Supplement 1: Ethical Approval

The study was conducted according to legal regulations of the European Union, national legislation, and the Declaration of Helsinki. The study protocols were approved by the relevant ethical committees at each site prior to the start of data collection: the Ethics Committee of the Medical Faculty of Goethe University Frankfurt for the Frankfurt site (site 1), RWTH Aachen University Hospital (EK027/14) for the Aachen site (site 2), and the University Ethics Committee (ERGO Number: 18970) and National Health Service Research Ethics Committee (NRES Committee West Midlands, Edgbaston; REC reference 13/WM/0483) for the UK sites (Southampton and Birmingham).

Supplement 2: Structural Magnetic Resonance Imaging (MRI) Data Acquisition

To ensure comparability of MRI data between the four sites, each site adopted similar scanning parameters and image acquisition sequences, and underwent site qualification procedures to ensure that sequences were comparable. These included scanning an American College of Radiology[1] (ACR) phantom, a Functional Biomedical Informatics Research Network[2] (FBIRN) phantom, and a human volunteer. The ACR phantom is designed to assess structural MRI sequences, and the FBIRN is designed to verify and measure scanning stability during functional MRI sequences, and provide information concerning scanner drift, percent fluctuation in signal, signal-to-noise ratio, and signal-to-fluctuation-noise ratio. Once collected, the three sets of data were reviewed by an MRI physicist at the University of Birmingham, and each site adjusted the scanning parameters according to the physicist's recommendations until the sites' scanning procedures were comparable. The sites were only able to start collecting data once they had successfully passed this site qualification procedure and had been given permission to start acquiring data.

Supplement 3: Medication

Thirteen participants were taking medication at the time of the scan. Seven participants with CD were taking medication for attention-deficit/hyperactivity disorder (ADHD; Medikinet, Methylphenidate, Lisdexamfetamine, Concerta, Strattera), three were taking antidepressants (Fluoxetine, Citalopram, Venlafaxine), one participant was taking medication for insomnia (Circadin), and one participant

was taking antipsychotic drugs for behavioural problems (Dipiperon). One control participant was taking antihistamines for severe allergies (Fexophenadine).

Supplement References:

1. Chen C-C, Wan Y-L, Wai Y-Y, Liu H-L. Quality assurance of clinical MRI scanners using ACR MRI phantom: Preliminary results. J Digit Imaging. 2004;17:279-284.
2. Glover GH. FBIRN Stability phantom QA procedures. Stanford University and FBIRN. 2005.

Figure S1. Unthresholded effect size maps (gamma = C * beta, where beta is the regression coefficient and C is the contrast) for the main effect of diagnosis and sex-by-diagnosis interactions (corrected results are presented in Figure 1 of the main manuscript and reported in Tables S3-5) across the three measures (columns). Note: Row A) Findings obtained across all sites, row B) Frankfurt site, row C) Aachen site, row D) Southampton site, and row E) Birmingham site.

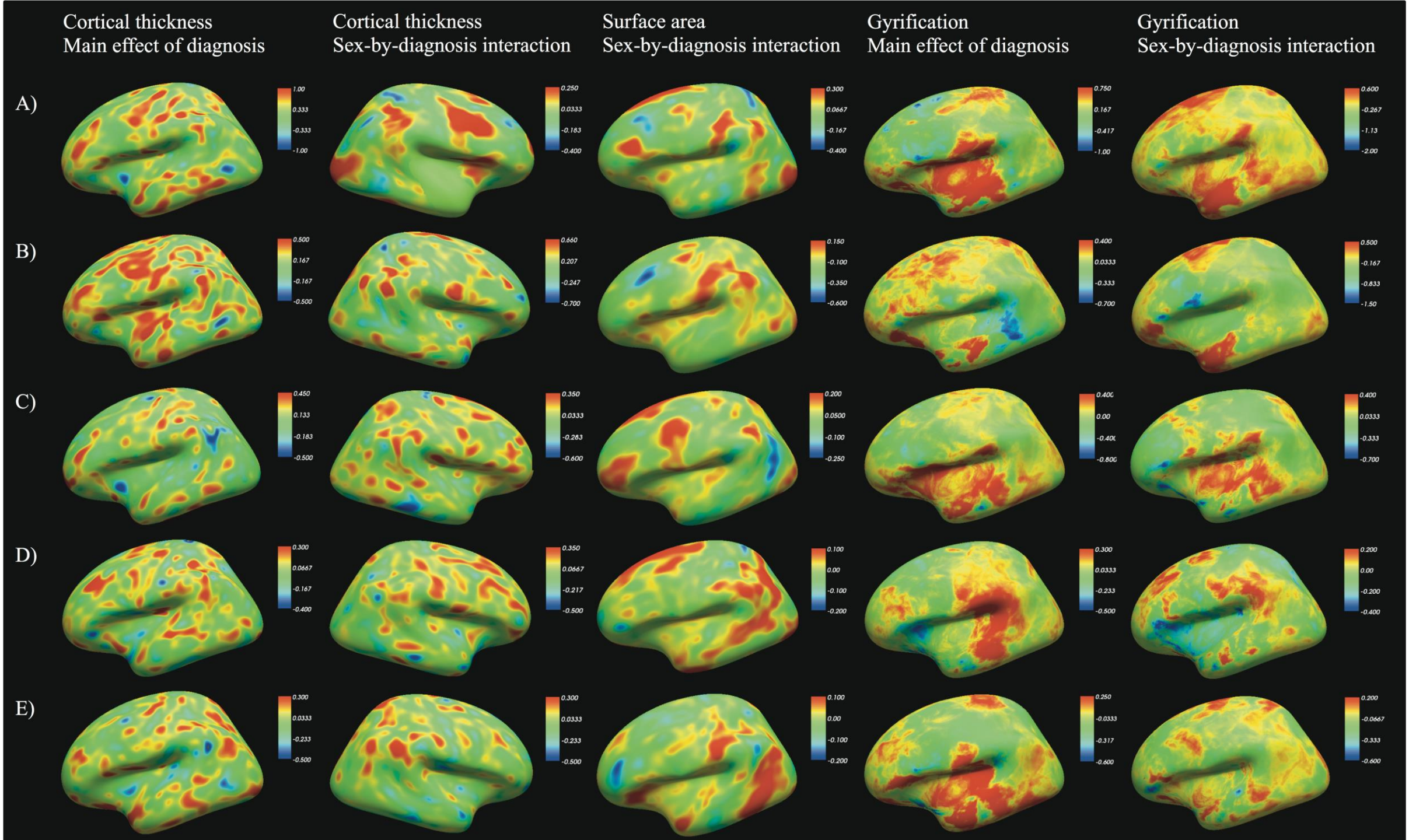
Cortical thickness
Main effect of diagnosis
Cortical thickness
Sex-by-diagnosis interaction
Surface area
Sex-by-diagnosis interaction
Gyrification
Main effect of diagnosis
Gyrification
Sex-by-diagnosis interaction
A)
1.00
0.333
-0.333
-1.00
0.250
0.0333
-0.183
-0.400
0.300
0.0667
-0.167
-0.400
0.750
0.167
-0.417
-1.00
0.600
-0.267
-1.13
-2.00
B)
0.500
0.167
-0.167
-0.500
0.660
0.207
-0.247
-0.700
0.150
-0.100
-0.350
-0.600
0.400
0.0333
-0.333
-0.700
0.500
-0.167
-0.833
-1.50
C)
0.450
0.133
-0.183
-0.500
0.350
0.0333
-0.283
-0.600
0.200
0.0500
-0.100
-0.250
0.400
0.00
-0.400
-0.800
0.400
0.0333
-0.333
-0.700
D)
0.300
0.0667
-0.167
-0.400
0.350
0.0667
-0.217
-0.500
0.100
0.00
-0.100
-0.200
0.300
0.0333
-0.233
-0.500
0.200
0.00
-0.200
-0.400
E)
0.300
0.0333
-0.233
-0.500
0.300
0.0333
-0.233
-0.500
0.100
0.00
-0.100
-0.200
0.250
-0.0333
-0.317
-0.600
0.200
-0.0667
-0.333
-0.600

Table S1. Number of Participants Contributed by Each of the Four Sites

Groups	Site 1 Frankfurt (*n*=32)	Site 2 Aachen (*n*=42)	Site 3 Southampton (*n*=64)	Site 4 Birmingham (*n*=62)	Chi Square (p value)
No. F-CD	7	11	16	14	X^2=2.24 (.99)
No. M-CD	5	11	16	16	
No. F-HC	10	10	16	16	
No. M-HC	10	10	16	16	

Note: F-CD = Females with conduct disorder; F-HC = Female healthy controls; M-CD = Males with conduct disorder; M-HC = Male healthy controls. Differences between sites were tested using a Chi Square test.

Table S2. Scanning Parameters and Image Acquisition Sequence at Each Site

	Frankfurt	Aachen	Southampton	Birmingham
Scanner make and model	Siemens Magnetom Tim Trio	Siemens Magnetom Prisma	Siemens Magnetom Tim Trio	Philips Achieva
Software version	Syngo MR A35	Syngo MR D13D	Syngo MR B17	Version 3.2.6.1
Head coil	8 channel	32 channel	32 channel	32 channel

Table S3. Main Effects of Diagnosis, Sex, and Sex-by-Diagnosis Interactions on Cortical Thickness That Were Obtained Without Controlling for Attention-Deficit/Hyperactivity Disorder Symptoms

Contrast Cerebral Region	Hemisphere	Size (mm^2)	NVtxs	MNI Coordinates *x*	*y*	*z*	CWP	*Max*
Main effects of Diagnosis All CD < All HC								
Precentral gyrus	L	2621	4411	-52	0	38	0.0002	3.09
Rostral middle frontal	L	1846	1922	-41	36	17	0.0062	3.00
Ventromedial PFC	L	2048	2219	-7	50	8	0.0024	2.68
	R	2373	2565	7	65	6	0.0006	3.08
Cuneus	R	1618	1768	3	-81	27	0.0106	2.59
Main effects of Sex All females > All males								
Postcentral gyrus	L	1350	2392	-58	-9	34	0.0284	8.66
	R	2509	4431	62	-8	34	0.0005	5.92
Precentral gyrus	L	5745	10766	-49	0	50	0.0001	5.57
	R	2035	4141	18	-16	71	0.0024	5.28
Sex-by-diagnosis interaction FCD > FHC, MCD < MHC								
Superior parietal lobule	L	1287	2195	-19	-65	44	0.0367	4.38
Supramarginal gyrus	R	2008	2895	57	-48	30	0.0027	3.24

Note: CD = Conduct Disorder; CWP = Cluster-wise-*P* value; FCD = Females with conduct disorder; HC = Healthy control; L = left; Max = Maximum –log10(P value); MCD = Males with conduct disorder; MNI = Montreal Neurological Institute; NVtxs = Number of vertices in the cluster; PFC = Prefrontal cortex; R = right.

Table S4. Main Effects of Diagnosis, Sex, and Sex-by-Diagnosis Interactions in Surface Area That Were Obtained Without Controlling for Attention-Deficit/Hyperactivity Disorder Symptoms

Contrast Cerebral Region	Hemisphere	Size (mm^2)	NVtxs	MNI Coordinates			CWP	*Max*
				x	*y*	*z*		
Main effects of Diagnosis All CD > All HC								
Fusiform/inferior temporal gyrus	L	2312	2557	-42	-43	-25	0.0112	3.01
Postcentral/superior frontal gyrus	L	3044	5840	-50	-27	41	0.0013	2.78
Lateral occipital	R	2953	3311	12	-95	15	0.0021	1.83
Main effects of Sex All females > All males								
Caudal middle frontal	R	2318	3864	35	14	28	0.0102	4.17
Middle/superior temporal gyrus/insula	R	4589	7072	49	-25	-6	0.0001	3.44
Middle/inferior temporal gyrus	L	2011	2221	-61	-39	-17	0.0246	2.92
All males > All females								
Lateral occipital	L	2695	2689	-19	-98	-18	0.0039	4.28
Rostral middle frontal	R	2008	1980	43	48	-3	0.0272	3.23
Cuneus/ occipital cortex	R	2618	2610	11	-91	16	0.0042	2.73
Sex-by-diagnosis interaction MCD > MHC, FCD < FHC								
Lateral occipital	L	2229	2357	-28	-98	-1	0.0130	2.29
Superior frontal gyrus	L	1936	2183	-17	2	72	0.0298	1.93

Note: CD = Conduct Disorder; CWP = Cluster-wise-*P* value; FCD = Females with conduct disorder; HC = Healthy control; L = left; Max = Maximum –log10(P value); MCD = Males with conduct disorder; MNI = Montreal Neurological Institute; NVtxs = Number of vertices in the cluster; PFC = Prefrontal cortex; R = right.

Table S5. Main Effects of Diagnosis, Sex, and Sex-by-Diagnosis Interactions on Cortical Folding, as Quantified by Local Gyrification Index, That Were Obtained Without Controlling for Attention-Deficit/Hyperactivity Disorder Symptoms

Contrast Cerebral Region	Hemisphere	Size (mm^2)	NVtxs	*MNI Coordinates*			CWP	*Max*
				x	*y*	*z*		
Main effect of diagnosis All CD > All HC								
Superior temporal/ insula	L	2554	4830	-64	-19	-4	0.0001	3.10
Ventromedial PFC	L	988	846	-27	46	-13	0.0068	2.86
Post/precentral gyrus	L	1689	3571	-28	-29	53	0.0001	2.41
Lateral orbitofrontal	L	892	726	-13	60	-10	0.0122	1.86
All CD < All HC								
Inferior frontal gyrus	R	1647	2577	42	17	22	0.0001	2.99
Supramarginal	R	872	1495	54	-36	22	0.0171	2.74
Main effects of Sex All females > All males								
Precentral gyrus	R	1575	2880	38	5	28	0.0001	3.96
Middle frontal gyrus/ inferior frontal gyrus	L	1928	3393	-40	15	34	0.0001	3.34
Orbitofrontal cortex	L	1029	1389	-38	21	-17	0.0053	3.34
Postcentral gyrus	R	1008	1917	53	-9	26	0.0072	3.33
Lateral occipital cortex	L	2486	3115	-22	-97	18	0.0001	2.78
Middle temporal gyrus	L	3069	4197	-65	-23	-11	0.0001	2.43
Rostral anterior cingulate cortex	R	897	1334	4	33	-10	0.0145	2.23
All males > All females								
Fusiform/lingual gyrus	L	1761	2249	-15	-67	-12	0.0001	3.16
	R	3718	6043	20	-63	-11	0.0001	2.97
Sex-by-diagnosis interaction MCD > MHC, FCD < FHC								
Fusiform /parahippocampal gyrus	L	2463	4023	-17	-17	-26	0.0001	2.54
Superior frontal gyrus	L	1251	2129	-8	-9	70	0.0009	2.18

Note: CD = Conduct Disorder; CWP = Cluster-wise-*P* value; FCD = Females with conduct disorder; HC = Healthy control; L = left; Max = Maximum –log10(P value); MCD = Males with conduct disorder; MNI = Montreal Neurological Institute; NVtxs = Number of vertices in the cluster; PFC = Prefrontal cortex; R = right.

Table S6. P Values Obtained When Testing for Main Effects of Diagnosis, Sex, and Sex-by-Diagnosis Interactions on Subcortical Volumes in a Full Factorial Model

		Full factorial			Within the CD group			
Subcortical Region	Hemisphere	Effect of Diagnosis	Effect of Sex	Sex-by-diagnosis interaction	Correlations with CD symptoms	Sex-by-CD severity interaction	Correlations with CU traits	Sex-by-CU traits interaction
Amygdala	L	.76	.82	.73	.98	.98	.55	.83
	R	.62	.88	.95	.81	1.00	.92	.56
Hippocampus	L	.76	.88	.56	.81	.63	.49	.24
	R	.76	.47	.84	.81	.63	.41	.21
Putamen	L	.62	.41	.53	.98	.98	.77	.06
	R	.76	.32	.56	.98	.81	.20	.25
Pallidum	L	.96	<.001	.28	.81	.81	.91	.08
	R	.62	.004	.08	.98	.81	.95	.37
Caudate	L	.62	.28	.41	.81	.81	.74	.46
	R	.76	.77	.53	.63	.81	.56	.64
Thalamus	L	.62	.08	.12	.92	.98	.75	.81
	R	.62	.05	.08	.98	.98	.06	.97

Note: The results of correlations between lifetime conduct disorder (CD) symptoms and subcortical volumes and sex-by-symptom severity interactions, and correlations between callous-unemotional (CU) traits and subcortical volumes and sex-by-CU traits interactions within the CD group are also reported. Results are presented after applying a false discovery rate correction for multiple comparisons, but without controlling for attention-deficit/hyperactivity disorder symptoms.

Table S7. Correlations Between Conduct Disorder (CD) Severity and Cortical Thickness, Surface Area, and Gyrification, and Sex-by-CD Severity Interactions Within the Conduct Disorder Group Only

Contrast Cerebral Region	Hemisphere	Size (mm^2)	NVtxs	*MNI Coordinates*			CWP	*Max*
				x	*y*	*z*		
Surface area								
Overall positive correlation								
Posterior cingulate cortex/precuneus	R	2045	3715	8	-54	26	0.0240	3.39
Interaction: MCD positive, FCD negative								
Precentral gyrus /superior frontal gyrus	R	4298	8054	53	3	44	0.0001	2.89
Local gyrification index								
Overall positive correlation								
Caudal middle frontal	L	848	1373	-30	22	45	0.0166	3.06
Overall negative correlation								
Isthmus cingulate	R	1051	1663	17	-50	-0	0.0052	2.06
Interaction: MCD positive, FCD negative								
Superior frontal gyrus	R	1105	1835	24	-0	52	0.0037	3.07
Interaction: FCD positive, MCD negative								
Fusiform gyrus	R	2560	2661	30	-76	-13	0.0001	2.52
Insula	L	899	1032	-33	3	-21	0.0119	3.37
Middle temporal	L	1424	1991	-65	-45	-9	0.0001	2.10
Supramarginal gyrus	L	1050	1785	-58	-55	20	0.0047	1.75

Note: Results are presented without controlling for attention-deficit/hyperactivity disorder symptoms. CWP = Cluster-wise-*P* value; FCD = Females with conduct disorder; Max = Maximum –log10(P value); MCD = Males with conduct disorder; MNI = Montreal Neurological Institute; NVtxs = Number of vertices in the cluster.

Table S8. Correlations Between Callous-Unemotional (CU) Traits Across Males and Females, and Sex-by-CU Traits Interactions in Cortical Structure Within the Conduct Disorder Group

Contrast Cerebral Region	Hemisphere	Size (mm^2)	NVtxs	MNI Coordinates			CWP	*Max*
				x	*y*	*z*		
Cortical thickness								
Overall negative correlation								
Occipital pole	L	1243	1239	-3	-94	16	0.044	2.11
Local gyrification index								
Overall negative correlation								
Fusiform gyrus	L	1130	1132	-31	-69	-18	0.0023	2.46
	R	3085	3726	42	-48	-23	0.0001	3.54
Superior parietal gyrus	L	1549	3317	-28	-55	42	0.0001	1.98
Interaction: MCD positive, FCD negative								
Superior frontal gyrus	R	1105	1835	24	-0	52	0.0037	3.07
Ventromedial Prefrontal cortex	L	2568	2788	-24	58	5	0.0001	2.77
Precentral/ middle frontal gyrus	L	755	1286	-38	4	36	0.036	1.85
Posterior cingulate	L	813	1656	-1	-16	39	0.022	1.77
Lingual gyrus	R	3509	4413	24	-69	-5	0.0001	3.53
Precentral gyrus	R	1005	941	31	4	24	0.0075	2.67
Superior frontal gyrus	R	1024	1110	14	61	21	0.0063	1.85

Note: Results are presented without controlling for attention-deficit/hyperactivity disorder symptoms. CWP = Cluster-wise-*P* value; FCD = Females with conduct disorder; L = left; Max = Maximum – log10(P value); MCD = Males with conduct disorder; MNI = Montreal Neurological Institute; NVtxs = Number of vertices in the cluster; R = right.

Table S9. Age-of-Onset Effects Across Males and Females, and Sex-by-Age-of-Onset Interactions on Local Gyrification Index Measures Within the Conduct Disorder (CD) Group

Contrast Cerebral Region	Hemisphere	Size (mm^2)	NVtxs	MNI Coordinates			CWP	*Max*
				x	*y*	*z*		
All CO > All AO								
Temporal pole	R	719	781	21	0	-25	0.0491	2.89
Insula	L	2356	4215	-39	2	-17	0.0001	2.32
	R	3721	6777	42	9	-12	0.0001	2.62
All AO > All CO								
Postcentral gyrus	R	3716	8137	27	-29	66	0.0001	4.52
Caudal middle frontal gyrus	L	5288	7204	-27	24	39	0.0001	3.52
Supplementary motor area	R	985	1991	10	-1	47	0.0080	2.61
Superior parietal/occipital cortex	R	1245	1510	13	-89	37	0.0007	2.11
Inferior parietal cortex	L	1276	2265	-44	-55	20	0.0005	1.85
Middle frontal gyrus	R	899	1077	41	45	26	0.0140	1.75
Interaction: F-CO > F-AO, M-CO < M-AO								
Cuneus	R	4534	5469	3	-87	7	0.0001	4.42
Superior frontal gyrus	L	4838	9014	-23	16	55	0.0001	3.52
Middle frontal gyrus	L	1199	1211	-25	62	14	0.0012	2.62
Cuneus	R	4534	5469	3	-87	7	0.0001	4.42
Inferior parietal cortex	L	997	1754	-36	-70	50	0.0064	1.89
	R	860	1885	40	-46	37	0.0189	1.63
Superior parietal cortex	L	759	932	-12	-88	35	0.0350	1.70
Rostral anterior cingulate	R	897	1334	4	33	-10	0.0145	2.23
Interaction: M-CO > M-AO, F-AO > F-CO								
Lateral orbitofrontal	R	820	1311	16	8	-18	0.0236	2.46

Note: Results are presented without controlling for attention-deficit/hyperactivity disorder symptoms. AO = Adolescence-onset CD; CO = Childhood-onset CD; CWP = Cluster-wise *P* value; F = Females, L = left; M = Males, Max = Maximum –log10(P value); NVtxs = Number of vertices in the cluster; R = right.

Table S10. Commonalities Between Main Effects of Diagnosis, Sex, and Sex-by-Diagnosis Interactions in Cortical Thickness Observed in the Main Analysis Compared to Additional Analyses Individually Taking Comorbid Attention-Deficit/Hyperactivity Disorder (ADHD), Major Depressive Disorder (MDD), Substance Abuse, Handedness, or Medication Use Into Account, or Dropping Site or IQ From the Analyses

Contrast Cerebral Region	Hemisphere	Main analysis	ADHD[a]	MDD[a]	Substance abuse[a]	Dropping site[b]	Dropping IQ[b]	IQ-matched[c]	Right-handers[d]	Medication use[d]
Main effects of Diagnosis All CD < All HC										
Precentral gyrus	L	Yes	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Rostral middle frontal gyrus	L	Yes	No	No	Yes	No	Yes	Yes	Yes	No
Ventromedial PFC	L	Yes	Yes	No	Yes	No	Yes	No	No	Yes
	R	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes
Cuneus	R	Yes	No	No	No	No	Yes	Yes	Yes	Yes
Main effects of Sex All females > All males										
Postcentral gyrus	L	Yes	Yes	No	Yes	Yes	Yes	No	Yes	No [e]
	R	Yes	Yes	No	Yes	Yes	No [e]	No	Yes	Yes
Precentral gyrus	L	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes
	R	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes
Sex-by-diagnosis interactions FCD > FHC, MCD < MHC										
Superior parietal lobule	L	Yes	No	No	Yes	No [e]	Yes	No	Yes	Yes
Supramarginal gyrus	R	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes

Note: CD = Conduct Disorder; FCD = Females with Conduct Disorder; HC = Healthy control; L = left; MCD = Males with Conduct Disorder; R = right.

[a] Number of current symptoms, as measured using the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version were included as an additional covariate of no interest.

[b] Results that were obtained when dropping site or IQ as covariates of no interest.

[c] Groups were matched on IQ (lower limit for the CD group was 85, and upper limit for the HC group was 100; this analysis included 25 FCD, 24 FHC, 28 MCD, and 25 MHC participants).

[d] Participants who were left handed, or were taking medication at the time of testing, respectively, were excluded from these analyses.

[e] Indicates a trend of $p = .06$.

Table S11. Commonalities Between Main Effects of Diagnosis, Sex, and Sex-by-Diagnosis Interactions in Surface Area Observed in the Main Analysis Compared to Additional Analyses Individually Taking Comorbid Attention-Deficit/Hyperactivity Disorder (ADHD), Major Depressive Disorder (MDD), Substance Abuse, Handedness, or Medication Use Into Account, or Dropping Site or IQ From the Analyses

Contrast Cerebral Region	Hemisphere	Main analysis	ADHD[a]	MDD[a]	Substance abuse[a]	Dropping site[b]	Dropping IQ[b]	IQ-matched[c]	Right handers[d]	Medication use[d]
Main effects of Diagnosis All CD > All HC										
Fusiform/inferior temporal gyrus	L	Yes	No	Yes	Yes	No	No	No	No	Yes
Postcentral/superior frontal gyrus	L	Yes	No	No	No	No	No	No	Yes	Yes
Lateral occipital gyrus	R	Yes	No	Yes	Yes	No	No	No	Yes	No
Main effects of Sex All females > All males										
Caudal middle frontal gyrus	R	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes
Middle/superior temporal gyrus/insula	R	Yes	Yes	No	Yes	Yes	No	Yes	Yes	Yes
Middle/inferior temporal gyrus	L	Yes	Yes	No	No[e]	No	No	No	Yes	Yes
All males > All females										
Lateral occipital gyrus	L	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rostral middle frontal gyrus	R	Yes	No	No[e]	Yes	Yes	Yes	No	No[e]	Yes
Cuneus/occipital cortex	R	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Sex-by-diagnosis interaction MCD > MHC, FCD < FHC										
Lateral occipital gyrus	L	Yes	No	No[e]	Yes	Yes	No	Yes	Yes	Yes
Superior frontal gyrus	L	Yes	Yes	No[e]	No	Yes	Yes	Yes	No	Yes

Note: CD = Conduct Disorder; FCD = Females with Conduct Disorder; HC = Healthy control; L = left; MCD = Males with Conduct Disorder; R = right.

[a] Number of current symptoms, as measured using the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version were included as an additional covariate of no interest.

[b] Results obtained when dropping site or IQ as covariates of no interest.

[c] Groups were matched on IQ (lower limit for the CD group was 85, and upper limit for the HC group was 100; this analysis included 25 FCD, 24 FHC, 28 MCD, and 25 MHC participants).

[d] Participants who were left handed, or were taking medication at the time of testing, respectively, was excluded from these analyses.

[e] Indicates a trend of $p = .06$.

Table S12. Commonalities Between Main Effects of Diagnosis, Sex, and Sex-by-Diagnosis Interactions in Local Gyrification Index Observed in the Main Analysis Compared to Additional Analyses Individually Taking Comorbid Attention-Deficit/Hyperactivity Disorder (ADHD), Major Depressive Disorder (MDD), Substance Abuse, Handedness, or Medication Use Into Account, or Dropping Site or IQ From the Analyses

Contrast Cerebral Region	Hemisphere	Main analysis	ADHD[a]	MDD[a]	Substance abuse[a]	Dropping site[b]	Dropping IQ[b]	IQ-matched[c]	Right handers[d]	Medication use[d]
Main effect of diagnosis All CD > All HC										
Superior temporal/insula	L	Yes	No	Yes	Yes	Yes	No	No	No	Yes
Ventromedial PFC	L	Yes	Yes	No	Yes	No	No	No	Yes	Yes
Post/precentral gyrus	L	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes
Lateral orbitofrontal gyrus	L	Yes	No	No	Yes	No	No	Yes	Yes	Yes
All CD < All HC										
Inferior frontal gyrus	R	Yes	No	No	Yes	Yes	Yes	No	Yes	Yes
Supramarginal gyrus	R	Yes	No	No	Yes	Yes	Yes	No	Yes	No
Main effects of Sex All females > All males										
Precentral gyrus	R	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
MFG/IFG	L	Yes	Yes	No	Yes	No	No	Yes	Yes	Yes
Orbitofrontal cortex	L	Yes	Yes	No	Yes	No	No	No [e]	Yes	Yes
Postcentral gyrus	R	Yes	Yes	Yes	Yes	No	No	No	No	Yes
Lateral occipital cortex	L	Yes	Yes	No	Yes	No	No	Yes	Yes	No [e]
Middle temporal gyrus	L	Yes	No	No	No	No	No	Yes	Yes	Yes
Rostral anterior cingulate	R	Yes	No	No	No	No	No	Yes	Yes	Yes
All males > All females										
Fusiform/lingual gyrus	L	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes
	R	Yes	Yes	No	Yes	No	Yes	No	Yes	Yes
Sex-by-diagnosis interaction MCD > MHC, FCD < FHC										
Fusiform/parahippocampal gyrus	L	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Superior frontal gyrus	L	Yes	Yes	No	Yes	No	Yes	No	No	Yes

Note: CD = conduct disorder; FCD = females with conduct disorder; HC = healthy control; IFG = inferior frontal gyrus; L = left; MCD = males with conduct disorder; R = right.

[a] Number of current symptoms, as measured using the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime version were included as an additional covariate of no interest.

[b] Results obtained when dropping site or IQ as covariates of no interest.

[c] Groups were matched on IQ (lower limit for CD group was 85, and upper limit for HC group was 100; this analysis included 25 FCD, 24 FHC, 28 MCD, and 25 MHC participants).
[d] Participants who were left handed, or were taking medication at the time of testing, respectively, were excluded from these analyses.
[e] Indicates a trend of $p = .06$.