

Table 3. Studies investigating the connectome in depression.

Study	Participants	Age of patients	Medication	Global signal regression	Modality/ MR Scanner	Node definition	Node number	Edge definition	Network type	C_p	γ	E_{loc}	L_p	λ	E_{glob}	σ	Small-worldness alteration
Borchardt et al. ⁸³ (2016)	21MDD vs 22C	37.9±11.4	Medication		fMRI/3T	AAL	95	Pearson correlation	W	↓	=	NA	=	=	=	=	Randomization
He et al. ⁹² (2016)	40MDD vs 33C	35.2±9.3	Drug-naïve and medication-free ≥ 3 weeks	NA	fMRI/3T	ICA	48	Pearson correlation	W	=	NA	=	=	NA	=	NA	=
Manelis et al. ⁸⁴ (2016)	39MDD vs 36C	31.5±8.0	Medication	NA	fMRI/3T/	ICA	21	IMaGES algorithm	NA	NA	NA	NA	↑	NA	NA	NA	Regularization
Borchardt et al. ⁸⁵ (2015)	12 MDD vs 12C	42.8±10.6	NA	No	fMRI/1.5T	AAL	102	Pearson correlation	W	=	NA	NA	↑	NA	=	=	Regularization
Ye et al. ⁸⁷ (2015)	42MDD vs 42C	42.1±12.3	Drug-naïve	Yes	fMRI/3T	AAL	90	Pearson correlation	B	NA	NA	↑	NA	NA	=	NA	Regularization
Luo et al. ⁸⁹ (2015)	50MDD vs 50C	41.6±12.2	17 Medication	No	fMRI/3T	HOA	112	Pearson correlation	W	↓	NA	NA	↑	NA	↓	=	Weaker small-worldization
Peng et al. ⁹³ (2014)	16MDD vs 16C	34.4±6.7	Drug-naïve	No	fMRI/3T	AAL	90	Pearson correlation	B	NA	=	=	NA	=	=	=	=
Park et al. ⁸⁸ (2014)	13MDD vs 12C	35.3±9.8	12 Medication	NA	fMRI/1.5T	AAL	73	Partial correlation	B	NA	NA	↑	NA	NA	↓	NA	Regularization
Meng et al. ⁸⁶ (2014)	25MDD vs 25C	48.8±14.8	24 Medication	NA	fMRI/3T	HOA	112	Wavelet correlation	B	=	NA	NA	↑	NA	↓	=	Regularization
Lord et al. ⁴⁶ (2012)	21MDD vs 22C	37.9±11.4	Medication	Yes	fMRI/3T	AAL	95	Pearson correlation	W	=	NA	NA	=	NA	NA	=	=
Zhang et al. ¹³ (2011)	30MDD vs 63C	36.1±12.3	Drug-naïve	NA	fMRI/3T	AAL	90	Partial correlation	B	=	=	=	↓	↓	↑	=	Randomization
Jin et al. ⁹⁴ (2011)	16MDD vs 16C	17.1±1.3	Drug-naïve	No	fMRI/1.5T	AAL	90	Partial correlation	W	NA	NA	NA	NA	NA	NA	↓	UD
Wang et al. ⁹⁰ (2016)	33LLD vs 31C	68.2±4.5	Medication-free ≥ 3 months	Yes	fMRI/1.5T	AAL	90	Pearson correlation	B	=	=	↓	↑	=	↓	=	Weaker small-worldization
Li et al. ⁸¹ (2015)	23LLD vs 25C	67.8±5.9	21 Medication 2 Drug-naïve	Yes	fMRI/3T	Functiona l	264 1	Pearson correlation	B	=	NA	↓	=	NA	=	↓	Randomization
	13LLD-aMCI vs 25C	71.6±6.5	11 Medication 2 Drug-naïve	Yes	fMRI/3T	Functiona l	264 1	Pearson correlation	B	=	NA	↓	↑	NA	↓	↓	Weaker small-worldization
Bohr et al. ⁹¹ (2012)	14LLD vs 16C	76.6±7.7	Medication	Yes	fMRI/3T	HOA	110	Pearson correlation	B	=	=	NA	=	=	NA	=	=
Guo et al. ⁸² (2014)	36TD vs 27C	28.4±9.7	Drug-naïve	NA	fMRI/3T	AAL	90	Partial correlation	B	=	NA	=	↓	NA	↑	NA	Randomization
Wang et al. ⁹⁸ (2016)	76MDD vs 116C	36.2±11.3	Drug-naïve	-	sMRI/3T	DKA	68	Pearson correlation	B	=	↓	↓	=	=	=	↓	Randomization
Singh et al. ¹⁰⁰ (2013)	93MDD vs 151C	38.6±11.7	46 Medication 45 Drug-naïve	-	sMRI/3T	AAL	90	Pearson correlation	B	NA	↓	NA	NA	↑	NA	↓	Weaker small-worldization
Mak et al. ⁹⁵ (2016)	33LLD vs 25C	73.6±5.2	Medication	-	sMRI/3T	DKA	68	Pearson correlation	B	↑	=	=	NA	=	=	=	Regularization
Ajilore et al. ⁹⁷ (2014)	53LLD vs 73C	69.4±8.5	Drug-naïve and medication-free ≥ 2 weeks	-	sMRI/3T	FreeSurfe r	82	Pearson correlation	B	NA	↑	NA	NA	↑	↓	↓	Regularization
Lim et al. ¹⁰⁵ (2013)	37LLD vs 40C	71.8±4.8	Medication	-	sMRI/3T	AAL	90	Pearson correlation	B	NA	=	NA	NA	=	NA	=	=
Chen et al. ¹⁰¹ (2016)	27MDD vs 40C	33.0±8.8	NA	-	DTI/3T	AAL	90	Deterministic tractography	W	↓	=	↓	=	=	↓	=	Weaker small-worldization
Chen et al. ⁴⁷ (2016)	16MDD vs 30C	44.8±2.2	Medication	-	DTI/1.5T	AAL	90	GQI tractography	B	↑	NA	↑	↑	NA	NA	=	Regularization
Sacchet et al. ¹⁰⁸ (2015)	14MDD vs 18C	35.6±8.4	3 Medication	-	DTI/3T	DKA	68	Probabilistic tractography	B	NA	NA	NA	=	NA	=	=	=

Qin et al. ¹⁰⁶ (2014)	29MDD vs 30C	39.0±10.0	NA	-	DTI/1.5T	AAL	396	Deterministic tractography	W	=	NA	=	NA	NA	=	NA	=
Korgaonkar et al. ¹¹⁰ (2014)	95MDD vs 102C	33.8±13.1	Drug-naïve and medication-free ≥ 5 half-lives	-	DTI/3T	DKA	84	Probabilistic tractography	W	=	NA	NA	=	NA	=	NA	=
Sacchet et al. ¹⁰⁷ (2014)	14MDD vs 18C	NA	NA	-	DTI/3T	FreeSurfer	68	Probabilistic tractography	B	NA	NA	NA	=	NA	=	=	=
Ajlore et al. ¹⁰³ (2014)	43MDD vs 40C	57.4±11.9	Drug-naïve and medication ≥ 2 weeks	-	DTI/3T	FreeSurfer	87	Deterministic tractography	NA	NA	NA	=	NA	NA	=	NA	=
Tymofiyeva et al. ¹⁰⁹ (2017)	57MDD vs 41C	16.2±1.3	10 Medication 41 Drug-naïve	-	DTI/3T	AAL	90	Deterministic tractography	W	NA	=	NA	NA	=	NA	=	=
Li et al. ⁹⁹ (2017)	24LLD vs 24C	69.7±7.0	12 Medication	-	DTI/3T	AAL	90	Probabilistic tractography	W	↓	NA	=	=	NA	=	NA	Randomization
Charlton et al. ¹⁰⁴ (2015)	28LLD vs 48C	65.3±7.2	Medication-free ≥ 2 weeks	-	DTI/3T	FreeSurfer	87	Deterministic tractography	NA	NA	=	NA	NA	=	=	NA	=
Bai et al. ⁹⁶ (2012)	35LLD vs 30C	67.9±4.5	Medication-free ≥ 3 months	-	DTI/1.5T	AAL	90	Deterministic tractography	W	=	=	=	↑	=	↓	=	Regularization
Long et al. ¹⁰² (2015)	22TD vs 19C	28.1±9.9	Drug-naïve	-	DTI/1.5T	AAL	90	Deterministic tractography	B	=	↓	↑	↓	↓	↑	↓	Stronger small-worldization

Abbreviations: MDD, major depressive disorder; LLD, late-life depression; aMCI, amnesic mild cognitive impairment; TD, treatment-naïve depression; fMRI, functional magnetic resonance imaging; sMRI, structural magnetic resonance imaging; DTI, diffusion tensor imaging; AAL, automated anatomical labeling; ICA, independent component analysis; HOA, Harvard-Oxford atlas; DKA, Desikan-Killiany Atlas; GQI, Generalized q-sampling imaging; B, binary; W, weighted; C_p , clustering coefficient; γ , normalized clustering coefficient; E_{loc} , local efficiency; L_p , characteristic path length; λ , normalized characteristic path length; E_{glob} , global efficiency; σ , small-worldness; NA, not available; =, not different; UD, undefined.