Supplementary files

Table S1. Brain regions of nine cortical functional networks

Functional network	Specific brain regions
Default mode network	Angular gyrus
	Anterior cingulate gyrus
	Inferior operculum frontal gyrus
	Inferior temporal gyrus
	Inferior triangularis frontal gyrus
	Insula
	Lingual gyrus
	Medial superior frontal gyrus
	Middle cingulate gyrus
	Middle frontal gyrus
	Middle temporal gyrus
	Middle temporal pole gyrus
	Orbito inferior frontal gyrus
	Orbito medial frontal gyrus
	Orbito middle frontal gyrus
	Orbito superior frontal gyrus
	Precentral gyrus
	Precuneus
	Rectus
	Superior frontal gyrus
	Superior temporal pole gyrus
	Supplementary motor area
Cigulo opercular network	Anterior cingulate gyrus
	Inferior triangularis frontal gyrus
	Insula
	Middle cingulate gyrus
	Middle frontal gyrus
	Middle temporal gyrus
	Olfactory
	Rolandic operculum
	Sub-gyral
	Superior temporal gyrus
	Supplementary motor area
	Supramarginal
Medial occipital network	Inferior parietal gyrus
	Insula
	Paracentral_Lobule
	Postcentral gyrus
	Precentral gyrus
	Precuneus
	Rolandic operculum
	Superior frontal gyrus
	Superior parietal gyrus
	Supplementary motor area
Temporal network	Angular gyrus
	Inferior operculum frontal gyrus
	Inferior parietal gyrus
	Inferior temporal gyrus
	Inferior triangularis frontal gyrus

	Middle frontal gyrus
	Middle occipital gyrus
	Middle temporal gyrus
	Precentral gyrus
	Superior parietal gyrus
	Supramarginal
Somato-motor network	Fusiform gyrus
	Inferior occipital gyrus
	Inferior temporal gyrus
	Lingual gyrus
	Middle occipital gyrus
	Middle temporal gyrus
	Superior occipital gyrus
Lateral occipital network	Calcarine gyrus
	Cuneus
	Lingual gyrus
	Superior occipital gyrus
Fronto-parietal network	Calcarine gyrus
	Cuneus
	Fusiform gyrus
	Hippocampus
	Parahippocampus
Medial temporal network	Insula
	Rolandic operculum
	Superior temporal gyrus
	Supramarginal
Superior fronto-parietal network	Middle frontal gyrus
	Precentral gyrus
	Precuneus
	Superior frontal gyrus

Table S2. Correlation[§] of the Z score of significantly altered connectivity of thalamic subregions and cortical voxels between groups with the PANSS

Connectivity	*r* value	*p* value
General psychopathology		
Thalamic subregion 9 – Left precentral gyrus	0.301	0.040

[§]Partial correlation analysis with age, sex, and head motion (framewise displacement) as covariates; $p < 0.01$, uncorrected; $p < 0.05$, Family Wise Error rate corrected.

Table S3. Comparison of functional connectivity of thalamic subregions with cortical voxels between patients with TRS (n = 50) and HCs (n = 61)

Seed Region	MNI coordinate	Cluster Size	*t* value	*p*-FWE	*p*-unc	Name (voxel size - region)
TRS > HCs						
Thalamic subregion 1	-14 -44 -12	1357	4.87	0.009	<0.001	697 – Left lingual gyrus
Thalamic subregion 2	-28 -10 66	4313	6.23	<0.001	<0.001	1500 – Left precentral gyrus 1128 – Left postcentral gyrus

						262 – Left superior lateral occipital cortex 167 – Left superior parietal lobule 152 – Left superiorfrontal gyrus 149 – Left middle frontal gyrus
	46 8 -46	1978	6.54	<0.001	<0.001	605 – Right temporal pole cortex 155 – Right posterior temporal fusiform cortex 121 – Right anterior temporal fusiform cortex 112 – Right hippocampus 110 – Right anterior inferior temporal gyrus
	-28 -6 -28	1280	5.97	0.014	<0.001	395 – Left temporal pole cortex 164 – Left anterior middle temporal gyrus 101- Left anterior parahippocampal gyrus
	34 6 20	1060	5.57	0.044	<0.001	473 – Right precentral gyrus
Thalamic subregion 3	10 6 54	1897	5.82	<0.001	<0.001	278 – Right supplementary motor cortex 258 – Left supplementary motor cortex 234 – Right superior frontal gyrus 196 – Left superior frontal gyrus 164 – Left precentral gyrus 107 – Right middle frontal gyrus
Thalamic subregion 4	-36 -82 -2	1132	4.68	0.019	<0.001	411 – Left occipital pole cortex 375 – Left inferior lateral occipital cortex
Thalamic subregion 5	-24 -20 70	938	4.44	0.048	<0.001	474 – Left precentral gyrus 346 – Left postcentral gyrus
Thalamic subregion 6	-8 38 -22	3855	7.07	<0.001	<0.001	377 – Frontal medial cortex 212 – Right frontal orbital cortex 188 – Left frontal orbital cortex 177 – Right frontal pole cortex
	-36 -8 50	3440	6.08	<0.001	<0.001	825 – Right precentral gyrus 606 – Left precentral gyrus 558 – Left postcentral gyrus 402 – Right postcentral gyrus 159 – Left supplementary motor cortex 129 – Right superior parietal lobule 124 – Right supplementary motor cortex
Thalamic subregion 7	16 58 -6	993	5.81	0.038	<0.001	662 – Right frontal pole cortex
Thalamic subregion 9	-44 -14 42	1278	6.29	0.006	<0.001	540 – Left precentral gyrus 208 – Left postcentral gyrus 177 – Left middle frontal gyrus
TRS < HCs						
Thalamic subregion 3	-20 -78 -28	2549	-5.40	<0.001	<0.001	271 – Right lingual gyrus 263 – Left intracalcarine cortex

						163 – Right intracalcarine cortex 148 – Right occipital pole cortex
Thalamic subregion 5	-28 32 -6	1582	-7.10	0.001	<0.001	753 – Left frontal pole cortex 114 – Right frontal pole cortex
Thalamic subregion 6	-28 22 32	1027	-5.50	0.030	<0.001	585 – Left middle frontal gyrus 137 – Left superior frontal gyrus
Thalamic subregion 7	-4 -72 58	1139	-5.74	0.016	<0.001	348 – Precuneus 114 – Left superior lateral occipital cortex

Thresholded at $p < 0.05$, uncorrected; $p < 0.05$, Family Wise Error rate corrected.

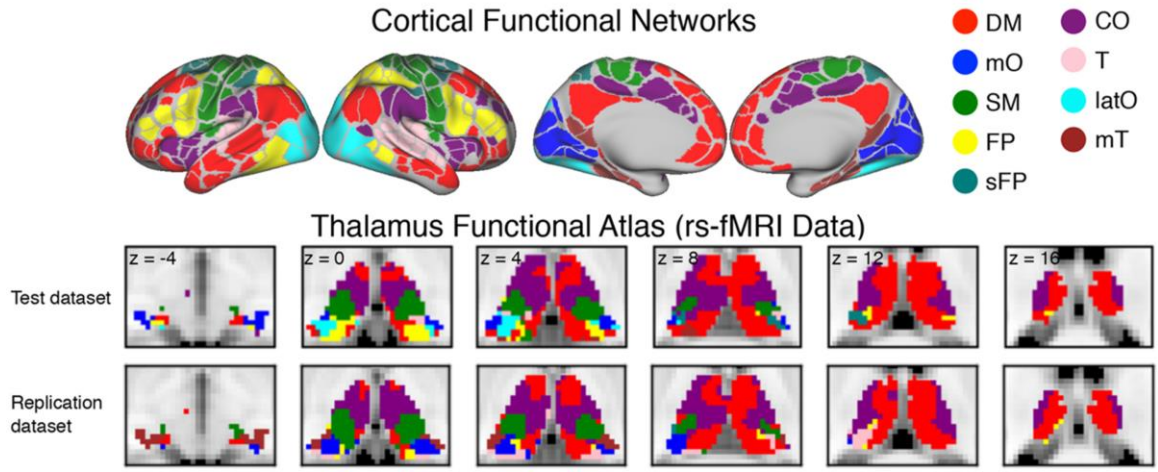

Fig S1. Cortical functional networks and thalamic atlases. Cortical functional networks and thalamic parcellation derived from functional connectivity analyses between the thalamus and each cortical network using rs-fMRI data. Thalamus functional atlas can be downloaded from the website (https://neurovault.org/images/111302/) Network abbreviations: DM; Default mode, CO; Cingulo-opercular, mO; Medial Occipital, T; Temporal, SM; Somato-Motor, latO; Lateral Occipital, FP; Fronto-Parietal, mT; Medial temporal, sFP; superior FP.