

Supplemental Table 1

Demographics Split by Group and Distribution of Congenital Heart Defects and Intracranial Injury / Abnormalities Among Participants with CHD

Variable / Diagnosis	Control	CHD	X^2 / t
	<i>n</i> (%)	<i>n</i> (%)	<i>p</i>
Males (%)	43 (53.75%)	45 (77.59%)	0.0040
White (%)	52 (65.00%)	50 (86.21%)	0.0051
Right-Hand Dominant (%)	65 (87.84%)	47 (81.03%)	0.2793
Preterm Birth (%)	8 (13.11%)	8 (14.04%)	0.8840
Mean Maternal Education (<i>SD</i>)	1.78 (0.52)	1.61 (0.49)	0.0563
Mean Household Income (<i>SD</i>)	3.65 (2.13)	3.39 (1.83)	0.5303
Mean Age at Assessment (<i>SD</i>)	12.63 (2.96)	12.46 (3.35)	0.7604
Congenital Heart Defect (CHD)			
Single Ventricle (SV)	-	26 (44.83%)	-
Hypoplastic Left Heart Syndrome (HLHS)	-	13 (22.41%)	-
Double Inlet Left Ventricle (DILV)	-	5 (8.62%)	-
Double Outlet Right Ventricle (DORV)	-	9 (15.52%)	-
Aortic Arch Anomaly	-	38 (65.52%)	-
Coarctation of Aorta (COA)	-	8 (13.79%)	-
Hypoplastic / Interrupted Aortic Arch (HAA / IAA)	-	4 (6.90%)	-
Bicuspid Aortic Arch (BAV)	-	10 (17.24%)	-
Aortic Valve / Pulmonary Stenosis (AVS / PS)	-	23 (39.66%)	-
Total / Partial Anomalous Pulmonary Venous Return (TAPVR / PAPVR)	-	3 (5.17%)	-
Tetralogy of Fallot (TOF)	-	4 (6.90%)	-
Transposition of Great Arteries (TGA)	-	13 (22.41%)	-
Atrioventricular Septal Defect (AVSD)	-	3 (5.17%)	-
Ventricular / Atrial Septal Defect (VSD / ASD)	-	28 (48.28%)	-
Cardiac Surgery	-	52 (89.66%)	-
Age at 1 st Cardiac Surgery ≤ 1 Year	-	39 (67.24%)	-
Age at 1 st Cardiac Surgery ≤ 7 Days	-	19 (32.76%)	-
Intracranial Injury / Abnormality			
Hemorrhage	-	4 (6.90%)	-
Stroke	-	6 (10.34%)	-
Encephalomalacia	-	2 (3.45%)	-
Ventriculomegaly / Hydrocephalus	-	2 (3.45%)	-
Gliosis	-	3 (5.17%)	-
Necrosis	-	1 (1.72%)	-
Volume Loss	-	5 (8.62%)	-
Structural Abnormalities	-	6 (10.34%)	-

Note. Maternal Education: 0 = no high school diploma, 1 = high school diploma, 2 = college graduate and above. Household Income: 0 = less than \$25,000, 1 = \$25,000 to \$34,999, 2 = \$35,000 to \$49,999, 3 = \$50,000 to \$74,999, 4 = \$75,000 to \$99,999, 5 = \$100,000 to \$149,999; 6 = \$150,000 or more.

Supplemental Table 2

Group Differences for Clinician-Issued Battery and Rating Scales

Test / Composite / Scale	Control		CHD		<i>t</i>	<i>p</i>
	<i>n</i>	μ (<i>SD</i>)	<i>n</i>	μ (<i>SD</i>)		
WASI-II: Vocabulary	61	57.61 (9.768)	44	53.98 (8.851)	1.953	0.054
Verbal Comprehension Index	61	110.70 (14.024)	44	105.70 (12.275)	1.898	0.061
Perceptual Reasoning Index	61	108.41 (15.174)	42	99.52 (18.081)	2.700	0.008
Full Scale IQ	61	110.67 (13.314)	42	102.79 (15.889)	2.729	0.008
NEPSY-2: Comprehension of Instructions	69	11.74 (2.984)	44	10.41 (2.773)	2.374	0.019
WISC-IV: Digit Span	67	10.45 (3.001)	44	9.00 (2.745)	2.570	0.012
Letter Number Sequencing	61	11.15 (2.072)	44	9.50 (2.758)	3.341	0.001
Coding	66	10.56 (3.379)	42	8.26 (3.140)	3.541	0.001
Symbol Search	66	11.74 (2.963)	42	10.10 (2.621)	2.943	0.004
Working Memory Index	67	103.75 (12.679)	44	95.02 (13.498)	3.456	0.001
Processing Speed Index	66	106.65 (16.051)	42	95.45 (14.397)	3.676	<0.001
D-KEFS: TMT – Number Letter Switching	62	10.94 (2.268)	35	8.31 (2.888)	4.944	<0.001
VFT – Switching	63	11.33 (3.188)	38	10.32 (2.672)	1.648	0.102
CWIT – Inhibition	54	10.80 (2.326)	27	8.74 (2.982)	3.406	0.001
WRAML-2: Design Memory	70	9.90 (2.959)	42	7.64 (2.448)	4.160	<0.001
ABAS-II: Global Adaptive Composite	66	104.67 (13.324)	43	95.26 (17.159)	3.213	0.002
Conceptual Composite	68	106.71 (12.930)	44	96.86 (14.767)	3.719	<0.001
Social Composite	68	105.46 (13.895)	44	98.95 (15.622)	2.302	0.023
Practical Composite	66	101.70 (13.791)	43	92.23 (16.883)	3.202	0.002
BASC-2: Externalizing Composite	70	43.73 (8.446)	43	46.05 (8.588)	-1.407	0.162
Internalizing Composite	70	43.54 (9.234)	44	53.00 (13.701)	-4.038	<0.001
Behavior Symptoms Index	70	43.89 (7.700)	44	48.75 (11.115)	-2.544	0.013
Adaptive Composite	70	55.50 (11.553)	44	48.64 (12.529)	2.989	0.003
PedsQL: Parent Report – Total	64	91.73 (9.623)	44	71.737 (19.349)	6.338	<0.001
Child Report – Total	42	81.55 (13.497)	16	72.92 (13.486)	2.178	0.034

Note. WASI-II: *T*-scores for subtests ($M = 50$, $SD = 10$) and standard scores for composites ($M = 100$, $SD = 15$). D-KEFS: scaled scores ($M = 10$, $SD = 3$). NEPSY-2: scaled scores ($M = 10$, $SD = 3$). WISC-IV: scaled scores for subtests ($M = 10$, $SD = 3$) and standard scores for composites ($M = 100$, $SD = 15$).

WRAML-2: scaled score ($M = 10$, $SD = 3$). ABAS-II: standard scores ($M = 100$, $SD = 15$). BASC-2: *T*-scores ($M = 50$, $SD = 10$).