

Table S1. Cluster peaks and local maxima of regions sensitive to the BIO > SCRAM contrast in whole-brain analysis, for the full sample (typically developing (TD) adults and children and adults and children with autism spectrum disorder (ASD); sample A) and the matched subsample of TD children and children with ASD (sample C).

Site	x	y	z	Z	k
TD adults & children (sample A)					
Right Middle Temporal Gyrus	48	-52	4	7.28	11554
Right Temporal Occipital Fusiform Cortex	42	-54	-12	6.88	
Right Lateral Occipital Cortex	46	-76	-6	6.75	
Right Supramarginal Gyrus	52	-40	12	6.67	
Left Lateral Occipital Cortex	-48	-64	2	7.75	9130
Left Temporal Occipital Fusiform Cortex	-40	-50	-16	6.75	
Left Inferior Temporal Gyrus	-46	-54	-8	6.66	
Right Precentral Gyrus	48	2	40	5.30	1950
Right Inferior Frontal Gyrus	48	16	22	5.09	
Left Frontal Orbital Cortex	-40	34	-2	4.18	493
Left Inferior Frontal Gyrus	-50	36	0	3.37	
Left Frontal Operculum Cortex	-40	26	6	3.27	
Left Frontal Pole	-54	36	0	3.20	
Frontal Medial Cortex	-6	36	-20	4.00	481
Subcallosal Cortex	-2	24	-20	3.60	
Frontal Medial Cortex	0	44	-16	3.23	
Frontal Pole	-6	56	-14	3.19	
TD children (sample C)					
Right Occipital Pole	36	-92	-6	7.26	6280
Right Lateral Occipital Cortex	50	-78	-6	7.12	
Right Lateral Occipital Cortex	46	-80	-8	6.67	
Right Occipital Pole	28	-96	-4	6.08	
Right Lateral Occipital Cortex	36	-88	-2	5.96	
Right Inferior Temporal Gyrus	52	-52	-14	5.95	
Left Lateral Occipital Cortex	-38	-66	-4	7.60	3193
Left Lateral Occipital Cortex	-40	-80	-6	6.91	
Left Lateral Occipital Cortex	-50	-64	8	6.76	
Left Lateral Occipital Cortex	-42	-64	-4	6.75	
Left Lateral Occipital Cortex	-44	-80	-6	6.37	
Left Inferior Temporal Gyrus	-44	-54	-8	5.98	
Inferior Frontal Gyrus	48	16	22	5.70	890
Inferior Frontal Gyrus	52	14	24	5.40	
Middle Frontal Gyrus	44	12	36	5.37	
Precentral Gyrus	44	8	34	5.27	
Inferior Frontal Gyrus	54	20	22	4.97	
Inferior Frontal Gyrus	52	24	20	4.64	
Left Temporal Fusiform Cortex	-36	-4	-34	5.45	542
Left Temporal Pole	-32	18	-30	3.97	
Left Amygdala	-28	-4	-24	3.80	
Left Optic Radiation	-34	-10	-20	3.77	
Left Amygdala	-20	-4	-16	3.52	
Left Amygdala	-16	-8	-14	3.48	
ASD adults & children (sample A)					
Right Temporal Occipital Fusiform Cortex	42	-40	-18	4.41	2764
Right Middle Temporal Gyrus	60	-54	4	4.33	
Right Supramarginal Gyrus	54	-38	20	3.93	
Left VI	-36	-46	-26	4.46	1967
Left Occipital Pole	-22	-104	-4	4.23	
Left Temporal Occipital Fusiform Cortex	-38	-52	-20	4.08	
Left Middle Temporal Gyrus	-52	-54	8	4.06	
Right Amygdala	12	-6	-16	4.07	418

Table SI (cont'd).

Site	x	y	z	Z	k
ASD adults & children (sample A) (cont'd)					
Right Temporal Pole	26	6	-26	3.13	
ASD children (sample C)					
Right Supramarginal Gyrus	56	-42	20	4.62	1127
Right Angular Gyrus	64	-50	20	4.16	
Right Middle Temporal Gyrus	54	-54	10	4.15	
Right Supramarginal Gyrus/Inferior parietal lobule	66	-34	34	4.15	
Right Middle Temporal Gyrus	52	-50	2	4.01	
Right Thalamus	12	-16	10	3.83	805
Right Caudate	14	-8	20	3.75	
Right Caudate	10	6	10	3.71	
Right Corticospinal tract	24	-12	8	3.34	
Right Temporal Occipital Fusiform Cortex	42	-40	-20	4.64	653
Right Temporal Fusiform Cortex	38	-36	-20	4.40	
Right Temporal Fusiform Cortex	42	-28	-24	3.94	
Left VI	-36	-56	-28	4.10	537
Left Temporal Occipital Fusiform Cortex	-36	-46	-24	3.70	
Left VI	-38	-52	-28	3.54	
Left Temporal Occipital Fusiform Cortex	-38	-50	-18	3.48	
Left Crus I	-46	-64	-24	3.32	
Left VI	-36	-44	-30	3.51	

Note. Coordinates are reported in MNI space. *Z*: Z-statistic. *k*: Cluster voxel extent.

Table SII. Cluster peaks and local maxima of cerebellar regions responsive to the BIO > SCRAM \times LpSTS interaction in PPI analysis, controlling for age, within the full sample (sample A).

Site	Prob.	x	y	z	Z	k
BIO > SCRAM \times LpSTS						
TD						
Left Crus II	91%	-16	-84	-39	3.64	114
Left Crus I	93%	-26	-86	-35	2.63	
Left VIIa	79%	-30	-46	-55	3.59	64
Left VIIb	73%	-26	-38	-51	3.24	
Right VIIa	41%	30	-44	-55	5.88	19
Right I-IV	28%	28	-34	-25	3.24	19
Right V	24%	32	-38	-25	2.67	
Right X	93%	24	-36	-43	2.92	18
ASD						
Left Crus II	100%	-28	-80	-47	3.97	250
Left Crus I	78%	-34	-80	-39	3.49	
Left VIIb	36%	-2	-76	-43	3.34	
Left Crus II	100%	-14	-90	-35	3.08	
Right Crus II	67%	6	-76	-37	3.05	

Figure S1. Regions displaying significant response to the BIO > SCRAM contrast in the whole-brain analysis for each of the TD (typically developing) and ASD (autism spectrum disorder) groups (both full samples and matched child samples), presented as an axial mosaic in MNI space, with every second slice displayed. Colormap ranges are group-specific; for each group, the value mapped to the top of the color range is close to the group-specific maximum z-value in order to better reveal within-group peak

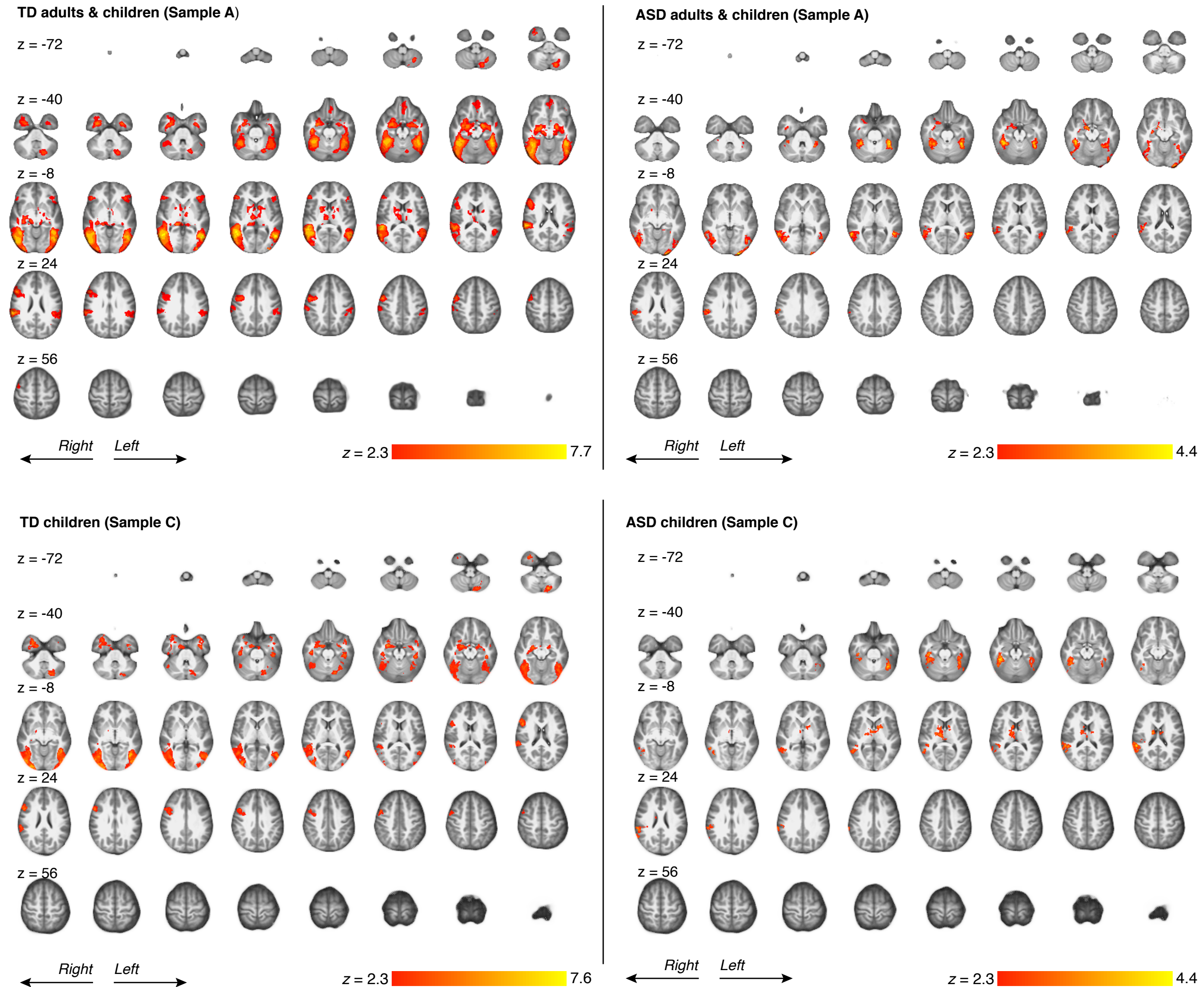


Figure S2. Details of PPI seed creation. **A)** Every sagittal and axial slice of the right posterior superior temporal sulcus (RpSTS) seed is displayed on the MNI standard space template, with coordinates in mm. The left pSTS seed (not shown) is the mirror image of this mask. **B)** Example of seed creation workflow illustrated on a representative axial slice ($z = 6$). Thresholded z-statistic images representing brain regions significantly responsive to the BIO > SCRAM (whole-brain) contrast, within the full TD and ASD samples, as well as the matched child samples, were binarized, and a mask was created in the region of overlap within the posterior continuing branch of the STS. **C)** Manual adjustments to the merged, binarized overlap mask included minor hole-filling and removal of “stray” voxels to create a coherent seed region.

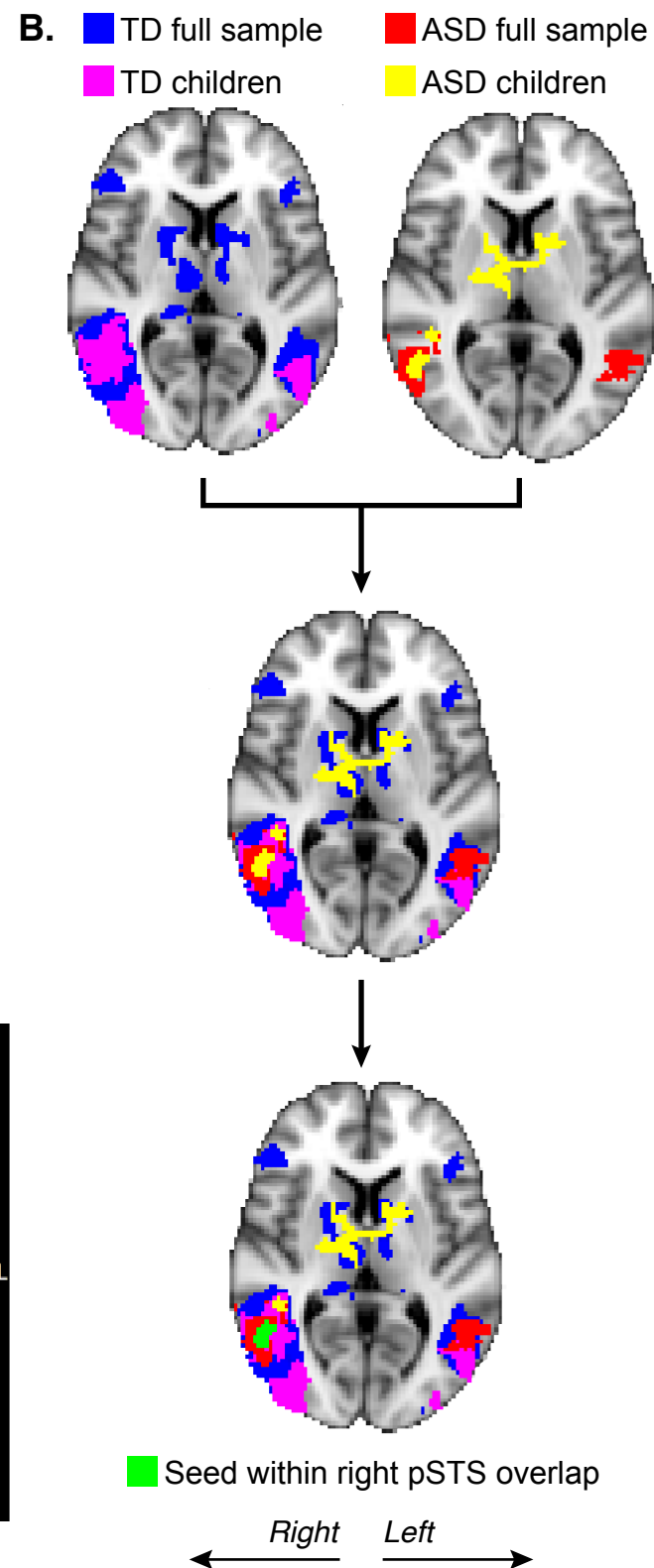
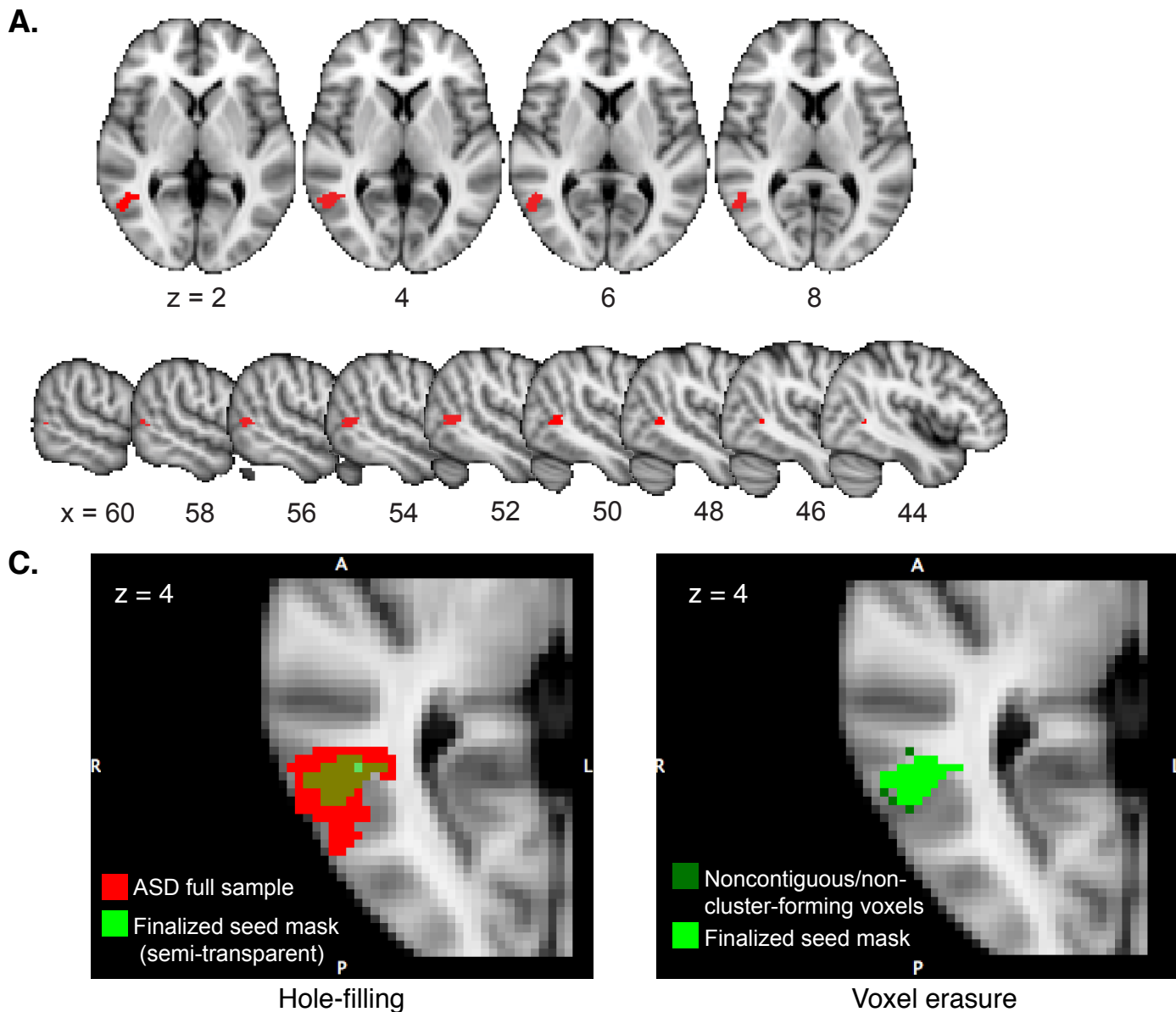
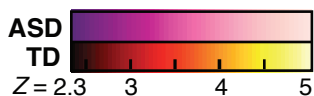


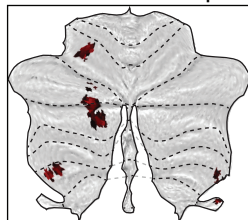
Figure S3. Flattened z-statistic displays of regions displaying a significant psychophysiological interaction (PPI) between the BIO > SCRAM contrast and a seed region in left posterior superior temporal sulcus (LpSTS) within A) the full sample of TD adults and children and B) the full sample of adults and children with ASD, with outlines indicating lobular structure overlaid in black. For comparison, results obtained using the right pSTS seed are inset.

BIO > SCRAM × LpSTS (PPI)

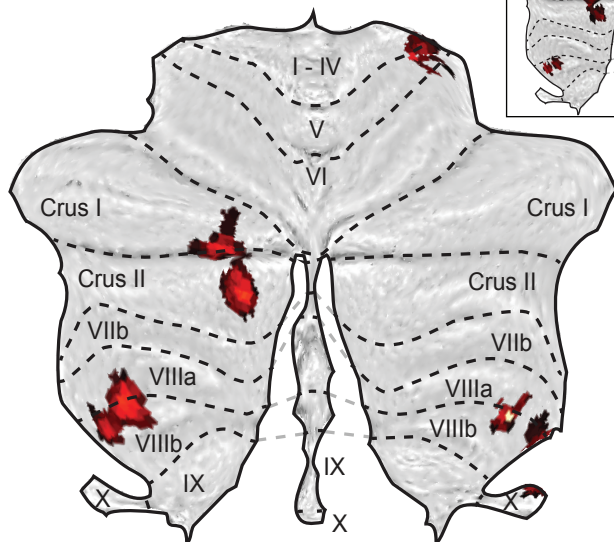
Controlling for age.



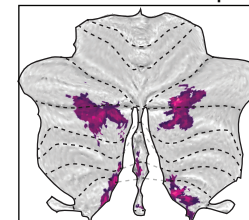
BIO > SCRAM × RpSTS



A. TD adults & children (n = 62)



BIO > SCRAM × RpSTS



B. ASD adults & children (n = 35)

