

Author (year)	Total n	New n	% Male	Duration of Disease	Age of diagnosis	Age at surgery	Co-morbid diagnoses	Stimulation target(s)	Pre-op Y-BOCS	Response Rate	Follow-up duration (mos)	Depression Scale	Depression score (baseline)	Anxiety Scale	Anxiety score (baseline)	% Anxiety score reduction at last FU	GAF (baseline)	% GAF increase at last FU
Abelson (2005)	4	4	50.0%	22.5	17.7	40.2	MDD (3/4), social phobia (1/4), body dysmorphic disorder (1/4), tic disorder (1/4), eating disorder (1/4)	ALIC	32.7	50% (2/4)	12.9	HDRS-17	20.5	HAM-A	15.3	28.1%	31.8	39.4%
Greenberg (2006)	10	10	60.0%	22.5	12.8	35.3	MDD (8/10), OCPD (1/10), BP-II (1/10), dysthymia (1/10), schizotypal traits (1/10)	VC/VS	34.6	44% (4/9)	31.9	HDRS-24	21.1	HARS	18.2	56.0%	36.6	32.0%
Mallet (2008)	16	16	56.3%	30.3	13.4	43.8	MDD (6/16), Tourette's Syndrome (1/16), personality disorder NOS (1/16), kleptomania (2/16)	STN	32.0	75% (6/8)	10.0	MADRS	12.1	BAI	13.6	NR	31.6	NR
Aouizerate (2009)	2	2	100.0 %	33.5	17.5	51.0	MDD (2/2)	NAc + CN	29.0	100% (2/2)	15.0	HDRS-17	10.5	NR	NR	NR	NR	NR
Greenberg (2010)	26	16	50.0%	24.1	14.4	38.5	MDD (15/16), panic disorder (3/16), GAD (2/16), Tourette's Syndrome (1/16), dependent personality disorder (1/16), histrionic & narcissistic traits (1/16)	ALIC (more posterior and slightly medial lead positions) (4/16), ALIC (more anterior lead positions) (5/16), ALIC/BNST (7/16)	33.4	50% (8/16)	80.3	HAM-D	20.3	HAM-A	25.7	NR	33.2	NR
Huff (2010)	10	10	60.0%	22.2	14.1	36.3	MDD (6/10)	Right NAc	32.2	10% (1/10)	12.0	BDI	22.7	STAI-X1	56.4	10.1%	36.6	31.0%
Denys (2010)	16	16	56.3%	28.4	14.2	42.6	MDD (6/16), panic disorder (1/16), dysthymia (1/16), OCPD (1/16),	NAc	33.7	75% (12/16)	50.0	HDRS-17	19.5	HAM-A	20.9	36.8%	NR	NR
Roh (2012)	4	4	75.0%	16.8	17.0	33.7	MDD (3/4)	VC/VS	37.0	100% (4/4)	24.0	HAM-D	21	NR	NR	NR	44	30.2%
Jiménez (2013)	6	6	NR	16.2	NR	34.7	Substance use disorder (3/6), schizoid personality (1/6)	ITP	35.8	100% (6/6)	24.0	NR	NR	NR	NR	NR	NR	NR

Barcia (2014)	2	2	50.0%	14.5	18.0	32.5	Intellectual disability (1/2)	STN + NAc	33.0	100 % (2/2)	25.5	HAM-D	9	HARS	19	71.1%	NR	NR
Tsai (2014)	4	4	100.0 %	12.5	13.0	25.5	MDD (3/4), BP-I (1/4)	VC/VS	36.3	75% (3/4)	17.8	HAM-D	33.3	NR	NR	NR	43.5	23.7%
Islam (2015)	8	8	87.5%	29.3	14.3	43.6	MDD (5/8), BP-I (2/8), dependent personality disorder (2/8), body dysmorphic disorder (1/8), specific phobia (1/8)	NAc (3/8), BNST (5/8)	35.1	62.5 % (5/8)	34.1	HAM-D	19.6	NR	NR	NR	39.5	NR
Luyten (2016)	24	13	53.8%	NR	NR	42.5	NR	ALIC/BNST	35.2	67% (16/24)	52.8	HAM-D	21	HAM-A	23.5	NR	37.7	NR
Maarouf (2016)	4	4	25.0%	23.5	15.7	39.2	MDD (2/4), BPD (2/4), histrionic personality disorder (1/4), PTSD (1/4), dissociative disorder (1/4), bulimia nervosa (1/4)	MD/VA	34.7	0% (0/4)	11.5	BDI	32.8	STAI-X1/X2	60 (STAI-X1); 66.5 (STAI-X2)	9.5% (STAI-X1); 8.3% (STAI-X2)	41.5	2.4%
Coenen (2017)	2	2	100.0 %	29.0	12.5	41.5	No co-morbidities	sIMFB	34.5	50% (1/2)	12.0	MADRS (1/2), BDI (1/2)	21 (MADRS), 36 (BDI)	NR	NR	NR	35	NR
Voon (2017)	12	10	30.0%	20.9	19.7	40.6	NR	STN	34.5	70% (7/10)	32.2	NR	NR	NR	NR	NR	NR	NR
Ooms (2017)	17	17	17.6%	26.6	16.3	42.9	NR	ALIC (ventral)	33.5	NR	24.0	NR	NR	NR	NR	NR	42.5	NR
Farrand (2018)	7	7	NR	25.0	21.5	46.5	MDD (3/7), benzodiazepine use disorder (3/7), alcohol use disorder (2/7), dysthymia (2/7), trichotillomania (1/7), epilepsy (1/7)	BNST (3/7), NAc (3/7), L BNST/R NAc (1/7)	32.4	42% (3/7)	30.9	DASS-D	20	DASS-A	12.3	-35.0%	NR	NR
Lee (2019)	5	5	40.0%	16.2	16.2	32.4	Patients with ≥4 prior suicide attempts (2/5)	ITP	35.0	100 % (5/5)	49.8	HAM-D	14	NR	NR	NR	NR	NR
Barcia (2019)	7	7	42.9%	25.3	11.0	36.2	MDD (1/7), anorexia nervosa (1/7), personality disorder NOS (1/7)	CN (5/7), NAc + CN (1/7), NAc (1/7)	32.4	85% (6/7)	13.3	BDI	30.4	STAI-State	45.3	31.4%	30.7	30.7%
Huys (2019)	20	20	50.0%	26.1	14.2	43.2	NR	NAc	30.9	40% (8/20)	12.0	BDI	20.5	STAI-1/2	54.7 (STAI-1); 59.7 (STAI-2)	1.3% (STAI-1); 3.0% (STAI-2)	36.4	33.1%

Gupta (2019)	2	2	0.0%	23.0	23.5	46.5	NR	VS/ALIC	38.0	100 % (2/2)	41.5	BDI	23	NR	NR	NR	NR		
Beszlej (2019)	2	2	50.0%	21.0	12.0	33.0	NR	ALIC/NAc	31.5	100 % (2/2)	6.0	HDRS	10.5	HAM-A	9	0%	40	27.3%	
Denys (2020)	70	54	24.1%	23.8	17.6	41.4	MDD (24/54), OCPD (6/54), ASD (4/54), avoidant personality disorder (3/54), BP-I (3/54), eating disorder (3/54), personality disorder NOS (3/54), panic disorder, with or without agoraphobia (3/54), social phobia (2/54), hoarding disorder (2/54), PTSD (1/54), BP-II (1/54), somatization disorder (1/54), ADHD (1/54), borderline personality disorder (1/54), dysthymia (1/54)	ALIC (ventral)	33.7	50% (27/54)	12.0	HAM-D	21	HAM-A	26.7	NR	NR	NR	NR
Holland (2020)	9	9	55.6%	NR	10-35	40.2	MDD (7/9), GAD (4/9), prior cingulotomy (1/9), depression NOS (1/9), hoarding disorder (1/9), anorexia nervosa (1/9), tic disorder (1/9), panic disorder (1/9), psychosis NOS (1/9), Tourette's Syndrome (1/9)	VC/VS	34.2	44% (4/9)	54.8	NR	NR	NR	NR	NR	NR	NR	
Chabardes (2020)	19	13	38.5%	18.5	21.8	40.3	Substance use disorder (2/13), MDD (1/13), prior left temporal lobectomy for epilepsy (1/13), OCPD (1/13), eating disorder (1/13), hypersomnia (1/13), social phobia (1/13), pregnancy and baby birth during study (1/13)	STN	33.2	69% (9/13)	24.0	NR	NR	NR	NR	NR	34.5	48.0%	
Menchón (2021)	30	30	48.0%	24.5	16.5	41.0	Mood disorders (9/30), anxiety disorders (9/30), somatoform disorders (5/30)	VC/VS	34.7	60% (18/30)	12.0	MADRS	22	NR	NR	NR	39	36.0%	

"New n" - de novo patients not already included in other studies; NR - not reported; MDD - major depressive disorder; OCPD - obsessive-compulsive personality disorder; BP-I - bipolar 1 disorder; BP-II - bipolar 2 disorder; NOS - not otherwise specified; GAD - generalized anxiety disorder; BPD - borderline personality disorder; PTSD - post-traumatic stress disorder; ALIC - anterior limb of internal capsule; STN - subthalamic nucleus; NAc - nucleus accumbens; CN - caudate nucleus; BNST - bed nucleus of stria terminalis; VC/VS - ventral capsule/ventral striatum; ITP - inferior thalamic peduncle; MD/VA - medial dorsal and ventral anterior nucleus of the thalamus; sIMFB - superolateral branch of the medial forebrain bundle; Y-BOCS - Yale-Brown Obsessive Compulsive Scale; HDRS-17/HDRS-24/HAM-D - Hamilton Depression Rating Scale; MADRS - Montgomery-Åsberg Depression Rating Scale; BDI - Beck Depression Inventory; DASS-D - Depression Anxiety Stress Scale-Depression; HAM-A/HARS - Hamilton Anxiety Rating Scale; BAI - Beck Anxiety Inventory; STAI-X1/X2 - State-Trait Anxiety Inventory-X1/X2; DASS-A - Depression Anxiety Stress Scale-Anxiety; GAF - Global Assessment of Functioning; FU - follow-up

