

THE HEART OF IT ALL: BODY DYSMORPHIA DISORDER IN COSMETIC SURGERY

Anna D. Lee, BS¹; Elijah W. Hale MS¹; Leela Mundra MD¹; Christodoulos Kaoutzanis MD¹; David W. Mathes, MD¹

¹ Division of Plastic and Reconstructive Surgery, University of Colorado School of Medicine, 13001 E 17th Pl, Aurora, CO 80045

Background

• Body Dysmorphic Disorder (BDD) is a common mental illness characterized by preoccupation with minute defects in physical appearance or distorted perception of self

• The most common age of onset was 12-13 years old, with the weighted prevalence of adult and adolescent BDD estimated to be 1.9% and 2.2 %, respectively

• BDD is a contraindication to undergoing cosmetic surgery

• Surgeons preferentially use their intuition and intangible information gathered from their clinical encounter to determine whether a patient may have BDD characteristics.

• Informal diagnoses of BDD may miss individuals with milder forms of BDD.

• Our goal is to investigate the prevalence of BDD in cosmetic surgery and evaluate patient characteristics associated with BDD.

Methods

• TriNetX is a federated network of EHRs recording anonymized data from 59 health care organizations (HCOs) primarily in the United States and contains more than 81 million unique patients

• TriNetX database study was used to identify patients with BDD between 2002 and 2022 who underwent cosmetic surgery with patient demographics and patient characteristics determined by ICD-10 codes

• Odds ratios using chi-squared to assess risk factors among patients with BDD with significance for this study was set at p<0.05

Results

• Fewer than 0.1% of 226,374 patients underwent plastic surgery between August 2002 and August 2022 had BDD, and 52.1% of BDD patients were diagnosed after cosmetic surgery

• BDD patients were more likely to undergo rhinoplasty (OR=1.784, P=0.004) and non-localized lipectomy (OR=1.448, P=0.021), and less likely to undergo blepharoplasty (OR=0.451, P=0.002)

• Depression (OR=4.279, P<0.05), anxiety (OR=5.490, P<0.05), and attention deficit hyperactivity disorder (OR=3.993, P<0.05) were strongly associated with BDD patients undergoing cosmetic procedures

Results

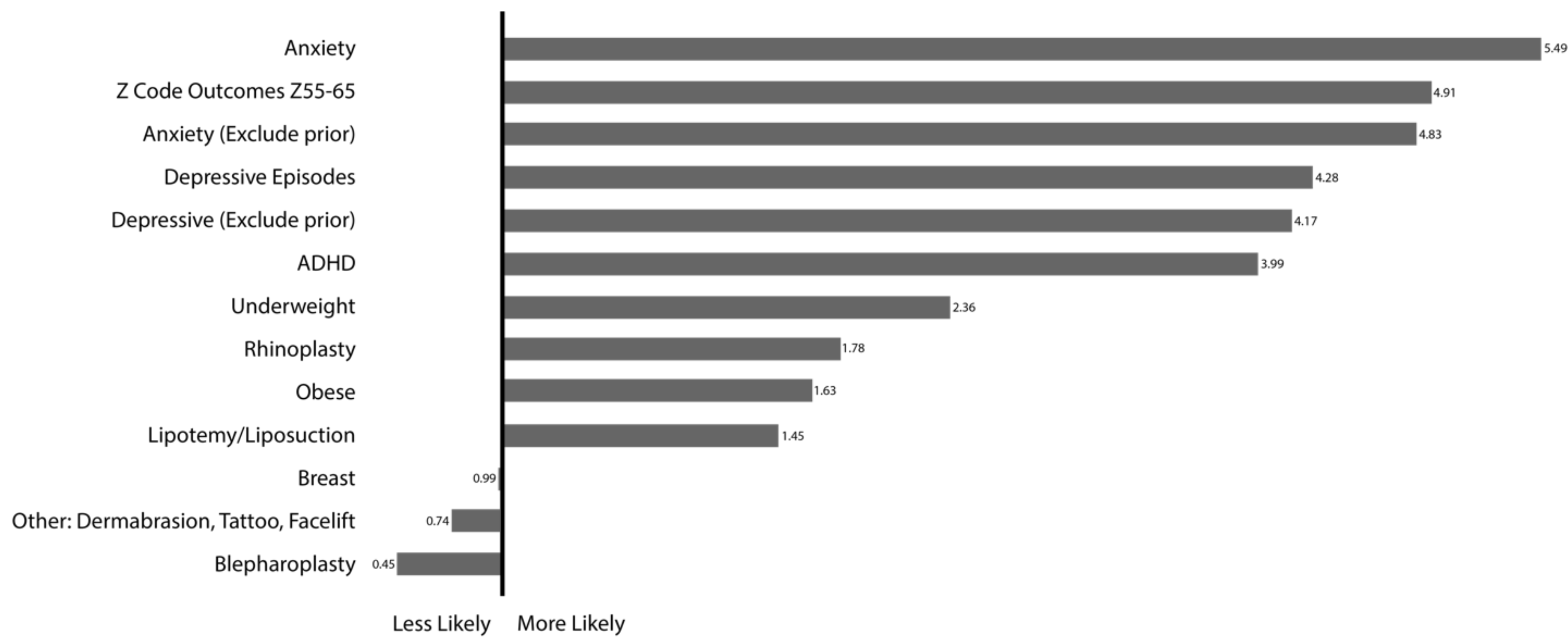


Figure 1. Odds Ratios for Procedures and Characteristics

Demographics (Pre-Surgery)	N	% of Cohort	P value
Current Age (Mean +/- SD)			
No BDD	226,374	48 +/- 17	<0.001
BDD	190	39.7 +/- 17	
Male			
No BDD	33,348	14.7%	0.8199
BDD	27	14.2%	
Female			
No BDD	193,126	85.3%	0.8101
BDD	164	86.3%	
White			
No BDD	157,547	69.6%	0.0384
BDD	146	76.8%	
Black			
No BDD	26,047	11.5%	0.2607
BDD	17	8.9%	
Asian			
No BDD	4,120	1.8%	0.004
BDD	10	5.3%	
Hispanic/Latino			
No BDD	14,547	6.4%	0.0469
BDD	19	10.0%	
Not Hispanic/Latino			
No BDD	155,689	68.8%	0.2272
BDD	139	73.2%	
Prior BDD Diagnosis			
No BDD	-	0.0%	<0.001
BDD	91	47.9%	
Unknown Race			
No BDD	38,660	17.1%	0.1760
BDD	17	8.9%	
Unknown Ethnicity			
No BDD	56,138	24.8%	0.1028
BDD	32	16.8%	

Table 2. Characteristics of Cohort with Lifetime Diagnosis of BDD compared to Cohort without BDD. P values for t test were bolded when p <0.05, indicating a significant difference

ICD10 /CPT Events	Group	Outcome/Population	Risk (%)	Odds Ratio (95% CI)	P-Value
ADHD	BDD	16/190	8.42	3.993 (2.991, 6.668)	0.0
	No BDD	5,096/226,374	2.25		
Anxiety	BDD	113/190	59.47	5.490 (4.109, 7.335)	0.0
	No BDD	47,749/226,374	21.09		
Anxiety (Exclude prior)	BDD	41/96	42.71	4.830 (3.223, 7.239)	0.0
	No BDD	25,683/192,084	13.37		
Blepharoplasty	BDD	15/190	7.89	0.451 (0.266, 0.764)	0.002
	No BDD	36,180/226,374	15.98		
Breast	BDD	104/190	54.74	0.985 (0.741, 1.312)	0.92
	No BDD	124,729/226,374	55.10		
Depressive Episodes	BDD	92/190	48.42	4.279 (3.219, 5.689)	0.0
	No BDD	40,717/226,374	17.99		
Depressive (Exclude prior)	BDD	35/106	33.02	4.166 (2.778, 6.246)	0.0
	No BDD	20,548/194,185	10.58		
Lipotemy/Liposuction	BDD	53/190	27.89	1.448 (1.054, 1.989)	0.021
	No BDD	47,725/226,374	21.08		
Obese	BDD	59/190	31.05	1.627 (1.196, 2.212)	0.002
	No BDD	49,087/226,374	21.68		
Other: Dermabrasion, Tattoo, Facelift	BDD	10/190	5.26	0.745 (0.394, 1.408)	0.363
	No BDD	15,711/226,374	6.94		
Rhinoplasty	BDD	29/190	15.26	1.784 (1.201, 2.650)	0.004
	No BDD	20,759/226,374	9.17		
Underweight	BDD	10/190	5.26	2.355 (1.245, 4.455)	0.007
	No BDD	5,217/226,374	2.30		
Z Code Outcomes Z55-65	BDD	34/190	17.89	4.914 (3.389, 7.125)	0.0
	No BDD	9,614/226,374	4.25		

Table 1. Procedure and characteristic cohort size, event risk, odds ratios with 95% CI, and p value. *Bolded values indicate p < 0.05

Conclusion

• The incidence of BDD is significantly lower than previously described, suggesting that plastic surgeons are identifying patients with BDD

• However, approximately half of patients were diagnosed with BDD postoperatively, emphasizing the need to maintain vigilance

• Our data suggest that patients undergoing rhinoplasty and lipectomy with previously diagnosed mental health illness are at higher risk of BDD

• It's important for plastic surgeons with high clinical suspicion to support patients and refer them for evaluation by a mental health professional

Implications

• This poster addresses the concern that plastic surgeons may be inappropriately operating on patients with body dysmorphia disorder, a contraindication to undergoing cosmetic surgery

• This research influences the performance of surgeons to remain vigilant when identifying individuals who may have an underlying BDD and to consider referrals to mental health professionals when suspecting mental health illnesses during aesthetic surgery consultations

Disclosures

• None