychological Health			Social Relationships				Environment			-	
	>1SD below	Within/ above 1SD	d [95% CI]	>1SD below	Within/ above 1SD	d [95% CI]	>1SD below	Within/ above 1SD	d [95% CI]	>1SD below	Within/ above 1SD	d [95% CI]		-	
Ν	68	38	-	55	51	-	54	51	-	22	42	-		-	
Sex: Males (Females)	43 (25)	29 (9)	0.13 <sup>a</sup>	32 (23)*	40 (11)*	0.22 <sup>a</sup>	33 (21)	38 (13)	0.14 <sup>a</sup>	12 (10)	32 (10)	0.22 <sup>a</sup>		-	
Age	23.09 (3.57)	23.07 (3.62)	0.01 [-0.39, 0.40]	23.30 (3.38)	22.85 (3.78)	0.13 [-0.26, 0.51]	23.20 (3.48)	23.00 (3.72)	0.06 [-0.33, 0.44]	24.71 (3.62)*	22.85 (3.60)*	0.52 [-0.01, 1.04]		-	
Full-scale IQ	105.86 (13.37)	105.23 (16.57)	0.04 [-0.35, 0.44]	107.94 (12.71)	103.16 (16.02)	0.33 [-0.05, 0.72]	104.85 (16.03)	106.82 (12.74)	-0.14 [-0.52, 0.25]	105.44 (13.06)	103.73 (14.20)	0.12 [-0.39, 0.64]		-	
SRS-2 (Self)	66.22 (9.81)*	61.59 (10.27)*	0.46 [0.06, 0.87]	69.31 (8.84)***	59.46 (9.03)***	1.10 [0.69, 1.52]	66.94 (8.42)**	61.58 (10.72)**	0.56 [0.16, 0.95]	67.27 (10.15)	62.22 (9.87)	0.51 [-0.02, 1.03]		-	
DAWBA Anxiety	3 (0-4)**	2.5 (0-4)**	-0.54 <sup>b</sup>	3 (0-4)*	3 (0-4)*	-0.47 <sup>b</sup>	3 (1-4)*	3 (0-4)*	-0.47 <sup>b</sup>	3.5 (1-4)*	2.5 (0-4)*	-0.49 <sup>b</sup>		-	
DAWBA Depression	1 (0-5)**	0 (0-5)**	-0.63 <sup>b</sup>	1 (0-5)***	0 (0-5)***	-0.93 <sup>b</sup>	1 (0-5)**	0 (0-4)**	-0.72 <sup>b</sup>	1 (0-5)	0.50 (0-5)	-0.26 <sup>b</sup>		-	
						b	) CHIP-CE (	Children/ Ad	olescents 6-17-ye	ears)					
	Satisfaction			Comfort			Resilience			Risk Avoidar	nce	Achievement			
	>1SD below	Within/ above 1SD	d [95% CI]	>1SD below	Within/ above 1SD	d [95% CI]	>1SD below	Within/ above 1SD	d [95% CI]	>1SD below	Within/ above 1SD	d [95% CI]	>1SD below	Within/ above 1SD	d [95% CI]
N	126	112	-	96	142	-	70	168	-	82	154	-	125	98	-
Sex: Males (Females)	88 (38)	85 (27)	$0.07^{\mathrm{a}}$	64 (32)	109 (33)	0.11 <sup>a</sup>	48 (22)	125 (43)	$0.06^{a}$	62 (20)	109 (45)	-0.05 <sup>a</sup>	93 (32)	69 (29)	-0.04 <sup>a</sup>
Age	13.01 (2.92)	12.61 (3.31)	0.13 [-0.13, 0.38]	12.12 (3.08)**	13.29 (3.05)**	-0.38 [-0.64, -0.12]	13.40 (3.06)	12.58 (3.11)	0.26 [-0.01, 0.54]	12.23 (2.98)*	13.10 (3.13)*	-0.28 [-0.55, -0.01]	12.77 (3.00)	12.47 (3.21)	0.10 [-0.17, 0.36]
Full-scale IQ	98.13 (19.22)	97.56 (19.99)	0.03 [-0.23, 0.29]	97.43 (18.83)	98.15 (20.08)	-0.04 [-0.30, 0.23]	96.95 (18.06)	98.24 (20.18)	-0.07 [-0.35, 0.22]	97.43 (18.38)	98.40 (20.13)	-0.05 [-0.32, 0.22]	94.41 (16.66)***	106.60 (18.65)***	-0.69 [-0.97, -0.42]
	78.20	72.18 (11.80)***	0.58 [0.32, 0.85]	78.96 (9.36)***	72.93 (10.93)***	0.58 [0.32, 0.85]	77.07 (9.36)	74.69 (11.18)	0.22 [-0.06, 0.51]	76.53 (9.49)	74.69 (11.35)	0.17 [-0.10, 0.44]	77.63 (9.47)***	72.17 (11.72)***	0.52 [0.25, 0.79]
SRS-2 (Parent)	(8.81)***	(11.00)	[0.02, 0.00]	()											
SRS-2 (Parent) DAWBA Anxiety	(8.81)*** 3 (1-5)***	(11.80)*** 2 (0-5)***	-0.63 <sup>b</sup>	3 (1-5)***	2 (0-5)***	-0.77 <sup>b</sup>	3 (0-5)	2 (0-5)	-0.10 <sup>b</sup>	2 (0-5)	2 (0-5)	-0.06 <sup>b</sup>	2 (0-5)	2 (0-5)	-0.12 <sup>b</sup>

deviation; *d*=Cohen's *d* effect size [95% confidence intervals]. <sup>a</sup>Phi effect size; <sup>b</sup>r effect size for Mann-Whitney U was converted to *d* using Rosenthal (1994). \**p*<0.05; \*\**p*<0.001 (significant after Bonferroni correction; *p*=0.05/54).

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#### Supplementary Table 3.

*Regression coefficients and model fit after including sensory processing differences and ADHD symptoms in CHIP-CE regression models for the child/ adolescent group.* 

		Satisfaction	Comfort	Resilience	<b>Risk Avoidance</b>	Achievement
		β [95% CI]	β [95% CI]	β [95% CI]	β [95% CI]	β [95% CI]
	Age	-0.11 [-0.29, 0.06]	0.04 [-0.11, 0.20]	-0.19 [-0.36, -0.02]*	0.20 [0.04; 0.37]**	0.01 [-0.15; 0.16]
Demographic	IQ	-0.07 [-0.25, 0.09]	0.12 [-0.03, 0.27]	0.03 [-0.14, 0.19]	0.02 [-0.15; 0.18]	0.33 [0.18; 0.51]***
	Sex	-0.02 [-0.20, 0.15]	0.12 [-0.02, 0.29]	-0.05 [-0.21, 0.12]	-0.21 [-0.39; -0.06]**	-0.17 [-0.34; -0.01]*
Core traits	SRS-2 (Parent)	-0.13 [-0.34, 0.08]	0.03 [-0.16, 0.21]	0.03 [-0.18, 0.23]	-0.12 [-0.32; 0.09]	-0.21 [-0.39; -0.003]*
	SSP	0.10 [-0.10, 0.30]	0.26 [0.09, 0.45]***	0.19 [-0.02, 0.37]	0.03 [-0.17, 0.23]	0.09 [-0.10, 0.28]
	Anxiety	-0.23 [-0.31, -0.05]**	-0.28 [-0.33, -0.10]***	0.04 [-0.10, 0.16]	0.15 [-0.02; 0.24]	0.11 [-0.04; 0.20]
Associated	Depression	-0.23 [-0.38, -0.07]***	-0.35 [-0.47, -0.20]***	-0.14 [-0.27, 0.03]	-0.19 [-0.32; -0.02]*	-0.15 [-0.27; 0.01]
	ADHD	-0.01 [-0.11, 0.10]	-0.07 [-0.14, 0.05]	0.02 [-0.09, 0.11]	-0.29 [-0.28, -0.08]***	-0.19 [-0.21, -0.01]*
	- Total effect $R^{2}_{adj}$ )	$F_{(8, 135)}=5.01, p<0.001^{***}, \eta_p^2=0.56$ (18.3%)	$F_{(8, 135)}=10.42, p<0.001^{***}, \eta_p^2=0.62$ (34.5%)	$F_{(8, 135)}=1.50, p=0.16, \eta_p^2=0.52$ (2.7%)	$F_{(8, 135)}=4.78, p<0.001^{***}, \eta_p^2=0.56$ (17.5%)	$F_{(8, 125)}=6.59, p<0.001^{***}, \eta_p^2=0.59$ (25.2%)

Note: SRS-2=Social Responsiveness Scale – Second Edition; SSP=Short Sensory Profile; ADHD=Attention deficit/ hyperactivity disorder;  $\beta$ =standardised regression coefficient [95% confidence intervals]; *F*=F-test for model significance (degrees of freedom, sample size);  $\eta_p^2$ =partial eta-squared effect size. \**p*<0.05; \*\**p*<0.01; \*\*\**p*<0.006 (significant after Bonferroni correction; *p*=0.05/8). Sensory processing differences and ADHD symptoms were not included in WHOQoL-BREF models for the adult group since a power analysis suggested a minimum sample of N=52 was required for a model with 8 independent variables to provide power of 0.8 ( $\alpha$ <0.05; f<sup>2</sup>=0.35) and too few adults had data for sensory processing differences (*N*=41)/ ADHD symptoms (*N*=59) after including other variables. Nevertheless, simple correlations indicated that neither sensory processing differences (*r<sub>s</sub>*=0.21, *p*≥0.17) nor ADHD symptoms (*r<sub>s</sub>*=-0.07- -0.16, *p*≥0.22) were significantly associated with WHOQoL-BREF domain scores in the adult group, though there were nominal associations with Physical Health (sensory *r<sub>s</sub>*=0.32, *p*=0.03; ADHD *r<sub>s</sub>*=-0.27, *p*=0.04) and Environment (sensory *r<sub>s</sub>*=0.41, *p*=0.03).