

Supplementary materials

Methods - Image acquisition

T1 and diffusion-weighted (DW) MRI data were acquired in Cheadle Manchester on a Siemens Skyra 3.0T scanner (Siemens Medical Solutions, Erlangen, Germany) with a 32-channel head coil (<https://www.healthcare.siemens.com/magnetic-resonance-imaging>). The following parameters were used for the T1-weighted sequence: field of view (FOV) = 208x256x256 mm; acquired voxel size = 1x1x1mm; repetition time (TR)/echo time (TE) = 2,000.00/2.01 ms; flip angle = 8°; plane acceleration iPAT = 2; acquisition time = 5.00 minutes. For the DW MRI data, the following parameters were used: FOV = 104x104x72mm; acquired voxel size = 2x2x2mm; TR/TE = 3,600/92ms; flip angle = 78°; acquisition time = 7.00 minutes. 72 slides, aligned to the anterior commissure to the posterior commissure and reversed, were collected along 50 gradient directions with $b=1,000$ s/mm², $b=2,000$ s/mm², and ten minimally diffusion ($b_0=0$ s/mm²) weighted scans.

Methods - Neuroimaging data pre-processing and analysis

T1-weighted and DW volumes were pre-processed and analysed by UK Biobank (<https://www.aievolution.com/hbm1601/index.cfm?do=abs.viewAbs&abs=3664>)¹ using Functional Magnetic Resonance Imaging of the Brain (FMRIB) Software Library (FSL, <http://fsl.fmrib.ox.ac.uk/fsl>)². Pre-processing pipelines are documented on the UK Biobank website (UK Biobank, Brain Imaging Documentation V1.1, <http://www.ukbiobank.ac.uk>). Manual and automated quality control on the image data was performed prior to data release.

To ensure the anonymity of subjects, the T1-weighted volumes were 'defaced' (*i.e.*, voxels in facial regions were set to zero). Thereafter, gradient distortion correction (GDC) was performed using a tool developed by teams of the Freesurfer and Human Connectome Project (HCP) (available at <https://github.com/Washington-University/Pipelines>).

Additionally, non-brain tissue was removed using BET (Brain Extraction Tool)³ and FLIRT (FMRIB's Linear Image Registration Tool)^{4,5}. Scans were nonlinearly aligned to Montreal Neurological Institute (MNI) 152 space, and segmented to identify WM, GM and cerebrospinal fluid (CSF) using FNIRT (FMRIB's Nonlinear Image Registration Tool)^{6,7}. Subsequently, total WM, GM, and CSF volume was calculated. Finally, FIRST (FMRIB's Integrated Registration and Segmentation Tool) was used to extract subcortical structures from the GM images⁸. Subcortical volumes were calculated for the following structures: caudate, hippocampus, pallidum, thalamus, amygdala, nucleus accumbens, and putamen bilaterally.

DW volumes were converted from DICOM into 4D Neuroimaging Informatics Technology Initiative (NIfTI) format, and b-vector and b-value files were created using Chris Rorden's dcm2niix conversion tool (<https://www.nitrc.org/plugins/mwiki/index.php/dcm2nii:MainPage>).

DW volumes were corrected for eddy current distortions (using the Eddy tool)^{6,7} and head motion, and outlier-slices were removed. Thereafter, GDC was performed using a similar method as used for the T1-weighted volumes. Mean diffusivity (MD) and FA maps were created by fitting the $b = 1,000 \text{ s/mm}^2$ shell into DTIFIT (DTI fitting tool). FA maps were warped to standard space, followed by a probabilistic tractography analysis. BEDPOSTx (Bayesian Estimation of Diffusion Parameters Obtained using Sampling Techniques) was used to model crossing fibers within each voxel⁹. Consequently, 27 WM tracts (12 bilateral and 3 unilateral WM tracts) were identified by starting at 27 different seed locations (defined by AutoPt^{x10}), and fitting voxels that consecutively follow each other's direction using PROBTRACKx.

Tract-averaged water diffusion measures (FA and MD) were calculated for the following WM tracts: acoustic radiation, cingulum (cingulate gyrus and parahippocampal

part), corticospinal tract, forceps major (unilateral), forceps minor (unilateral), inferior fronto-occipital fasciculus, inferior longitudinal fasciculus, medial lemniscus, middle cerebral peduncle (unilateral), thalamic radiation (anterior, superior and posterior), and uncinate fasciculus. MD measures were calculated using the warping and tract defining parameters generated by FA maps. MD and FA are widely-used diffusion measures¹¹, which describe the directional coherence¹² and mean magnitude of water molecule diffusion independent from direction and tissue type¹³ respectively¹⁴.

Results - PGRS and total brain and subcortical volumes

Table S1. Association of PGRS (MDD, SCZ or BP) at other p thresholds with total GM, WM, and CSF, in sample including outliers.

	Including outliers (N = 978)				
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	R ²
MDD-PGRS					
GM volume p ≤ 0.01	0.026 (0.027)	0.986	0.324	0.973	0.069
GM volume p ≤ 0.05	0.011 (0.027)	0.410	0.682	1.000	0.012
GM volume p ≤ 0.10	0.006 (0.027)	0.222	0.825	1.000	0.004
GM volume p ≤ 1.00	-0.000 (0.027)	-0.007	0.995	1.000	0.000
WM volume p ≤ 0.01	0.038 (0.026)	1.463	0.144	0.431	0.146
WM volume p ≤ 0.05	0.027 (0.026)	1.024	0.306	0.918	0.073
WM volume p ≤ 0.10	0.004 (0.027)	0.153	0.879	1.000	0.002
WM volume p ≤ 1.00	-0.007 (0.027)	-0.246	0.806	1.000	0.004
CSF volume p ≤ 0.01	0.010 (0.029)	0.360	0.719	1.000	0.011
CSF volume p ≤ 0.05	0.008 (0.030)	0.264	0.792	1.000	0.006
CSF volume p ≤ 0.10	0.005 (0.030)	0.168	0.867	1.000	0.002
CSF volume p ≤ 1.00	0.043 (0.030)	1.424	0.155	0.465	0.182
SCZ-PGRS					
GM volume p ≤ 0.01	0.008 (0.027)	0.291	0.771	1.000	0.006
GM volume p ≤ 0.05	-0.021 (0.027)	-0.786	0.432	1.000	0.045
GM volume p ≤ 0.10	-0.018 (0.027)	-0.661	0.509	1.000	0.032
GM volume p ≤ 1.00	-0.013 (0.028)	-0.475	0.635	1.000	0.017
WM volume p ≤ 0.01	-0.007 (0.026)	-0.279	0.781	1.000	0.005
WM volume p ≤ 0.05	-0.019 (0.026)	-0.727	0.467	1.000	0.037
WM volume p ≤ 0.10	-0.009 (0.026)	-0.322	0.747	1.000	0.007
WM volume p ≤ 1.00	-0.002 (0.027)	-0.080	0.936	1.000	0.000
CSF volume p ≤ 0.01	0.046 (0.029)	1.600	0.110	0.330	0.215
CSF volume p ≤ 0.05	0.044 (0.029)	1.490	0.137	0.410	0.193
CSF volume p ≤ 0.10	0.050 (0.030)	1.689	0.092	0.275	0.248
CSF volume p ≤ 1.00	0.046 (0.030)	1.517	0.130	0.389	0.208
BP-PGRS					
GM volume p ≤ 0.01	-0.029 (0.027)	-1.069	0.285	0.856	0.081
GM volume p ≤ 0.05	0.002 (0.027)	0.057	0.954	1.000	0.000
GM volume p ≤ 0.10	0.006 (0.027)	0.214	0.830	1.000	0.003
GM volume p ≤ 1.00	-0.001 (0.027)	-0.031	0.975	1.000	0.000
WM volume p ≤ 0.01	-0.023 (0.026)	-0.866	0.387	1.000	0.051
WM volume p ≤ 0.05	0.005 (0.026)	0.189	0.850	1.000	0.002
WM volume p ≤ 0.10	0.005 (0.026)	0.200	0.841	1.000	0.003
WM volume p ≤ 1.00	-0.000 (0.026)	-0.013	0.990	1.000	0.000
CSF volume p ≤ 0.01	0.019 (0.029)	0.658	0.511	1.000	0.037
CSF volume p ≤ 0.05	0.018 (0.029)	0.626	0.532	1.000	0.033
CSF volume p ≤ 0.10	0.004 (0.029)	0.137	0.891	1.000	0.002
CSF volume p ≤ 1.00	-0.007 (0.029)	-0.231	0.817	1.000	0.005

MDD: major depressive disorder, SCZ: schizophrenia, BP: bipolar disorder, GM: grey matter, WM: white matter, CSF:

cerebrospinal fluid, PGRS: polygenic risk scores, uncorr.: uncorrected, FDR: false discovery rate, S.D.: standard deviation. Controlled for age, age², gender, genotype batch and array, 15 MDS components and intracranial volume. R² = estimate of variance explained by PGRS in %.

Table S2. Association of PGRS for MDD at other p thresholds with subcortical volumes, in sample including outliers.

	Including outliers (N = 978)				
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	R ²
MDD-PGRS					
Caudate p ≤ 0.01	0.004 (0.026)	0.141	0.888	1.000	0.001
Caudate p ≤ 0.05	0.026 (0.026)	0.970	0.332	1.000	0.066
Caudate p ≤ 0.10	0.016 (0.026)	0.633	0.527	1.000	0.027
Caudate p ≤ 1.00	0.028 (0.026)	1.048	0.295	1.000	0.077
Hippocampus p ≤ 0.01	0.005 (0.025)	0.212	0.832	1.000	0.003
Hippocampus p ≤ 0.05	-0.002 (0.026)	-0.082	0.935	1.000	0.000
Hippocampus p ≤ 0.10	0.010 (0.025)	0.415	0.678	1.000	0.011
Hippocampus p ≤ 1.00	0.000 (0.026)	0.007	0.994	1.000	0.000
Pallidum p ≤ 0.01	-0.011 (0.026)	-0.422	0.673	1.000	0.012
Pallidum p ≤ 0.05	0.003 (0.027)	0.107	0.915	1.000	0.001
Pallidum p ≤ 0.10	0.009 (0.026)	0.326	0.744	1.000	0.007
Pallidum p ≤ 1.00	-0.006 (0.027)	-0.218	0.827	1.000	0.003
Thalamus p ≤ 0.01	0.003 (0.020)	0.169	0.866	1.000	0.001
Thalamus p ≤ 0.05	-0.012 (0.020)	-0.611	0.541	1.000	0.015
Thalamus p ≤ 0.10	-0.004 (0.020)	-0.196	0.844	1.000	0.001
Thalamus p ≤ 1.00	-0.013 (0.020)	-0.640	0.522	1.000	0.017
Amygdala p ≤ 0.01	-0.020 (0.026)	-0.763	0.445	1.000	0.039
Amygdala p ≤ 0.05	-0.000 (0.027)	-0.010	0.992	1.000	0.000
Amygdala p ≤ 0.10	-0.009 (0.026)	-0.359	0.720	1.000	0.009
Amygdala p ≤ 1.00	0.010 (0.027)	0.385	0.700	1.000	0.010
Nucleus accumbens p ≤ 0.01	0.000 (0.025)	0.005	0.996	1.000	0.000
Nucleus accumbens p ≤ 0.05	-0.019 (0.026)	-0.742	0.458	1.000	0.038
Nucleus accumbens p ≤ 0.10	0.014 (0.026)	0.526	0.599	1.000	0.018
Nucleus accumbens p ≤ 1.00	-0.019 (0.026)	-0.717	0.474	1.000	0.035
Putamen p ≤ 0.01	-0.008 (0.022)	-0.391	0.696	1.000	0.007
Putamen p ≤ 0.05	0.007 (0.022)	0.309	0.757	1.000	0.005
Putamen p ≤ 0.10	0.006 (0.022)	0.278	0.781	1.000	0.004
Putamen p ≤ 1.00	0.007 (0.022)	0.296	0.767	1.000	0.004

MDD: major depressive disorder, PGRS: polygenic risk scores, uncorr.: uncorrected, FDR: false discovery rate, S.D.: standard deviation. Controlled for age, age², gender, genotype batch and array, 15 MDS components, intracranial volume and side of hemisphere. R²= estimate of variance explained by PGRS in %.

Table S3. Association of PGRS for SCZ at other p thresholds with subcortical volumes, in sample including outliers.

	Including outliers (N = 978)				
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	R ²
SCZ-PGRS					
Caudate p ≤ 0.01	0.006 (0.026)	0.246	0.806	1.000	0.004
Caudate p ≤ 0.05	-0.003 (0.026)	-0.101	0.919	1.000	0.001
Caudate p ≤ 0.10	0.009 (0.026)	0.350	0.726	1.000	0.008
Caudate p ≤ 1.00	-0.006 (0.026)	-0.238	0.812	1.000	0.004
Hippocampus p ≤ 0.01	-0.014 (0.025)	-0.566	0.572	1.000	0.020
Hippocampus p ≤ 0.05	-0.001 (0.025)	-0.044	0.965	1.000	0.000
Hippocampus p ≤ 0.10	-0.001 (0.025)	-0.030	0.976	1.000	0.000
Hippocampus p ≤ 1.00	0.006 (0.025)	0.233	0.816	1.000	0.004
Pallidum p ≤ 0.01	-0.017 (0.026)	-0.650	0.516	1.000	0.028
Pallidum p ≤ 0.05	-0.015 (0.027)	-0.578	0.564	1.000	0.024
Pallidum p ≤ 0.10	-0.019 (0.026)	-0.719	0.472	1.000	0.036
Pallidum p ≤ 1.00	-0.017 (0.027)	-0.633	0.527	1.000	0.028
Thalamus p ≤ 0.01	-0.029 (0.020)	-1.477	0.140	0.979	0.083
Thalamus p ≤ 0.05	-0.039 (0.020)	-1.929	0.052	0.378	0.149
Thalamus p ≤ 0.10	-0.043 (0.020)	-2.170	0.030	0.212	0.183
Thalamus p ≤ 1.00	-0.040 (0.020)	-1.979	0.048	0.337	0.157
Amygdala p ≤ 0.01	0.013 (0.026)	0.517	0.606	1.000	0.018
Amygdala p ≤ 0.05	0.015 (0.026)	0.558	0.577	1.000	0.022
Amygdala p ≤ 0.10	0.023 (0.026)	0.896	0.370	1.000	0.055
Amygdala p ≤ 1.00	0.017 (0.026)	0.629	0.530	1.000	0.028
Nucleus accumbens p ≤ 0.01	-0.011 (0.026)	-0.449	0.653	1.000	0.013
Nucleus accumbens p ≤ 0.05	-0.024 (0.026)	-0.924	0.356	1.000	0.058
Nucleus accumbens p ≤ 0.10	-0.036 (0.026)	-1.412	0.158	1.000	0.132
Nucleus accumbens p ≤ 1.00	-0.023 (0.026)	-0.882	0.378	1.000	0.053
Putamen p ≤ 0.01	-0.006 (0.022)	-0.263	0.793	1.000	0.003
Putamen p ≤ 0.05	0.005 (0.022)	0.211	0.833	1.000	0.002
Putamen p ≤ 0.10	-0.001 (0.022)	-0.030	0.976	1.000	0.000
Putamen p ≤ 1.00	0.000 (0.022)	0.015	0.988	1.000	0.000

SCZ: schizophrenia, PGRS: polygenic risk scores, uncorr.: uncorrected, FDR: false discovery rate, S.D.: standard deviation. Controlled for age, age², gender, genotype batch and array, 15 MDS components, intracranial volume and side of hemisphere.

R²= estimate of variance explained by PGRS in %.

Table S4. Association of PGRS for BP at other p thresholds with subcortical volumes, in sample including outliers.

	Including outliers (N = 978)				
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	R ²
BP-PGRS					
Caudate p ≤ 0.01	0.034 (0.026)	1.295	0.196	1.000	0.113
Caudate p ≤ 0.05	0.017 (0.026)	0.653	0.514	1.000	0.029
Caudate p ≤ 0.10	0.019 (0.026)	0.747	0.455	1.000	0.037
Caudate p ≤ 1.00	0.022 (0.026)	0.852	0.394	1.000	0.049
Hippocampus p ≤ 0.01	0.006 (0.025)	0.235	0.814	1.000	0.003
Hippocampus p ≤ 0.05	0.024 (0.025)	0.963	0.336	1.000	0.058
Hippocampus p ≤ 0.10	0.016 (0.025)	0.658	0.511	1.000	0.027
Hippocampus p ≤ 1.00	0.030 (0.025)	1.177	0.239	1.000	0.087
Pallidum p ≤ 0.01	0.038 (0.026)	1.449	0.148	1.000	0.143
Pallidum p ≤ 0.05	-0.000 (0.026)	-0.009	0.993	1.000	0.000
Pallidum p ≤ 0.10	0.023 (0.026)	0.871	0.384	1.000	0.051
Pallidum p ≤ 1.00	0.005 (0.026)	0.179	0.858	1.000	0.002
Thalamus p ≤ 0.01	-0.005 (0.020)	-0.251	0.802	1.000	0.002
Thalamus p ≤ 0.05	0.010 (0.020)	0.517	0.605	1.000	0.010
Thalamus p ≤ 0.10	-0.009 (0.020)	-0.447	0.655	1.000	0.008
Thalamus p ≤ 1.00	0.009 (0.020)	0.432	0.666	1.000	0.007
Amygdala p ≤ 0.01	-0.006 (0.026)	-0.225	0.822	1.000	0.003
Amygdala p ≤ 0.05	0.030 (0.026)	1.158	0.247	1.000	0.091
Amygdala p ≤ 0.10	-0.001 (0.026)	-0.020	0.984	1.000	0.000
Amygdala p ≤ 1.00	0.029 (0.026)	1.130	0.259	1.000	0.087
Nucleus accumbens p ≤ 0.01	0.025 (0.026)	0.987	0.324	1.000	0.064
Nucleus accumbens p ≤ 0.05	-0.008 (0.026)	-0.296	0.767	1.000	0.006
Nucleus accumbens p ≤ 0.10	0.000 (0.026)	0.013	0.989	1.000	0.000
Nucleus accumbens p ≤ 1.00	-0.007 (0.026)	-0.262	0.793	1.000	0.005
Putamen p ≤ 0.01	0.001 (0.022)	0.060	0.953	1.000	0.000
Putamen p ≤ 0.05	0.025 (0.022)	1.133	0.257	1.000	0.061
Putamen p ≤ 0.10	0.027 (0.022)	1.229	0.219	1.000	0.071
Putamen p ≤ 1.00	0.024 (0.022)	1.114	0.265	1.000	0.059

BP: bipolar disorder, PGRS: polygenic risk scores, uncorr.: uncorrected, FDR: false discovery rate, S.D.: standard deviation. Controlled for age, age², gender, genotype batch and array, 15 MDS components, intracranial volume and side of hemisphere.

R²= estimate of variance explained by PGRS in %.

Results - PGRS and diffusion measures

Table S5. Association of PGRS (MDD, SCZ or BP) at other p thresholds with gFA and gMD, in sample including outliers.

	Including outliers (N = 816)					Including outliers (N = 816)			
	Beta: z ratio (S.D.)	t statistic	p	R ²		Beta: z ratio (S.D.)	t statistic	p	R ²
MDD-PGRS					MDD-PGRS				
gFA p ≤ 0.01	0.030 (0.035)	0.843	0.399	0.088	gMD p ≤ 0.01	-0.056 (0.034)	-1.649	0.099 #	0.316
gFA p ≤ 0.05	0.041 (0.036)	1.153	0.249	0.170	gMD p ≤ 0.05	-0.065 (0.035)	-1.895	0.059 #	0.429
gFA p ≤ 0.10	0.013 (0.036)	0.370	0.711	0.018	gMD p ≤ 0.10	-0.052 (0.035)	-1.491	0.136	0.268
gFA p ≤ 1.00	0.017 (0.036)	0.465	0.642	0.029	gMD p ≤ 1.00	-0.044 (0.035)	-1.239	0.216	0.192
SCZ-PGRS					SCZ-PGRS				
gFA p ≤ 0.01	0.020 (0.035)	0.561	0.575	0.039	gMD p ≤ 0.01	-0.035 (0.034)	-1.021	0.307	0.121
gFA p ≤ 0.05	-0.004 (0.036)	-0.121	0.903	0.002	gMD p ≤ 0.05	-0.014 (0.035)	-0.403	0.687	0.019
gFA p ≤ 0.10	-0.030 (0.036)	-0.845	0.398	0.091	gMD p ≤ 0.10	-0.006 (0.035)	-0.185	0.854	0.004
gFA p ≤ 1.00	-0.030 (0.036)	-0.831	0.406	0.091	gMD p ≤ 1.00	-0.012 (0.035)	-0.338	0.736	0.014
BP-PGRS					BP-PGRS				
gFA p ≤ 0.01	0.035 (0.035)	1.005	0.315	0.124	gMD p ≤ 0.01	-0.040 (0.034)	-1.189	0.235	0.163
gFA p ≤ 0.05	0.001 (0.035)	0.020	0.984	0.000	gMD p ≤ 0.05	-0.013 (0.034)	-0.387	0.699	0.017
gFA p ≤ 0.10	0.014 (0.035)	0.404	0.686	0.020	gMD p ≤ 0.10	-0.008 (0.034)	-0.226	0.821	0.006
gFA p ≤ 1.00	-0.004 (0.036)	-0.114	0.909	0.002	gMD p ≤ 1.00	0.009 (0.035)	0.255	0.799	0.008

FA: fractional anisotropy, MD: mean diffusivity, g: general factor, MDD: major depressive disorder, SCZ: schizophrenia,

BP: bipolar disorder, PGRS: polygenic risk scores, S.D.: standard deviation. Controlled for age, age² and gender, genotype batch and array, and 15 MDS components. R²= estimate of variance explained by PGRS in %. # depicts trendwise associations (p < 0.10).

Table S6. Association of PGRS (MDD, SCZ or BP) at other p thresholds with gFA and gMD for association, projection and thalamic WM fibers, in sample including outliers.

	Including outliers (N = 816)					Including outliers (N = 816)			
	Beta: z ratio (S.D.)	t statistic	p	R ²		Beta: z ratio (S.D.)	t statistic	p	R ²
MDD-PGRS					MDD-PGRS				
gFA Association p ≤ 0.01	0.031 (0.035)	0.876	0.381	0.095	gMD Association p ≤ 0.01	-0.054 (0.034)	-1.571	0.116	0.293
gFA Association p ≤ 0.05	0.046 (0.036)	1.288	0.198	0.211	gMD Association p ≤ 0.05	-0.065 (0.035)	-1.868	0.062 #	0.426
gFA Association p ≤ 0.10	0.019 (0.036)	0.544	0.587	0.038	gMD Association p ≤ 0.10	-0.049 (0.035)	-1.396	0.163	0.241
gFA Association p ≤ 1.00	0.039 (0.036)	1.068	0.286	0.151	gMD Association p ≤ 1.00	-0.049 (0.036)	-1.363	0.173	0.237
gFA Projection p ≤ 0.01	0.034 (0.035)	0.989	0.323	0.118	gMD Projection p ≤ 0.01	0.030 (0.035)	0.848	0.397	0.087
gFA Projection p ≤ 0.05	0.040 (0.035)	1.120	0.263	0.156	gMD Projection p ≤ 0.05	0.024 (0.035)	0.665	0.506	0.055
gFA Projection p ≤ 0.10	0.031 (0.035)	0.882	0.378	0.098	gMD Projection p ≤ 0.10	0.012 (0.036)	0.334	0.738	0.014
gFA Projection p ≤ 1.00	-0.015 (0.036)	-0.405	0.685	0.021	gMD Projection p ≤ 1.00	-0.024 (0.036)	-0.662	0.508	0.057
gFA Thalamic p ≤ 0.01	0.020 (0.036)	0.569	0.570	0.041	gMD Thalamic p ≤ 0.01	-0.055 (0.033)	-1.684	0.093 #	0.300
gFA Thalamic p ≤ 0.05	0.037 (0.036)	1.035	0.301	0.140	gMD Thalamic p ≤ 0.05	-0.063 (0.033)	-1.912	0.056 #	0.399
gFA Thalamic p ≤ 0.10	0.001 (0.036)	0.021	0.983	0.000	gMD Thalamic p ≤ 0.10	-0.044 (0.033)	-1.332	0.183	0.196
gFA Thalamic p ≤ 1.00	0.004 (0.037)	0.096	0.924	0.001	gMD Thalamic p ≤ 1.00	-0.031 (0.034)	-0.924	0.356	0.097
SCZ-PGRS					SCZ-PGRS				
gFA Association p ≤ 0.01	0.027 (0.035)	0.769	0.442	0.073	gMD Association p ≤ 0.01	-0.015 (0.034)	-0.435	0.664	0.022
gFA Association p ≤ 0.05	-0.004 (0.036)	-0.112	0.911	0.002	gMD Association p ≤ 0.05	0.004 (0.035)	0.113	0.910	0.002
gFA Association p ≤ 0.10	-0.024 (0.036)	-0.683	0.495	0.059	gMD Association p ≤ 0.10	0.011 (0.035)	0.308	0.758	0.012
gFA Association p ≤ 1.00	-0.023 (0.036)	-0.636	0.525	0.053	gMD Association p ≤ 1.00	-0.001 (0.036)	-0.026	0.979	0.000
gFA Projection p ≤ 0.01	0.006 (0.035)	0.181	0.857	0.004	gMD Projection p ≤ 0.01	0.010 (0.035)	0.302	0.763	0.011
gFA Projection p ≤ 0.05	0.001 (0.035)	0.016	0.987	0.000	gMD Projection p ≤ 0.05	0.002 (0.035)	0.064	0.949	0.001
gFA Projection p ≤ 0.10	-0.025 (0.035)	-0.707	0.480	0.062	gMD Projection p ≤ 0.10	-0.029 (0.035)	-0.827	0.409	0.085
gFA Projection p ≤ 1.00	-0.028 (0.036)	-0.785	0.433	0.079	gMD Projection p ≤ 1.00	-0.033 (0.036)	-0.915	0.360	0.108
gFA Thalamic p ≤ 0.01	0.014 (0.036)	0.408	0.683	0.021	gMD Thalamic p ≤ 0.01	-0.056 (0.032)	-1.731	0.084 #	0.315
gFA Thalamic p ≤ 0.05	-0.005 (0.036)	-0.146	0.884	0.003	gMD Thalamic p ≤ 0.05	-0.032 (0.033)	-0.959	0.338	0.100
gFA Thalamic p ≤ 0.10	-0.031 (0.036)	-0.870	0.385	0.098	gMD Thalamic p ≤ 0.10	-0.025 (0.033)	-0.751	0.453	0.061
gFA Thalamic p ≤ 1.00	-0.034 (0.037)	-0.923	0.356	0.115	gMD Thalamic p ≤ 1.00	-0.019 (0.034)	-0.578	0.563	0.038
BP-PGRS					BP-PGRS				

gFA Association p ≤ 0.01	0.032 (0.035)	0.926	0.355	0.105	gMD Association p ≤ 0.01	-0.028 (0.034)	-0.810	0.418	0.078
gFA Association p ≤ 0.05	0.003 (0.035)	0.087	0.930	0.001	gMD Association p ≤ 0.05	-0.011 (0.035)	-0.327	0.744	0.013
gFA Association p ≤ 0.10	0.018 (0.035)	0.508	0.612	0.032	gMD Association p ≤ 0.10	-0.006 (0.035)	-0.172	0.864	0.004
gFA Association p ≤ 1.00	-0.007 (0.036)	-0.210	0.834	0.006	gMD Association p ≤ 1.00	0.013 (0.035)	0.365	0.715	0.016
gFA Projection p ≤ 0.01	0.019 (0.035)	0.548	0.584	0.036	gMD Projection p ≤ 0.01	0.016 (0.035)	0.469	0.639	0.027
gFA Projection p ≤ 0.05	-0.016 (0.035)	-0.454	0.650	0.025	gMD Projection p ≤ 0.05	-0.014 (0.035)	-0.411	0.681	0.021
gFA Projection p ≤ 0.10	-0.002 (0.035)	-0.045	0.964	0.000	gMD Projection p ≤ 0.10	-0.000 (0.035)	-0.007	0.995	0.000
gFA Projection p ≤ 1.00	-0.021 (0.035)	-0.591	0.555	0.043	gMD Projection p ≤ 1.00	-0.018 (0.035)	-0.503	0.615	0.031
gFA Thalamic p ≤ 0.01	0.049 (0.035)	1.383	0.167	0.240	gMD Thalamic p ≤ 0.01	-0.041 (0.032)	-1.251	0.211	0.165
gFA Thalamic p ≤ 0.05	0.005 (0.036)	0.138	0.890	0.002	gMD Thalamic p ≤ 0.05	-0.014 (0.033)	-0.445	0.657	0.021
gFA Thalamic p ≤ 0.10	0.012 (0.036)	0.343	0.732	0.015	gMD Thalamic p ≤ 0.10	-0.004 (0.033)	-0.120	0.904	0.002
gFA Thalamic p ≤ 1.00	0.012 (0.036)	0.327	0.744	0.014	gMD Thalamic p ≤ 1.00	0.005 (0.033)	0.138	0.891	0.002

FA: fractional anisotropy, WM: white matter, g: general factor, MDD: major depressive disorder, SCZ: schizophrenia, BP: bipolar disorder, PGRS: polygenic risk scores, S.D.: standard deviation. Controlled for age, age² and gender, genotype batch and array, and 15 MDS components. R²= estimate of variance explained by PGRS in %. # depicts trendwise associations (p < 0.10).

Table S7. Association of PGRS (MDD, SCZ and BP) at $p \leq 0.5$ with FA, in sample including and excluding outliers.

	Including outliers (N = 816)					Excluding outliers (N = 733)				
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	R ²	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	R ²
MDD-PGRS										
Acoustic radiation	0.006 (0.031)	0.187	0.852	1.000	0.003	0.021 (0.033)	0.644	0.520	1.000	0.045
Cingulum (cingulate gyrus)	-0.061 (0.031)	-1.975	0.049	0.584	0.376	-0.054 (0.033)	-1.664	0.097	1.000	0.294
Cingulum (parahippocampal part)	0.030 (0.031)	0.965	0.335	1.000	0.088	0.024 (0.033)	0.746	0.456	1.000	0.059
Corticospinal tract	-0.028 (0.033)	-0.849	0.396	1.000	0.078	-0.011 (0.034)	-0.332	0.740	1.000	0.013
Forceps major (unilateral)	-0.009 (0.038)	-0.246	0.805	1.000	0.009	0.011 (0.040)	0.267	0.789	1.000	0.011
Forceps minor (unilateral)	-0.028 (0.036)	-0.779	0.436	1.000	0.079	0.008 (0.038)	0.210	0.834	1.000	0.006
Inferior fronto-occipital fasciculus	-0.065 (0.034)	-1.903	0.057	0.688	0.417	-0.062 (0.035)	-1.756	0.080	0.955	0.387
Inferior longitudinal fasciculus	-0.040 (0.034)	-1.173	0.241	1.000	0.158	-0.029 (0.036)	-0.825	0.410	1.000	0.086
Medial lemniscus	0.017 (0.030)	0.568	0.570	1.000	0.029	0.033 (0.031)	1.055	0.292	1.000	0.110
Middle cerebellar peduncle (unilateral)	-0.013 (0.037)	-0.352	0.725	1.000	0.017	-0.035 (0.039)	-0.918	0.359	1.000	0.126
Superior longitudinal fasciculus	-0.044 (0.034)	-1.287	0.199	1.000	0.189	-0.025 (0.036)	-0.686	0.493	1.000	0.060
Thalamic radiation (anterior)	-0.065 (0.033)	-1.933	0.054	0.643	0.416	-0.053 (0.035)	-1.501	0.134	1.000	0.281
Thalamic radiation (posterior)	-0.030 (0.033)	-0.890	0.374	1.000	0.088	-0.029 (0.035)	-0.828	0.408	1.000	0.082
Thalamic radiation (superior)	0.010 (0.034)	0.282	0.778	1.000	0.009	0.026 (0.036)	0.743	0.458	1.000	0.070
Uncinate fasciculus	-0.017 (0.032)	-0.521	0.603	1.000	0.027	-0.005 (0.033)	-0.165	0.869	1.000	0.003
SCZ-PGRS										
Acoustic radiation	0.026 (0.031)	0.833	0.405	1.000	0.068	0.031 (0.033)	0.926	0.355	1.000	0.094
Cingulum (cingulate gyrus)	-0.027 (0.031)	-0.854	0.393	1.000	0.072	-0.028 (0.033)	-0.863	0.388	1.000	0.081
Cingulum (parahippocampal part)	-0.076 (0.031)	-2.479	0.013	0.161	0.581	-0.068 (0.033)	-2.067	0.039	0.469	0.460
Corticospinal tract	-0.004 (0.033)	-0.121	0.904	1.000	0.002	-0.008 (0.035)	-0.216	0.829	1.000	0.006
Forceps major (unilateral)	0.021 (0.038)	0.562	0.574	1.000	0.045	0.021 (0.040)	0.526	0.599	1.000	0.045
Forceps minor (unilateral)	0.003 (0.036)	0.093	0.926	1.000	0.001	0.031 (0.038)	0.811	0.418	1.000	0.097
Inferior fronto-occipital fasciculus	0.025 (0.034)	0.734	0.463	1.000	0.063	0.038 (0.036)	1.060	0.289	1.000	0.144
Inferior longitudinal fasciculus	0.019 (0.034)	0.554	0.580	1.000	0.036	0.034 (0.036)	0.945	0.345	1.000	0.115
Medial lemniscus	-0.018 (0.030)	-0.603	0.547	1.000	0.033	-0.016 (0.032)	-0.515	0.607	1.000	0.027
Middle cerebellar peduncle (unilateral)	-0.005 (0.037)	-0.136	0.892	1.000	0.002	0.000 (0.039)	0.013	0.990	1.000	0.000
Superior longitudinal fasciculus	0.011 (0.034)	0.312	0.755	1.000	0.011	0.019 (0.036)	0.516	0.606	1.000	0.035

Thalamic radiation (anterior)	0.021 (0.034)	0.616	0.538	1.000	0.043	0.031 (0.036)	0.870	0.385	1.000	0.096
Thalamic radiation (posterior)	-0.018 (0.034)	-0.546	0.585	1.000	0.034	-0.005 (0.035)	-0.154	0.878	1.000	0.003
Thalamic radiation (superior)	0.028 (0.034)	0.829	0.407	1.000	0.080	0.043 (0.036)	1.202	0.230	1.000	0.186
Uncinate fasciculus	0.029 (0.032)	0.904	0.366	1.000	0.084	0.028 (0.034)	0.838	0.402	1.000	0.079
BP-PGRS										
Acoustic radiation	-0.004 (0.031)	-0.116	0.908	1.000	0.001	0.006 (0.033)	0.198	0.843	1.000	0.004
Cingulum (cingulate gyrus)	-0.033 (0.031)	-1.075	0.283	1.000	0.111	-0.029 (0.033)	-0.884	0.377	1.000	0.083
Cingulum (parahippocampal part)	-0.006 (0.031)	-0.208	0.835	1.000	0.004	-0.010 (0.033)	-0.301	0.763	1.000	0.010
Corticospinal tract	0.032 (0.033)	0.968	0.334	1.000	0.100	0.029 (0.034)	0.844	0.399	1.000	0.084
Forceps major (unilateral)	0.032 (0.037)	0.866	0.387	1.000	0.103	0.032 (0.039)	0.816	0.415	1.000	0.102
Forceps minor (unilateral)	-0.005 (0.035)	-0.150	0.881	1.000	0.003	0.001 (0.037)	0.021	0.983	1.000	0.000
Inferior fronto-occipital fasciculus	-0.003 (0.034)	-0.097	0.923	1.000	0.001	0.031 (0.035)	0.886	0.376	1.000	0.098
Inferior longitudinal fasciculus	0.007 (0.034)	0.218	0.827	1.000	0.005	0.035 (0.035)	0.986	0.324	1.000	0.122
Medial lemniscus	0.048 (0.030)	1.632	0.103	1.000	0.233	0.048 (0.031)	1.532	0.126	1.000	0.230
Middle cerebellar peduncle (unilateral)	0.023 (0.036)	0.648	0.517	1.000	0.054	-0.006 (0.038)	-0.159	0.874	1.000	0.004
Superior longitudinal fasciculus	-0.003 (0.034)	-0.078	0.938	1.000	0.001	0.011 (0.036)	0.316	0.752	1.000	0.013
Thalamic radiation (anterior)	0.001 (0.033)	0.044	0.965	1.000	0.000	0.027 (0.035)	0.762	0.446	1.000	0.072
Thalamic radiation (posterior)	-0.010 (0.033)	-0.302	0.763	1.000	0.010	0.032 (0.035)	0.913	0.362	1.000	0.100
Thalamic radiation (superior)	0.017 (0.034)	0.489	0.625	1.000	0.027	0.022 (0.036)	0.615	0.539	1.000	0.048
Uncinate fasciculus	0.022 (0.032)	0.707	0.480	1.000	0.050	0.034 (0.033)	1.030	0.304	1.000	0.116

MDD: major depressive disorder, SCZ: schizophrenia, BP: bipolar disorder, PGRS: polygenic risk scores, uncorr.: uncorrected, FDR: false discovery rate, S.D.: standard deviation.

Controlled for age, age², gender, genotype batch and array, 15 MDS components and side of hemisphere.

* Analyses performed separately for association of SCZ-PGRS with FA values of the cingulum (parahippocampal) for the analysis including outliers.

R²= estimate of variance explained by PGRS in %.

Table S8. Association of PGRS (MDD, SCZ or BP) at other p thresholds with FA, in sample including outliers.

	Including outliers (N = 816)				
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	R ²
MDD-PGRS					
Acoustic radiation p ≤ 0.01	-0.051 (0.031)	-1.659	0.097	1.000	0.262
Acoustic radiation p ≤ 0.05	0.004 (0.031)	0.123	0.903	1.000	0.001
Acoustic radiation p ≤ 0.10	0.010 (0.031)	0.323	0.747	1.000	0.010
Acoustic radiation p ≤ 1.00	0.019 (0.032)	0.605	0.545	1.000	0.037
Cingulum (cingulate gyrus) p ≤ 0.01	-0.060 (0.031)	-1.951	0.051	0.771	0.359
Cingulum (cingulate gyrus) p ≤ 0.05	-0.062 (0.031)	-1.987	0.047	0.709	0.379
Cingulum (cingulate gyrus) p ≤ 0.10	-0.020 (0.031)	-0.650	0.516	1.000	0.041
Cingulum (cingulate gyrus) p ≤ 1.00	-0.057 (0.032)	-1.801	0.072	1.000	0.327
Cingulum (parahippocampal part) p ≤ 0.01	-0.003 (0.030)	-0.093	0.926	1.000	0.001
Cingulum (parahippocampal part) p ≤ 0.05	0.029 (0.030)	0.948	0.343	1.000	0.084
Cingulum (parahippocampal part) p ≤ 0.10	0.030 (0.031)	0.972	0.331	1.000	0.089
Cingulum (parahippocampal part) p ≤ 1.00	0.010 (0.031)	0.330	0.741	1.000	0.011
Corticospinal tract p ≤ 0.01	-0.031 (0.032)	-0.942	0.347	1.000	0.093
Corticospinal tract p ≤ 0.05	-0.028 (0.033)	-0.849	0.396	1.000	0.077
Corticospinal tract p ≤ 0.10	-0.018 (0.033)	-0.561	0.575	1.000	0.034
Corticospinal tract p ≤ 1.00	0.025 (0.034)	0.737	0.461	1.000	0.061
Forceps major (unilateral) p ≤ 0.01	-0.022 (0.036)	-0.630	0.529	1.000	0.050
Forceps major (unilateral) p ≤ 0.05	-0.060 (0.036)	-1.678	0.094	1.000	0.362
Forceps major (unilateral) p ≤ 0.10	-0.048 (0.036)	-1.329	0.184	1.000	0.229
Forceps major (unilateral) p ≤ 1.00	-0.017 (0.037)	-0.463	0.643	1.000	0.029
Forceps minor (unilateral) p ≤ 0.01	-0.007 (0.034)	-0.191	0.848	1.000	0.004
Forceps minor (unilateral) p ≤ 0.05	-0.023 (0.035)	-0.662	0.508	1.000	0.052
Forceps minor (unilateral) p ≤ 0.10	-0.001 (0.035)	-0.020	0.984	1.000	0.000
Forceps minor (unilateral) p ≤ 1.00	-0.029 (0.035)	-0.815	0.415	1.000	0.083
Inferior fronto-occipital fasciculus p ≤ 0.01	-0.036 (0.034)	-1.069	0.285	1.000	0.129
Inferior fronto-occipital fasciculus p ≤ 0.05	-0.066 (0.034)	-1.937	0.053	0.797	0.430
Inferior fronto-occipital fasciculus p ≤ 0.10	-0.038 (0.034)	-1.105	0.270	1.000	0.141
Inferior fronto-occipital fasciculus p ≤ 1.00	-0.044 (0.035)	-1.265	0.206	1.000	0.193
Inferior longitudinal fasciculus p ≤ 0.01	-0.031 (0.034)	-0.916	0.360	1.000	0.094
Inferior longitudinal fasciculus p ≤ 0.05	-0.041 (0.034)	-1.217	0.224	1.000	0.170
Inferior longitudinal fasciculus p ≤ 0.10	-0.014 (0.034)	-0.416	0.677	1.000	0.020
Inferior longitudinal fasciculus p ≤ 1.00	-0.021 (0.035)	-0.607	0.544	1.000	0.044
Medial lemniscus p ≤ 0.01	0.019 (0.029)	0.643	0.520	1.000	0.036
Medial lemniscus p ≤ 0.05	0.016 (0.030)	0.533	0.594	1.000	0.025
Medial lemniscus p ≤ 0.10	0.003 (0.030)	0.116	0.907	1.000	0.001
Medial lemniscus p ≤ 1.00	0.038 (0.030)	1.263	0.207	1.000	0.148
Middle cerebellar peduncle (unilateral) p ≤ 0.01	-0.042 (0.035)	-1.217	0.224	1.000	0.178
Middle cerebellar peduncle (unilateral) p ≤ 0.05	-0.060 (0.035)	-1.706	0.088	1.000	0.357
Middle cerebellar peduncle (unilateral) p ≤ 0.10	-0.064 (0.035)	-1.832	0.067	1.000	0.414
Middle cerebellar peduncle (unilateral) p ≤ 1.00	-0.021 (0.036)	-0.593	0.553	1.000	0.045
Superior longitudinal fasciculus p ≤ 0.01	-0.010 (0.033)	-0.291	0.771	1.000	0.009
Superior longitudinal fasciculus p ≤ 0.05	-0.045 (0.034)	-1.321	0.187	1.000	0.199
Superior longitudinal fasciculus p ≤ 0.10	-0.019 (0.034)	-0.574	0.566	1.000	0.038

Superior longitudinal fasciculus p ≤ 1.00	-0.021 (0.035)	-0.611	0.541	1.000	0.045
Thalamic radiation (anterior) p ≤ 0.01	-0.061 (0.033)	-1.851	0.064	0.967	0.374
Thalamic radiation (anterior) p ≤ 0.05	-0.067 (0.033)	-2.005	0.045	0.679	0.447
Thalamic radiation (anterior) p ≤ 0.10	-0.034 (0.034)	-1.015	0.310	1.000	0.116
Thalamic radiation (anterior) p ≤ 1.00	-0.062 (0.034)	-1.821	0.069	1.000	0.387
Thalamic radiation (posterior) p ≤ 0.01	-0.020 (0.033)	-0.601	0.548	1.000	0.040
Thalamic radiation (posterior) p ≤ 0.05	-0.031 (0.033)	-0.926	0.355	1.000	0.095
Thalamic radiation (posterior) p ≤ 0.10	-0.011 (0.033)	-0.342	0.733	1.000	0.013
Thalamic radiation (posterior) p ≤ 1.00	-0.021 (0.034)	-0.608	0.543	1.000	0.043
Thalamic radiation (superior) p ≤ 0.01	0.023 (0.034)	0.671	0.502	1.000	0.051
Thalamic radiation (superior) p ≤ 0.05	0.008 (0.034)	0.225	0.822	1.000	0.006
Thalamic radiation (superior) p ≤ 0.10	0.030 (0.034)	0.882	0.378	1.000	0.090
Thalamic radiation (superior) p ≤ 1.00	0.063 (0.035)	1.814	0.070	1.000	0.394
Uncinate fasciculus p ≤ 0.01	-0.041 (0.031)	-1.318	0.188	1.000	0.172
Uncinate fasciculus p ≤ 0.05	-0.017 (0.032)	-0.549	0.583	1.000	0.030
Uncinate fasciculus p ≤ 0.10	-0.022 (0.032)	-0.694	0.488	1.000	0.049
Uncinate fasciculus p ≤ 1.00	-0.037 (0.032)	-1.131	0.258	1.000	0.135
SCZ-PGRS					
Acoustic radiation p ≤ 0.01	0.017 (0.031)	0.537	0.591	1.000	0.028
Acoustic radiation p ≤ 0.05	0.029 (0.031)	0.910	0.363	1.000	0.081
Acoustic radiation p ≤ 0.10	0.042 (0.031)	1.346	0.179	1.000	0.178
Acoustic radiation p ≤ 1.00	0.049 (0.032)	1.536	0.125	1.000	0.236
Cingulum (cingulate gyrus) p ≤ 0.01	-0.054 (0.031)	-1.746	0.081	1.000	0.291
Cingulum (cingulate gyrus) p ≤ 0.05	-0.026 (0.031)	-0.846	0.398	1.000	0.070
Cingulum (cingulate gyrus) p ≤ 0.10	-0.019 (0.031)	-0.618	0.537	1.000	0.037
Cingulum (cingulate gyrus) p ≤ 1.00	-0.012 (0.032)	-0.381	0.703	1.000	0.014
Cingulum (parahippocampal part) p ≤ 0.01	-0.056 (0.030)	-1.842	0.066	0.987	0.314
Cingulum (parahippocampal part) p ≤ 0.05	-0.075 (0.031)	-2.461	0.014	0.211	0.570
Cingulum (parahippocampal part) p ≤ 0.10	-0.075 (0.031)	-2.445	0.015	0.221	0.561
Cingulum (parahippocampal part) p ≤ 1.00	-0.055 (0.031)	-1.772	0.077	1.000	0.303
Corticospinal tract p ≤ 0.01	-0.001 (0.033)	-0.034	0.973	1.000	0.000
Corticospinal tract p ≤ 0.05	-0.004 (0.033)	-0.124	0.901	1.000	0.002
Corticospinal tract p ≤ 0.10	0.030 (0.033)	0.906	0.365	1.000	0.089
Corticospinal tract p ≤ 1.00	0.021 (0.033)	0.628	0.530	1.000	0.044
Forceps major (unilateral) p ≤ 0.01	0.007 (0.036)	0.192	0.848	1.000	0.005
Forceps major (unilateral) p ≤ 0.05	0.021 (0.036)	0.576	0.565	1.000	0.043
Forceps major (unilateral) p ≤ 0.10	0.044 (0.036)	1.229	0.220	1.000	0.196
Forceps major (unilateral) p ≤ 1.00	0.032 (0.036)	0.865	0.387	1.000	0.100
Forceps minor (unilateral) p ≤ 0.01	-0.044 (0.034)	-1.274	0.203	1.000	0.192
Forceps minor (unilateral) p ≤ 0.05	-0.014 (0.035)	-0.402	0.688	1.000	0.020
Forceps minor (unilateral) p ≤ 0.10	0.008 (0.035)	0.228	0.819	1.000	0.006
Forceps minor (unilateral) p ≤ 1.00	0.012 (0.035)	0.349	0.727	1.000	0.015
Inferior fronto-occipital fasciculus p ≤ 0.01	0.004 (0.034)	0.112	0.911	1.000	0.001
Inferior fronto-occipital fasciculus p ≤ 0.05	0.026 (0.034)	0.774	0.439	1.000	0.070
Inferior fronto-occipital fasciculus p ≤ 0.10	0.048 (0.034)	1.395	0.163	1.000	0.226
Inferior fronto-occipital fasciculus p ≤ 1.00	0.045 (0.034)	1.296	0.195	1.000	0.199
Inferior longitudinal fasciculus p ≤ 0.01	-0.012 (0.034)	-0.366	0.714	1.000	0.015
Inferior longitudinal fasciculus p ≤ 0.05	0.021 (0.034)	0.608	0.543	1.000	0.043

Inferior longitudinal fasciculus $p \leq 0.10$	0.040 (0.034)	1.183	0.237	1.000	0.162
Inferior longitudinal fasciculus $p \leq 1.00$	0.036 (0.034)	1.054	0.292	1.000	0.132
Medial lemniscus $p \leq 0.01$	-0.018 (0.030)	-0.615	0.539	1.000	0.033
Medial lemniscus $p \leq 0.05$	-0.017 (0.030)	-0.562	0.574	1.000	0.028
Medial lemniscus $p \leq 0.10$	0.002 (0.030)	0.057	0.954	1.000	0.000
Medial lemniscus $p \leq 1.00$	0.030 (0.030)	1.003	0.316	1.000	0.092
Middle cerebellar peduncle (unilateral) $p \leq 0.01$	-0.001 (0.035)	-0.035	0.972	1.000	0.000
Middle cerebellar peduncle (unilateral) $p \leq 0.05$	-0.011 (0.035)	-0.315	0.752	1.000	0.012
Middle cerebellar peduncle (unilateral) $p \leq 0.10$	-0.017 (0.035)	-0.497	0.620	1.000	0.031
Middle cerebellar peduncle (unilateral) $p \leq 1.00$	-0.014 (0.036)	-0.397	0.691	1.000	0.020
Superior longitudinal fasciculus $p \leq 0.01$	-0.011 (0.034)	-0.336	0.737	1.000	0.013
Superior longitudinal fasciculus $p \leq 0.05$	0.012 (0.034)	0.344	0.731	1.000	0.014
Superior longitudinal fasciculus $p \leq 0.10$	0.024 (0.034)	0.717	0.474	1.000	0.059
Superior longitudinal fasciculus $p \leq 1.00$	0.012 (0.034)	0.345	0.730	1.000	0.014
Thalamic radiation (anterior) $p \leq 0.01$	0.024 (0.033)	0.715	0.475	1.000	0.057
Thalamic radiation (anterior) $p \leq 0.05$	0.023 (0.034)	0.691	0.490	1.000	0.054
Thalamic radiation (anterior) $p \leq 0.10$	0.042 (0.034)	1.243	0.214	1.000	0.174
Thalamic radiation (anterior) $p \leq 1.00$	0.046 (0.034)	1.355	0.176	1.000	0.211
Thalamic radiation (posterior) $p \leq 0.01$	-0.047 (0.033)	-1.411	0.159	1.000	0.219
Thalamic radiation (posterior) $p \leq 0.05$	-0.017 (0.034)	-0.498	0.618	1.000	0.028
Thalamic radiation (posterior) $p \leq 0.10$	0.001 (0.034)	0.038	0.970	1.000	0.000
Thalamic radiation (posterior) $p \leq 1.00$	0.015 (0.034)	0.449	0.654	1.000	0.023
Thalamic radiation (superior) $p \leq 0.01$	0.020 (0.034)	0.581	0.561	1.000	0.038
Thalamic radiation (superior) $p \leq 0.05$	0.030 (0.034)	0.889	0.374	1.000	0.092
Thalamic radiation (superior) $p \leq 0.10$	0.060 (0.034)	1.766	0.078	1.000	0.360
Thalamic radiation (superior) $p \leq 1.00$	0.049 (0.034)	1.430	0.153	1.000	0.241
Uncinate fasciculus $p \leq 0.01$	-0.008 (0.032)	-0.268	0.789	1.000	0.007
Uncinate fasciculus $p \leq 0.05$	0.029 (0.032)	0.923	0.357	1.000	0.087
Uncinate fasciculus $p \leq 0.10$	0.042 (0.032)	1.334	0.183	1.000	0.181
Uncinate fasciculus $p \leq 1.00$	0.048 (0.032)	1.486	0.138	1.000	0.229
BP-PGRS					
Acoustic radiation $p \leq 0.01$	-0.008 (0.031)	-0.260	0.795	1.000	0.007
Acoustic radiation $p \leq 0.05$	-0.000 (0.031)	-0.011	0.991	1.000	0.000
Acoustic radiation $p \leq 0.10$	-0.025 (0.031)	-0.793	0.428	1.000	0.061
Acoustic radiation $p \leq 1.00$	-0.006 (0.031)	-0.207	0.836	1.000	0.004
Cingulum (cingulate gyrus) $p \leq 0.01$	-0.038 (0.031)	-1.234	0.218	1.000	0.145
Cingulum (cingulate gyrus) $p \leq 0.05$	-0.034 (0.031)	-1.116	0.265	1.000	0.119
Cingulum (cingulate gyrus) $p \leq 0.10$	-0.039 (0.031)	-1.269	0.205	1.000	0.155
Cingulum (cingulate gyrus) $p \leq 1.00$	0.000 (0.031)	0.012	0.991	1.000	0.000
Cingulum (parahippocampal part) $p \leq 0.01$	-0.007 (0.030)	-0.237	0.813	1.000	0.005
Cingulum (parahippocampal part) $p \leq 0.05$	-0.006 (0.030)	-0.204	0.839	1.000	0.004
Cingulum (parahippocampal part) $p \leq 0.10$	-0.014 (0.031)	-0.447	0.655	1.000	0.019
Cingulum (parahippocampal part) $p \leq 1.00$	0.013 (0.031)	0.428	0.669	1.000	0.017
Corticospinal tract $p \leq 0.01$	0.008 (0.033)	0.248	0.804	1.000	0.007
Corticospinal tract $p \leq 0.05$	0.031 (0.033)	0.941	0.347	1.000	0.094
Corticospinal tract $p \leq 0.10$	0.017 (0.033)	0.528	0.597	1.000	0.030
Corticospinal tract $p \leq 1.00$	0.027 (0.033)	0.823	0.411	1.000	0.073
Forceps major (unilateral) $p \leq 0.01$	-0.003 (0.036)	-0.087	0.931	1.000	0.001

Forceps major (unilateral) p ≤ 0.05	0.037 (0.036)	1.028	0.304	1.000	0.135
Forceps major (unilateral) p ≤ 0.10	0.047 (0.036)	1.298	0.195	1.000	0.216
Forceps major (unilateral) p ≤ 1.00	0.035 (0.036)	0.981	0.327	1.000	0.124
Forceps minor (unilateral) p ≤ 0.01	-0.040 (0.034)	-1.156	0.248	1.000	0.158
Forceps minor (unilateral) p ≤ 0.05	-0.026 (0.034)	-0.766	0.444	1.000	0.070
Forceps minor (unilateral) p ≤ 0.10	-0.026 (0.035)	-0.754	0.451	1.000	0.068
Forceps minor (unilateral) p ≤ 1.00	-0.003 (0.035)	-0.094	0.925	1.000	0.001
Inferior fronto-occipital fasciculus p ≤ 0.01	-0.026 (0.034)	-0.768	0.442	1.000	0.067
Inferior fronto-occipital fasciculus p ≤ 0.05	-0.002 (0.034)	-0.048	0.962	1.000	0.000
Inferior fronto-occipital fasciculus p ≤ 0.10	-0.006 (0.034)	-0.190	0.849	1.000	0.004
Inferior fronto-occipital fasciculus p ≤ 1.00	0.011 (0.034)	0.330	0.741	1.000	0.013
Inferior longitudinal fasciculus p ≤ 0.01	-0.013 (0.034)	-0.379	0.705	1.000	0.016
Inferior longitudinal fasciculus p ≤ 0.05	0.010 (0.034)	0.301	0.763	1.000	0.010
Inferior longitudinal fasciculus p ≤ 0.10	-0.004 (0.034)	-0.132	0.895	1.000	0.002
Inferior longitudinal fasciculus p ≤ 1.00	-0.004 (0.034)	-0.117	0.907	1.000	0.002
Medial lemniscus p ≤ 0.01	0.014 (0.030)	0.459	0.647	1.000	0.018
Medial lemniscus p ≤ 0.05	0.050 (0.030)	1.681	0.093	1.000	0.246
Medial lemniscus p ≤ 0.10	0.051 (0.030)	1.717	0.086	1.000	0.259
Medial lemniscus p ≤ 1.00	0.040 (0.030)	1.342	0.180	1.000	0.159
Middle cerebellar peduncle (unilateral) p ≤ 0.01	-0.024 (0.035)	-0.691	0.490	1.000	0.058
Middle cerebellar peduncle (unilateral) p ≤ 0.05	0.002 (0.035)	0.051	0.960	1.000	0.000
Middle cerebellar peduncle (unilateral) p ≤ 0.10	-0.011 (0.035)	-0.308	0.758	1.000	0.012
Middle cerebellar peduncle (unilateral) p ≤ 1.00	0.003 (0.035)	0.081	0.935	1.000	0.001
Superior longitudinal fasciculus p ≤ 0.01	-0.037 (0.034)	-1.096	0.273	1.000	0.136
Superior longitudinal fasciculus p ≤ 0.05	-0.003 (0.034)	-0.095	0.924	1.000	0.001
Superior longitudinal fasciculus p ≤ 0.10	-0.031 (0.034)	-0.927	0.354	1.000	0.098
Superior longitudinal fasciculus p ≤ 1.00	-0.007 (0.034)	-0.211	0.833	1.000	0.005
Thalamic radiation (anterior) p ≤ 0.01	-0.013 (0.033)	-0.389	0.697	1.000	0.017
Thalamic radiation (anterior) p ≤ 0.05	0.002 (0.033)	0.058	0.954	1.000	0.000
Thalamic radiation (anterior) p ≤ 0.10	-0.004 (0.033)	-0.113	0.910	1.000	0.001
Thalamic radiation (anterior) p ≤ 1.00	-0.007 (0.033)	-0.216	0.829	1.000	0.005
Thalamic radiation (posterior) p ≤ 0.01	-0.047 (0.033)	-1.413	0.158	1.000	0.219
Thalamic radiation (posterior) p ≤ 0.05	-0.007 (0.033)	-0.224	0.823	1.000	0.006
Thalamic radiation (posterior) p ≤ 0.10	-0.007 (0.033)	-0.213	0.831	1.000	0.005
Thalamic radiation (posterior) p ≤ 1.00	-0.010 (0.033)	-0.305	0.761	1.000	0.010
Thalamic radiation (superior) p ≤ 0.01	-0.019 (0.034)	-0.570	0.569	1.000	0.037
Thalamic radiation (superior) p ≤ 0.05	0.018 (0.034)	0.526	0.599	1.000	0.031
Thalamic radiation (superior) p ≤ 0.10	0.005 (0.034)	0.157	0.875	1.000	0.003
Thalamic radiation (superior) p ≤ 1.00	0.007 (0.034)	0.203	0.839	1.000	0.005
Uncinate fasciculus p ≤ 0.01	0.001 (0.032)	0.036	0.971	1.000	0.000
Uncinate fasciculus p ≤ 0.05	0.020 (0.032)	0.641	0.521	1.000	0.041
Uncinate fasciculus p ≤ 0.10	0.012 (0.032)	0.372	0.710	1.000	0.014
Uncinate fasciculus p ≤ 1.00	0.033 (0.032)	1.048	0.295	1.000	0.111

FA: fractional anisotropy, WM: white matter, g: general factor, MDD: major depressive disorder, SCZ: schizophrenia, BP:

bipolar disorder, PGRS: polygenic risk scores, S.D.: standard deviation. Controlled for age, age² and gender, genotype

batch and array, and 15 MDS components. R²= estimate of variance explained by PGRS in %.

Table S9. Association of PGRS (MDD, SCZ and BP) at $p \leq 0.5$ with MD, in sample including and excluding outliers.

	Including outliers (N = 816)					Excluding outliers (N = 733)				
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	R ²	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	R ²
MDD-PGRS										
Acoustic radiation	0.052 (0.029)	1.752	0.080	0.962	0.267	0.049 (0.031)	1.602	0.110	1.000	0.242
Cingulum (cingulate gyrus)	0.030 (0.034)	0.895	0.371	1.000	0.090	0.017 (0.036)	0.482	0.630	1.000	0.029
Cingulum (parahippocampal part)	0.016 (0.031)	0.520	0.603	1.000	0.025	0.020 (0.033)	0.624	0.533	1.000	0.042
Corticospinal tract	0.015 (0.033)	0.451	0.652	1.000	0.022	0.004 (0.035)	0.128	0.898	1.000	0.002
Forceps major (unilateral)	0.003 (0.038)	0.074	0.941	1.000	0.001	-0.010 (0.040)	-0.240	0.810	1.000	0.009
Forceps minor (unilateral)	-0.014 (0.037)	-0.386	0.699	1.000	0.021	-0.055 (0.039)	-1.423	0.155	1.000	0.304
Inferior fronto-occipital fasciculus	0.071 (0.033)	2.148	0.032	0.384	0.502	0.049 (0.035)	1.416	0.157	1.000	0.240
Inferior longitudinal fasciculus	0.068 (0.033)	2.037	0.042	0.503	0.462	0.044 (0.035)	1.256	0.210	1.000	0.194
Medial lemniscus	-0.002 (0.031)	-0.051	0.959	1.000	0.000	-0.020 (0.033)	-0.620	0.536	1.000	0.041
Middle cerebellar peduncle (unilateral)	0.054 (0.037)	1.467	0.143	1.000	0.291	0.084 (0.038)	2.195	0.029	0.428	0.712
Superior longitudinal fasciculus	0.048 (0.034)	1.418	0.157	1.000	0.227	0.020 (0.036)	0.554	0.580	1.000	0.039
Thalamic radiation (anterior)	0.086 (0.031)	2.790	0.005	0.065 #	0.732	0.081 (0.032)	2.509	0.012	0.148	0.652
Thalamic radiation (posterior)	0.052 (0.032)	1.651	0.099	1.000	0.274	0.033 (0.033)	1.008	0.314	1.000	0.112
Thalamic radiation (superior)	0.028 (0.033)	0.850	0.396	1.000	0.077	0.012 (0.034)	0.344	0.731	1.000	0.014
Uncinate fasciculus	0.064 (0.032)	2.010	0.045	0.537	0.412	0.051 (0.034)	1.510	0.131	1.000	0.260
SCZ-PGRS										
Acoustic radiation	0.020 (0.030)	0.677	0.498	1.000	0.040	0.019 (0.031)	0.607	0.544	1.000	0.035
Cingulum (cingulate gyrus)	0.022 (0.034)	0.650	0.516	1.000	0.048	0.023 (0.036)	0.645	0.519	1.000	0.054
Cingulum (parahippocampal part)	0.062 (0.031)	2.006	0.045	0.542	0.378	0.046 (0.033)	1.406	0.160	1.000	0.216
Corticospinal tract	0.051 (0.033)	1.557	0.120	1.000	0.262	0.050 (0.035)	1.418	0.157	1.000	0.246
Forceps major (unilateral)	-0.045 (0.038)	-1.202	0.230	1.000	0.204	-0.042 (0.040)	-1.071	0.285	1.000	0.184
Forceps minor (unilateral)	-0.016 (0.037)	-0.420	0.675	1.000	0.024	-0.037 (0.039)	-0.941	0.347	1.000	0.135
Inferior fronto-occipital fasciculus	-0.016 (0.033)	-0.483	0.629	1.000	0.026	-0.019 (0.035)	-0.549	0.583	1.000	0.037
Inferior longitudinal fasciculus	-0.032 (0.034)	-0.966	0.334	1.000	0.105	-0.031 (0.035)	-0.881	0.379	1.000	0.097
Medial lemniscus	0.027 (0.031)	0.867	0.386	1.000	0.073	0.015 (0.033)	0.447	0.655	1.000	0.022
Middle cerebellar peduncle (unilateral)	0.038 (0.037)	1.031	0.303	1.000	0.143	0.029 (0.039)	0.754	0.451	1.000	0.086
Superior longitudinal fasciculus	-0.001 (0.034)	-0.018	0.986	1.000	0.000	-0.016 (0.036)	-0.451	0.652	1.000	0.026

Thalamic radiation (anterior)	0.015 (0.031)	0.470	0.639	1.000	0.021	0.018 (0.033)	0.538	0.591	1.000	0.031
Thalamic radiation (posterior)	0.044 (0.032)	1.387	0.166	1.000	0.196	0.029 (0.033)	0.879	0.380	1.000	0.087
Thalamic radiation (superior)	0.018 (0.033)	0.538	0.591	1.000	0.031	0.004 (0.035)	0.109	0.913	1.000	0.001
Uncinate fasciculus	-0.021 (0.032)	-0.660	0.509	1.000	0.045	-0.007 (0.034)	-0.217	0.828	1.000	0.005
BP-PGRS										
Acoustic radiation	0.011 (0.029)	0.375	0.708	1.000	0.012	-0.009 (0.031)	-0.304	0.761	1.000	0.009
Cingulum (cingulate gyrus)	0.018 (0.033)	0.547	0.585	1.000	0.034	0.005 (0.035)	0.139	0.889	1.000	0.002
Cingulum (parahippocampal part)	0.043 (0.030)	1.411	0.159	1.000	0.184	0.040 (0.033)	1.233	0.218	1.000	0.162
Corticospinal tract	0.029 (0.033)	0.899	0.369	1.000	0.086	0.008 (0.035)	0.229	0.819	1.000	0.006
Forceps major (unilateral)	-0.056 (0.037)	-1.533	0.126	1.000	0.317	-0.054 (0.039)	-1.379	0.168	1.000	0.287
Forceps minor (unilateral)	-0.038 (0.036)	-1.065	0.287	1.000	0.148	-0.070 (0.038)	-1.840	0.066	0.993	0.486
Inferior fronto-occipital fasciculus	0.011 (0.033)	0.331	0.741	1.000	0.012	-0.033 (0.035)	-0.954	0.340	1.000	0.109
Inferior longitudinal fasciculus	-0.005 (0.033)	-0.149	0.881	1.000	0.002	-0.037 (0.035)	-1.058	0.291	1.000	0.137
Medial lemniscus	-0.016 (0.031)	-0.514	0.607	1.000	0.025	-0.019 (0.033)	-0.594	0.553	1.000	0.038
Middle cerebellar peduncle (unilateral)	-0.047 (0.036)	-1.305	0.192	1.000	0.219	-0.036 (0.038)	-0.966	0.334	1.000	0.133
Superior longitudinal fasciculus	0.014 (0.033)	0.417	0.677	1.000	0.019	-0.026 (0.035)	-0.722	0.471	1.000	0.066
Thalamic radiation (anterior)	0.025 (0.031)	0.819	0.413	1.000	0.063	-0.013 (0.032)	-0.390	0.696	1.000	0.016
Thalamic radiation (posterior)	-0.010 (0.032)	-0.320	0.749	1.000	0.010	-0.037 (0.033)	-1.117	0.264	1.000	0.137
Thalamic radiation (superior)	0.028 (0.033)	0.856	0.392	1.000	0.077	-0.014 (0.034)	-0.418	0.676	1.000	0.021
Uncinate fasciculus	-0.004 (0.032)	-0.119	0.905	1.000	0.001	-0.021 (0.034)	-0.614	0.539	1.000	0.043

MDD: major depressive disorder, SCZ: schizophrenia, BP: bipolar disorder, PGRS: polygenic risk scores, uncorr.: uncorrected, FDR: false discovery rate. Controlled for age, age², gender, genotype batch and array, 15 MDS components and intracranial volume. R²= estimate of variance explained by PGRS in %. # depicts trendwise associations (p-FDR < 0.10).

Table S10. Association of PGRS (MDD, SCZ or BP) at other p thresholds with MD, in sample including outliers.

	Including outliers (N= 816)				
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	R ²
MDD-PGRS					
Acoustic radiation p ≤ 0.01	0.058 (0.029)	1.989	0.047	0.706	0.336
Acoustic radiation p ≤ 0.05	0.051 (0.029)	1.744	0.081	1.000	0.263
Acoustic radiation p ≤ 0.10	0.052 (0.030)	1.760	0.079	1.000	0.270
Acoustic radiation p ≤ 1.00	0.051 (0.030)	1.703	0.089	1.000	0.263
Cingulum (cingulate gyrus) p ≤ 0.01	0.009 (0.033)	0.284	0.776	1.000	0.009
Cingulum (cingulate gyrus) p ≤ 0.05	0.032 (0.034)	0.961	0.337	1.000	0.104
Cingulum (cingulate gyrus) p ≤ 0.10	0.037 (0.034)	1.086	0.278	1.000	0.134
Cingulum (cingulate gyrus) p ≤ 1.00	0.025 (0.034)	0.729	0.466	1.000	0.063
Cingulum (parahippocampal part) p ≤ 0.01	0.043 (0.030)	1.434	0.152	1.000	0.187
Cingulum (parahippocampal part) p ≤ 0.05	0.016 (0.030)	0.535	0.593	1.000	0.027
Cingulum (parahippocampal part) p ≤ 0.10	0.006 (0.031)	0.190	0.849	1.000	0.003
Cingulum (parahippocampal part) p ≤ 1.00	0.036 (0.031)	1.159	0.247	1.000	0.131
Corticospinal tract p ≤ 0.01	0.028 (0.032)	0.874	0.383	1.000	0.080
Corticospinal tract p ≤ 0.05	0.016 (0.033)	0.504	0.614	1.000	0.027
Corticospinal tract p ≤ 0.10	0.029 (0.033)	0.889	0.374	1.000	0.085
Corticospinal tract p ≤ 1.00	0.018 (0.033)	0.538	0.591	1.000	0.032
Forceps major (unilateral) p ≤ 0.01	0.023 (0.035)	0.644	0.520	1.000	0.052
Forceps major (unilateral) p ≤ 0.05	0.046 (0.036)	1.289	0.198	1.000	0.212
Forceps major (unilateral) p ≤ 0.10	0.040 (0.036)	1.107	0.269	1.000	0.158
Forceps major (unilateral) p ≤ 1.00	0.004 (0.037)	0.114	0.910	1.000	0.002
Forceps minor (unilateral) p ≤ 0.01	0.001 (0.035)	0.036	0.971	1.000	0.000
Forceps minor (unilateral) p ≤ 0.05	0.021 (0.035)	0.592	0.554	1.000	0.044
Forceps minor (unilateral) p ≤ 0.10	0.009 (0.035)	0.265	0.791	1.000	0.009
Forceps minor (unilateral) p ≤ 1.00	-0.017 (0.036)	-0.460	0.645	1.000	0.028
Inferior fronto-occipital fasciculus p ≤ 0.01	0.072 (0.033)	2.205	0.028	0.416	0.517
Inferior fronto-occipital fasciculus p ≤ 0.05	0.072 (0.033)	2.192	0.029	0.430	0.521
Inferior fronto-occipital fasciculus p ≤ 0.10	0.045 (0.033)	1.354	0.176	1.000	0.201
Inferior fronto-occipital fasciculus p ≤ 1.00	0.038 (0.034)	1.125	0.261	1.000	0.145
Inferior longitudinal fasciculus p ≤ 0.01	0.069 (0.033)	2.080	0.038	0.568	0.470
Inferior longitudinal fasciculus p ≤ 0.05	0.069 (0.033)	2.069	0.039	0.583	0.474
Inferior longitudinal fasciculus p ≤ 0.10	0.036 (0.033)	1.071	0.284	1.000	0.128
Inferior longitudinal fasciculus p ≤ 1.00	0.034 (0.034)	0.985	0.325	1.000	0.113
Medial lemniscus p ≤ 0.01	0.036 (0.031)	1.162	0.245	1.000	0.127
Medial lemniscus p ≤ 0.05	-0.003 (0.031)	-0.081	0.935	1.000	0.001
Medial lemniscus p ≤ 0.10	0.010 (0.031)	0.338	0.736	1.000	0.011
Medial lemniscus p ≤ 1.00	0.032 (0.032)	1.007	0.314	1.000	0.102
Middle cerebellar peduncle (unilateral) p ≤ 0.01	0.064 (0.035)	1.838	0.066	0.997	0.406
Middle cerebellar peduncle (unilateral) p ≤ 0.05	0.048 (0.035)	1.373	0.170	1.000	0.231
Middle cerebellar peduncle (unilateral) p ≤ 0.10	0.034 (0.035)	0.976	0.329	1.000	0.118
Middle cerebellar peduncle (unilateral) p ≤ 1.00	0.054 (0.036)	1.513	0.131	1.000	0.294
Superior longitudinal fasciculus p ≤ 0.01	0.029 (0.033)	0.867	0.386	1.000	0.083
Superior longitudinal fasciculus p ≤ 0.05	0.049 (0.034)	1.471	0.142	1.000	0.243
Superior longitudinal fasciculus p ≤ 0.10	0.037 (0.034)	1.103	0.270	1.000	0.138

Superior longitudinal fasciculus p ≤ 1.00	0.032 (0.034)	0.940	0.348	1.000	0.104
Thalamic radiation (anterior) p ≤ 0.01	0.084 (0.030)	2.775	0.006	0.085 #	0.710
Thalamic radiation (anterior) p ≤ 0.05	0.088 (0.031)	2.881	0.004	0.061 #	0.779
Thalamic radiation (anterior) p ≤ 0.10	0.070 (0.031)	2.280	0.023	0.343	0.493
Thalamic radiation (anterior) p ≤ 1.00	0.056 (0.031)	1.770	0.077	1.000	0.310
Thalamic radiation (posterior) p ≤ 0.01	0.056 (0.031)	1.800	0.072	1.000	0.318
Thalamic radiation (posterior) p ≤ 0.05	0.052 (0.032)	1.655	0.098	1.000	0.274
Thalamic radiation (posterior) p ≤ 0.10	0.022 (0.032)	0.688	0.491	1.000	0.048
Thalamic radiation (posterior) p ≤ 1.00	0.017 (0.032)	0.514	0.608	1.000	0.028
Thalamic radiation (superior) p ≤ 0.01	0.021 (0.032)	0.659	0.510	1.000	0.045
Thalamic radiation (superior) p ≤ 0.05	0.030 (0.033)	0.925	0.355	1.000	0.091
Thalamic radiation (superior) p ≤ 0.10	0.029 (0.033)	0.884	0.377	1.000	0.084
Thalamic radiation (superior) p ≤ 1.00	0.009 (0.033)	0.283	0.777	1.000	0.009
Uncinate fasciculus p ≤ 0.01	0.064 (0.032)	2.014	0.044	0.666	0.405
Uncinate fasciculus p ≤ 0.05	0.067 (0.032)	2.087	0.037	0.559	0.443
Uncinate fasciculus p ≤ 0.10	0.066 (0.032)	2.071	0.039	0.580	0.439
Uncinate fasciculus p ≤ 1.00	0.066 (0.033)	2.021	0.044	0.654	0.436
SCZ-PGRS					
Acoustic radiation p ≤ 0.01	0.029 (0.029)	0.972	0.331	1.000	0.081
Acoustic radiation p ≤ 0.05	0.020 (0.030)	0.675	0.500	1.000	0.040
Acoustic radiation p ≤ 0.10	0.017 (0.030)	0.562	0.575	1.000	0.028
Acoustic radiation p ≤ 1.00	0.008 (0.030)	0.263	0.792	1.000	0.006
Cingulum (cingulate gyrus) p ≤ 0.01	0.030 (0.033)	0.911	0.362	1.000	0.093
Cingulum (cingulate gyrus) p ≤ 0.05	0.019 (0.034)	0.569	0.569	1.000	0.037
Cingulum (cingulate gyrus) p ≤ 0.10	0.005 (0.034)	0.162	0.872	1.000	0.003
Cingulum (cingulate gyrus) p ≤ 1.00	-0.000 (0.034)	-0.004	0.996	1.000	0.000
Cingulum (parahippocampal part) p ≤ 0.01	0.015 (0.030)	0.490	0.625	1.000	0.022
Cingulum (parahippocampal part) p ≤ 0.05	0.061 (0.031)	1.994	0.046	0.697	0.372
Cingulum (parahippocampal part) p ≤ 0.10	0.067 (0.031)	2.209	0.027	0.412	0.455
Cingulum (parahippocampal part) p ≤ 1.00	0.062 (0.031)	1.994	0.046	0.697	0.379
Corticospinal tract p ≤ 0.01	0.034 (0.032)	1.058	0.291	1.000	0.118
Corticospinal tract p ≤ 0.05	0.049 (0.033)	1.496	0.135	1.000	0.241
Corticospinal tract p ≤ 0.10	0.051 (0.033)	1.569	0.117	1.000	0.264
Corticospinal tract p ≤ 1.00	0.054 (0.033)	1.644	0.101	1.000	0.296
Forceps major (unilateral) p ≤ 0.01	-0.027 (0.036)	-0.746	0.456	1.000	0.070
Forceps major (unilateral) p ≤ 0.05	-0.042 (0.036)	-1.175	0.240	1.000	0.178
Forceps major (unilateral) p ≤ 0.10	-0.063 (0.036)	-1.748	0.081	1.000	0.393
Forceps major (unilateral) p ≤ 1.00	-0.060 (0.036)	-1.646	0.100	1.000	0.356
Forceps minor (unilateral) p ≤ 0.01	0.027 (0.035)	0.766	0.444	1.000	0.073
Forceps minor (unilateral) p ≤ 0.05	-0.015 (0.036)	-0.431	0.667	1.000	0.024
Forceps minor (unilateral) p ≤ 0.10	-0.031 (0.036)	-0.877	0.381	1.000	0.097
Forceps minor (unilateral) p ≤ 1.00	-0.027 (0.036)	-0.740	0.459	1.000	0.071
Inferior fronto-occipital fasciculus p ≤ 0.01	0.009 (0.033)	0.260	0.795	1.000	0.007
Inferior fronto-occipital fasciculus p ≤ 0.05	-0.018 (0.033)	-0.536	0.592	1.000	0.032
Inferior fronto-occipital fasciculus p ≤ 0.10	-0.029 (0.033)	-0.861	0.390	1.000	0.082
Inferior fronto-occipital fasciculus p ≤ 1.00	-0.017 (0.034)	-0.510	0.610	1.000	0.029
Inferior longitudinal fasciculus p ≤ 0.01	-0.010 (0.033)	-0.316	0.752	1.000	0.011
Inferior longitudinal fasciculus p ≤ 0.05	-0.034 (0.034)	-1.003	0.316	1.000	0.113

Inferior longitudinal fasciculus p ≤ 0.10	-0.042 (0.033)	-1.255	0.210	1.000	0.177
Inferior longitudinal fasciculus p ≤ 1.00	-0.033 (0.034)	-0.961	0.337	1.000	0.106
Medial lemniscus p ≤ 0.01	0.039 (0.031)	1.278	0.201	1.000	0.155
Medial lemniscus p ≤ 0.05	0.028 (0.031)	0.899	0.369	1.000	0.078
Medial lemniscus p ≤ 0.10	0.012 (0.031)	0.386	0.699	1.000	0.014
Medial lemniscus p ≤ 1.00	0.014 (0.031)	0.441	0.659	1.000	0.019
Middle cerebellar peduncle (unilateral) p ≤ 0.01	0.030 (0.035)	0.847	0.397	1.000	0.087
Middle cerebellar peduncle (unilateral) p ≤ 0.05	0.034 (0.035)	0.961	0.337	1.000	0.115
Middle cerebellar peduncle (unilateral) p ≤ 0.10	0.040 (0.035)	1.123	0.262	1.000	0.156
Middle cerebellar peduncle (unilateral) p ≤ 1.00	0.040 (0.036)	1.119	0.263	1.000	0.159
Superior longitudinal fasciculus p ≤ 0.01	0.022 (0.033)	0.667	0.505	1.000	0.050
Superior longitudinal fasciculus p ≤ 0.05	-0.003 (0.034)	-0.079	0.937	1.000	0.001
Superior longitudinal fasciculus p ≤ 0.10	-0.006 (0.034)	-0.186	0.853	1.000	0.004
Superior longitudinal fasciculus p ≤ 1.00	0.008 (0.034)	0.247	0.805	1.000	0.007
Thalamic radiation (anterior) p ≤ 0.01	0.031 (0.031)	1.011	0.312	1.000	0.096
Thalamic radiation (anterior) p ≤ 0.05	0.011 (0.031)	0.365	0.715	1.000	0.013
Thalamic radiation (anterior) p ≤ 0.10	0.008 (0.031)	0.273	0.785	1.000	0.007
Thalamic radiation (anterior) p ≤ 1.00	0.004 (0.031)	0.141	0.888	1.000	0.002
Thalamic radiation (posterior) p ≤ 0.01	0.069 (0.031)	2.182	0.029	0.440	0.472
Thalamic radiation (posterior) p ≤ 0.05	0.044 (0.032)	1.377	0.169	1.000	0.192
Thalamic radiation (posterior) p ≤ 0.10	0.033 (0.032)	1.028	0.304	1.000	0.107
Thalamic radiation (posterior) p ≤ 1.00	0.023 (0.032)	0.722	0.471	1.000	0.054
Thalamic radiation (superior) p ≤ 0.01	0.037 (0.032)	1.154	0.249	1.000	0.140
Thalamic radiation (superior) p ≤ 0.05	0.015 (0.033)	0.450	0.653	1.000	0.022
Thalamic radiation (superior) p ≤ 0.10	0.011 (0.033)	0.327	0.744	1.000	0.011
Thalamic radiation (superior) p ≤ 1.00	0.005 (0.033)	0.163	0.870	1.000	0.003
Uncinate fasciculus p ≤ 0.01	-0.005 (0.032)	-0.164	0.870	1.000	0.003
Uncinate fasciculus p ≤ 0.05	-0.024 (0.032)	-0.741	0.459	1.000	0.057
Uncinate fasciculus p ≤ 0.10	-0.024 (0.032)	-0.746	0.456	1.000	0.057
Uncinate fasciculus p ≤ 1.00	-0.018 (0.032)	-0.565	0.572	1.000	0.034
BP-PGRS					
Acoustic radiation p ≤ 0.01	0.034 (0.029)	1.173	0.241	1.000	0.118
Acoustic radiation p ≤ 0.05	0.009 (0.029)	0.316	0.752	1.000	0.009
Acoustic radiation p ≤ 0.10	0.011 (0.029)	0.358	0.721	1.000	0.011
Acoustic radiation p ≤ 1.00	0.004 (0.030)	0.124	0.901	1.000	0.001
Cingulum (cingulate gyrus) p ≤ 0.01	0.003 (0.033)	0.092	0.926	1.000	0.001
Cingulum (cingulate gyrus) p ≤ 0.05	0.015 (0.033)	0.453	0.651	1.000	0.023
Cingulum (cingulate gyrus) p ≤ 0.10	0.021 (0.034)	0.628	0.530	1.000	0.044
Cingulum (cingulate gyrus) p ≤ 1.00	-0.005 (0.034)	-0.152	0.879	1.000	0.003
Cingulum (parahippocampal part) p ≤ 0.01	0.031 (0.030)	1.008	0.314	1.000	0.093
Cingulum (parahippocampal part) p ≤ 0.05	0.044 (0.030)	1.437	0.151	1.000	0.189
Cingulum (parahippocampal part) p ≤ 0.10	0.022 (0.030)	0.717	0.474	1.000	0.048
Cingulum (parahippocampal part) p ≤ 1.00	0.001 (0.031)	0.038	0.970	1.000	0.000
Corticospinal tract p ≤ 0.01	0.064 (0.032)	1.964	0.050	0.749	0.405
Corticospinal tract p ≤ 0.05	0.028 (0.032)	0.857	0.392	1.000	0.077
Corticospinal tract p ≤ 0.10	0.047 (0.033)	1.457	0.145	1.000	0.225
Corticospinal tract p ≤ 1.00	0.036 (0.033)	1.111	0.267	1.000	0.132
Forceps major (unilateral) p ≤ 0.01	-0.005 (0.036)	-0.151	0.880	1.000	0.003

Forceps major (unilateral) p ≤ 0.05	-0.043 (0.036)	-1.218	0.224	1.000	0.187
Forceps major (unilateral) p ≤ 0.10	-0.080 (0.036)	-2.234	0.026	0.387	0.632
Forceps major (unilateral) p ≤ 1.00	-0.063 (0.036)	-1.757	0.079	1.000	0.394
Forceps minor (unilateral) p ≤ 0.01	0.022 (0.035)	0.636	0.525	1.000	0.050
Forceps minor (unilateral) p ≤ 0.05	0.006 (0.035)	0.156	0.876	1.000	0.003
Forceps minor (unilateral) p ≤ 0.10	-0.010 (0.035)	-0.282	0.778	1.000	0.010
Forceps minor (unilateral) p ≤ 1.00	-0.045 (0.035)	-1.258	0.209	1.000	0.198
Inferior fronto-occipital fasciculus p ≤ 0.01	0.031 (0.033)	0.934	0.350	1.000	0.094
Inferior fronto-occipital fasciculus p ≤ 0.05	0.009 (0.033)	0.266	0.790	1.000	0.008
Inferior fronto-occipital fasciculus p ≤ 0.10	-0.001 (0.033)	-0.041	0.967	1.000	0.000
Inferior fronto-occipital fasciculus p ≤ 1.00	-0.016 (0.033)	-0.473	0.636	1.000	0.024
Inferior longitudinal fasciculus p ≤ 0.01	0.020 (0.033)	0.602	0.547	1.000	0.040
Inferior longitudinal fasciculus p ≤ 0.05	-0.006 (0.033)	-0.194	0.847	1.000	0.004
Inferior longitudinal fasciculus p ≤ 0.10	-0.014 (0.033)	-0.423	0.673	1.000	0.020
Inferior longitudinal fasciculus p ≤ 1.00	-0.018 (0.033)	-0.551	0.582	1.000	0.034
Medial lemniscus p ≤ 0.01	0.019 (0.031)	0.633	0.527	1.000	0.038
Medial lemniscus p ≤ 0.05	-0.015 (0.031)	-0.491	0.623	1.000	0.023
Medial lemniscus p ≤ 0.10	-0.010 (0.031)	-0.324	0.746	1.000	0.010
Medial lemniscus p ≤ 1.00	-0.000 (0.031)	-0.003	0.998	1.000	0.000
Middle cerebellar peduncle (unilateral) p ≤ 0.01	-0.006 (0.035)	-0.160	0.873	1.000	0.003
Middle cerebellar peduncle (unilateral) p ≤ 0.05	-0.025 (0.035)	-0.722	0.470	1.000	0.063
Middle cerebellar peduncle (unilateral) p ≤ 0.10	-0.019 (0.035)	-0.534	0.593	1.000	0.035
Middle cerebellar peduncle (unilateral) p ≤ 1.00	-0.026 (0.035)	-0.731	0.465	1.000	0.066
Superior longitudinal fasciculus p ≤ 0.01	0.028 (0.033)	0.846	0.398	1.000	0.080
Superior longitudinal fasciculus p ≤ 0.05	0.012 (0.033)	0.358	0.721	1.000	0.014
Superior longitudinal fasciculus p ≤ 0.10	0.021 (0.033)	0.617	0.537	1.000	0.043
Superior longitudinal fasciculus p ≤ 1.00	-0.006 (0.034)	-0.185	0.853	1.000	0.004
Thalamic radiation (anterior) p ≤ 0.01	0.018 (0.031)	0.599	0.549	1.000	0.034
Thalamic radiation (anterior) p ≤ 0.05	0.023 (0.031)	0.753	0.452	1.000	0.053
Thalamic radiation (anterior) p ≤ 0.10	0.015 (0.031)	0.489	0.625	1.000	0.023
Thalamic radiation (anterior) p ≤ 1.00	0.014 (0.031)	0.459	0.647	1.000	0.020
Thalamic radiation (posterior) p ≤ 0.01	0.033 (0.032)	1.036	0.300	1.000	0.107
Thalamic radiation (posterior) p ≤ 0.05	-0.011 (0.032)	-0.353	0.724	1.000	0.012
Thalamic radiation (posterior) p ≤ 0.10	-0.025 (0.032)	-0.799	0.425	1.000	0.064
Thalamic radiation (posterior) p ≤ 1.00	-0.025 (0.032)	-0.793	0.428	1.000	0.063
Thalamic radiation (superior) p ≤ 0.01	0.032 (0.032)	0.994	0.321	1.000	0.104
Thalamic radiation (superior) p ≤ 0.05	0.025 (0.032)	0.771	0.441	1.000	0.063
Thalamic radiation (superior) p ≤ 0.10	0.022 (0.033)	0.671	0.502	1.000	0.048
Thalamic radiation (superior) p ≤ 1.00	0.007 (0.033)	0.225	0.822	1.000	0.005
Uncinate fasciculus p ≤ 0.01	-0.012 (0.032)	-0.368	0.713	1.000	0.014
Uncinate fasciculus p ≤ 0.05	-0.004 (0.032)	-0.141	0.888	1.000	0.002
Uncinate fasciculus p ≤ 0.10	-0.009 (0.032)	-0.297	0.767	1.000	0.009
Uncinate fasciculus p ≤ 1.00	-0.016 (0.032)	-0.492	0.623	1.000	0.025

MD: mean diffusivity, WM: white matter, g: general factor, MDD: major depressive disorder, SCZ: schizophrenia, BP:

bipolar disorder, PGRS: polygenic risk scores. Controlled for age, age², gender, genotype batch and array, and 15 MDS components. R² = estimate of variance explained by PGRS in %. # depicts trendwise associations (p-FDR < 0.10).

Results - Age-related effects in structural brain measures

Table S11. Association between age and total grey matter, white matter and cerebrospinal fluid. in sample including and excluding outliers.

	Including outliers (N = 978)				Excluding outliers (N = 892)			
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	Beta: z ratio (S.D.)	t statistic	p -uncorr	p-FDR
Age								
Grey matter volume	-0.402 (0.026)	-15.537	8.366 x 10 ⁻⁴⁹	2.51 x 10 ⁻⁴⁸ ***	-0.394 (0.027)	-14.329	4.730 x 10 ⁻⁴²	1.419 x 10 ⁻⁴¹ ***
White matter volume	-0.187 (0.026)	-7.282	6.773 x 10 ⁻¹³	2.032 x 10 ⁻¹² ***	-0.181 (0.027)	-6.698	3.752 x 10 ⁻¹¹	1.125 x 10 ⁻¹⁰ ***
CSF volume	0.356 (0.028)	12.651	4.472 x 10 ⁻³⁴	1.342 x 10 ⁻³³ ***	0.371 (0.029)	12.766	2.157 x 10 ⁻³⁴	6.472 x 10 ⁻³⁴ ***

CSF: cerebrospinal fluid, uncorr.: uncorrected. FDR: false discovery rate. Controlled for gender. *** depicts significant associations (p-FDR < 0.001).

Table S12. Association between age and subcortical volumes, in sample including and excluding outliers.

	Including outliers (N = 978)				Excluding outliers (N = 892)			
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	Beta: z ratio (S.D.)	t statistic	p -uncorr	p-FDR
Age								
Caudate	-0.185 (0.029)	-6.362	3.056 x 10 ⁻¹⁰	2.139 x 10 ⁻⁰⁹ ***	-0.166 (0.031)	-5.375	9.803 x 10 ⁻⁸	6.862 x 10 ⁻⁷ ***
Hippocampus	-0.278 (0.026)	-10.549	1.042 x 10 ⁻²⁴	7.295 x 10 ⁻²⁴ ***	-0.260 (0.028)	-9.352	6.791 x 10 ⁻²⁰	4.754 x 10 ⁻¹⁹ ***
Pallidum	-0.192 (0.028)	-6.959	6.297 x 10 ⁻¹²	4.408 x 10 ⁻¹¹ ***	-0.158 (0.029)	-5.479	5.556 x 10 ⁻⁸	3.889 x 10 ⁻⁷ ***
Thalamus	-0.392 (0.026)	-14.948	1.216 x 10 ⁻⁴⁵	8.511 x 10 ⁻⁴⁵ ***	-0.376 (0.028)	-13.520	5.141 x 10 ⁻³⁸	3.599 x 10 ⁻³⁷ ***
Amygdala	-0.042 (0.026)	-1.639	0.102	0.711	-0.015 (0.027)	-0.548	0.58	1.00
Nucleus accumbens	-0.321 (0.027)	-12.023	3.795 x 10 ⁻³¹	2.656 x 10 ⁻³⁰ ***	-0.279 (0.028)	-9.867	7.312 x 10 ⁻²²	5.118 x 10 ⁻²¹ ***
Putamen	-0.376 (0.025)	-15.132	1.274 x 10 ⁻⁴⁶	8.919 x 10 ⁻⁴⁶ ***	-0.360 (0.026)	-13.642	1.290 x 10 ⁻³⁸	9.030 x 10 ⁻³⁸ ***

Uncorr.: uncorrected, FDR: false discovery rate. Controlled for gender, and side of hemisphere. *** depicts significant associations (p-FDR < 0.001).

Table S13. Association between age and FA, in sample including and excluding outliers.

Age	Including outliers (N = 816)				Excluding outliers (N = 733)			
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	Beta: z ratio (S.D.)	t statistic	p -uncorr	p-FDR
Acoustic radiation	-0.080 (0.031)	-2.604	0.009	0.141	-0.050 (0.032)	-1.558	0.120	1.000
Cingulum (cingulate gyrus)	-0.151 (0.030)	-4.997	7.132 x 10 ⁻⁷	1.070 x 10 ⁻⁵ ***	-0.118 (0.032)	-3.715	2.189 x 10 ⁻⁴	3.284 x 10 ⁻³ **
Cingulum (parahippocampal part)	-0.025 (0.030)	-0.838	0.402	1.000	-0.026 (0.032)	-0.800	0.424	1.000
Corticospinal tract	-0.042 (0.032)	-1.321	0.187	1.000	-0.033 (0.034)	-0.994	0.321	1.000
Forceps major (unilateral)	-0.039 (0.035)	-1.104	0.270	1.000	-0.016 (0.037)	-0.419	0.675	1.000
Forceps minor (unilateral)	-0.249 (0.034)	-7.325	5.762 x 10 ⁻¹³	8.642 x 10 ⁻¹² ***	-0.214 (0.036)	-5.933	4.594 x 10 ⁻⁹	6.891 x 10 ⁻⁸ ***
Inferior fronto-occipital fasciculus	-0.189 (0.033)	-5.687	1.806 x 10 ⁻⁸	2.709 x 10 ⁻⁷ ***	-0.173 (0.035)	-4.950	9.207 x 10 ⁻⁷	1.381 x 10 ⁻⁵ ***
Inferior longitudinal fasciculus	-0.227 (0.033)	-6.865	1.316 x 10 ⁻¹¹	1.974 x 10 ⁻¹⁰ ***	-0.218 (0.035)	-6.268	6.254 x 10 ⁻¹⁰	9.382 x 10 ⁻⁹ ***
Medial lemniscus	0.016 (0.029)	0.564	0.573	1.000	0.015 (0.031)	0.500	0.618	1.000
Middle cerebellar peduncle (unilateral)	-0.030 (0.034)	-0.890	0.374	1.000	-0.002 (0.036)	-0.069	0.945	1.000
Superior longitudinal fasciculus	-0.224 (0.033)	-6.774	2.400 x 10 ⁻¹¹	3.600 x 10 ⁻¹⁰ ***	-0.182 (0.035)	-5.220	2.329 x 10 ⁻⁷	3.494 x 10 ⁻⁶ ***
Thalamic radiation (anterior)	-0.226 (0.033)	-6.898	1.060 x 10 ⁻¹¹	1.590 x 10 ⁻¹⁰ ***	-0.196 (0.035)	-5.654	2.252 x 10 ⁻⁸	3.379 x 10 ⁻⁷ ***
Thalamic radiation (posterior)	-0.144 (0.033)	-4.417	1.137 x 10 ⁻⁵	1.706 x 10 ⁻⁴ ***	-0.140 (0.034)	-4.108	4.436 x 10 ⁻⁵	6.654 x 10 ⁻⁴ ***
Thalamic radiation (superior)	-0.024 (0.033)	-0.731	0.465	1.000	0.006 (0.035)	0.167	0.867	1.000
Uncinate fasciculus	-0.201 (0.031)	-6.492	1.469 x 10 ⁻¹⁰	2.203 x 10 ⁻⁹ ***	-0.186 (0.032)	-5.747	1.335 x 10 ⁻⁸	2.003 x 10 ⁻⁷ ***

FA: fractional anisotropy, uncorr.: uncorrected, FDR: false discovery rate. Controlled for gender, and side of hemisphere. As terisks depict significant associations (***: p-FDR < 0.001,

**: p-FDR < 0.01).

Table S14. Association between age and MD, in sample including and excluding outliers.

	Including outliers (N= 816)				Excluding outliers (N= 733)			
	Beta: z ratio (S.D.)	t statistic	p -uncorr.	p-FDR	Beta: z ratio (S.D.)	t statistic	p -uncorr	p-FDR
Acoustic radiation	0.042 (0.029)	1.451	0.147	1.000	0.015 (0.030)	0.511	0.609	1.000
Cingulum (cingulate gyrus)	0.122 (0.033)	3.705	2.253 x 10 ⁻⁴	0.003 **	0.086 (0.035)	2.453	0.014	0.216
Cingulum (parahippocampal part)	0.163 (0.030)	5.404	8.574 x 10 ⁻⁸	1.286 x 10 ⁻⁶ ***	0.186 (0.032)	5.761	1.230 x 10 ⁻⁸	1.845 x 10 ⁻⁷ ***
Corticospinal tract	0.165 (0.032)	5.151	3.255 x 10 ⁻⁷	4.882 x 10 ⁻⁶ ***	0.134 (0.034)	3.939	8.969 x 10 ⁻⁵	0.001 **
Forceps major (unilateral)	0.081 (0.035)	2.314	0.021	0.313	0.064 (0.037)	1.741	0.082	1.000
Forceps minor (unilateral)	0.165 (0.035)	4.741	2.506 x 10 ⁻⁶	3.759 x 10 ⁻⁵ ***	0.132 (0.037)	3.574	3.752 x 10 ⁻⁴	0.006 **
Inferior fronto-occipital fasciculus	0.311 (0.032)	9.646	6.423 x 10 ⁻²¹	9.635 x 10 ⁻²⁰ ***	0.304 (0.034)	8.979	2.298 x 10 ⁻¹⁸	3.448 x 10 ⁻¹⁷ ***
Inferior longitudinal fasciculus	0.279 (0.033)	8.562	5.486 x 10 ⁻¹⁷	8.229 x 10 ⁻¹⁶ ***	0.273 (0.034)	7.995	5.084 x 10 ⁻¹⁵	7.627 x 10 ⁻¹⁴ ***
Medial lemniscus	0.041 (0.030)	1.345	0.179	1.000	0.042 (0.032)	1.313	0.190	1.000
Middle cerebellar peduncle (unilateral)	0.160 (0.035)	4.630	4.248 x 10 ⁻⁶	6.373 x 10 ⁻⁵ ***	0.167 (0.036)	4.586	5.315 x 10 ⁻⁶	7.972 x 10 ⁻⁵ ***
Superior longitudinal fasciculus	0.278 (0.033)	8.424	1.644 x 10 ⁻¹⁶	2.466 x 10 ⁻¹⁵ ***	0.244 (0.035)	6.988	6.295 x 10 ⁻¹²	9.442 x 10 ⁻¹¹ ***
Thalamic radiation (anterior)	0.458 (0.030)	15.168	6.058 x 10 ⁻⁴⁶	9.087 x 10 ⁻⁴⁵ ***	0.462 (0.032)	14.557	2.462 x 10 ⁻⁴²	3.693 x 10 ⁻⁴¹ ***
Thalamic radiation (posterior)	0.308 (0.031)	9.897	6.956 x 10 ⁻²²	1.043 x 10 ⁻²⁰ ***	0.320 (0.033)	9.828	1.711 x 10 ⁻²¹	2.567 x 10 ⁻²⁰ ***
Thalamic radiation (superior)	0.333 (0.032)	10.367	9.806 x 10 ⁻²⁴	1.471 x 10 ⁻²² ***	0.322 (0.034)	9.503	2.847 x 10 ⁻²⁰	4.270 x 10 ⁻¹⁹ ***
Uncinate fasciculus	0.336 (0.031)	10.759	2.480 x 10 ⁻²⁵	3.720 x 10 ⁻²⁴ ***	0.323 (0.033)	9.794	2.313 x 10 ⁻²¹	3.469 x 10 ⁻²⁰ ***

MD: mean diffusivity, uncorr.: uncorrected, FDR: false discovery rate. Controlled for gender, and side of hemisphere. Asterisks depict significant associations (***: p-FDR < 0.001, **: p-FDR < 0.01).

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