

The Prevalence of Depression and Anxiety Among Pediatric Patients Undergoing Surgery

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Introduction

Depression and anxiety have been shown to negatively affect surgical outcomes and recovery.

As mental health may worsen during the post-operative period, identifying and addressing mental health at pre-surgical visits is of importance.

Study Aim: To describe the prevalence of depression and anxiety in the pediatric surgical population to increase awareness as well as advocate for addressing mental health issues in this population to optimize surgical outcomes

Methods

A retrospective review of all patients with a concurrent diagnosis of depression or anxiety seen by a surgical care team at our institution from January 2012 to December 2022 was performed.

Patients were included if they presented to their surgical subspecialty visit with an ICD-10 code for depression or anxiety.

Descriptive and statistical analyses compared the prevalence of depression, anxiety, or both within surgical subspecialties.

Statistical sub-analyses identified the plastic surgery procedures most associated with mental health comorbidities.

Results

Figure 1. Graphic representation of concurrent mental health diagnoses in pediatric patients seen by surgical subspecialties

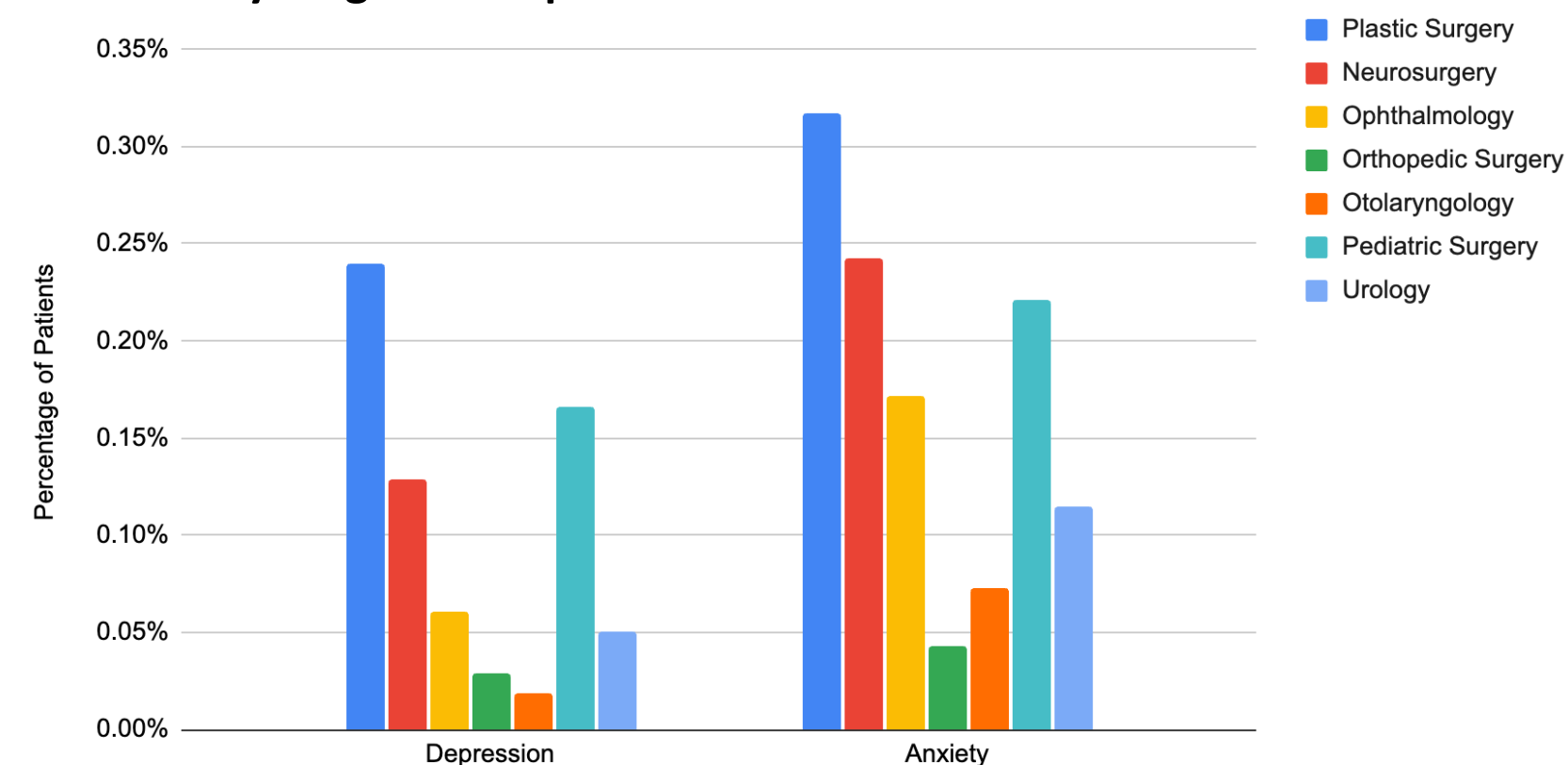


Table 1. Odds ratios for the presence of a concurrent depression or anxiety diagnosis across surgical specialties compared to plastic surgery. Significant findings are highlighted in red ($p^* < 0.001$).

Surgical Specialty	Depression	
	Including Gender Dysphoria	Excluding Gender Dysphoria
Plastic Surgery	1.000	1.000
Neurosurgery	0.611	0.153*
Ophthalmology	0.468	0.117*
Orthopedic Surgery	2.796*	0.698
Otolaryngology	9.482*	2.370
Pediatric Surgery	3.461*	0.865
Urology	6.255*	1.563

Surgical Specialty	Anxiety	
	Including Gender Dysphoria	Excluding Gender Dysphoria
Plastic Surgery	1.000	1.000
Neurosurgery	0.593	0.592
Ophthalmology	4.195*	0.726
Orthopedic Surgery	4.621*	2.649*
Otolaryngology	3.372*	1.933*
Pediatric Surgery	2.107*	1.262
Urology	3.596*	2.063*

Figure 2. Distribution of surgical procedures among the plastic surgery patients presenting with a diagnosis of anxiety and depression

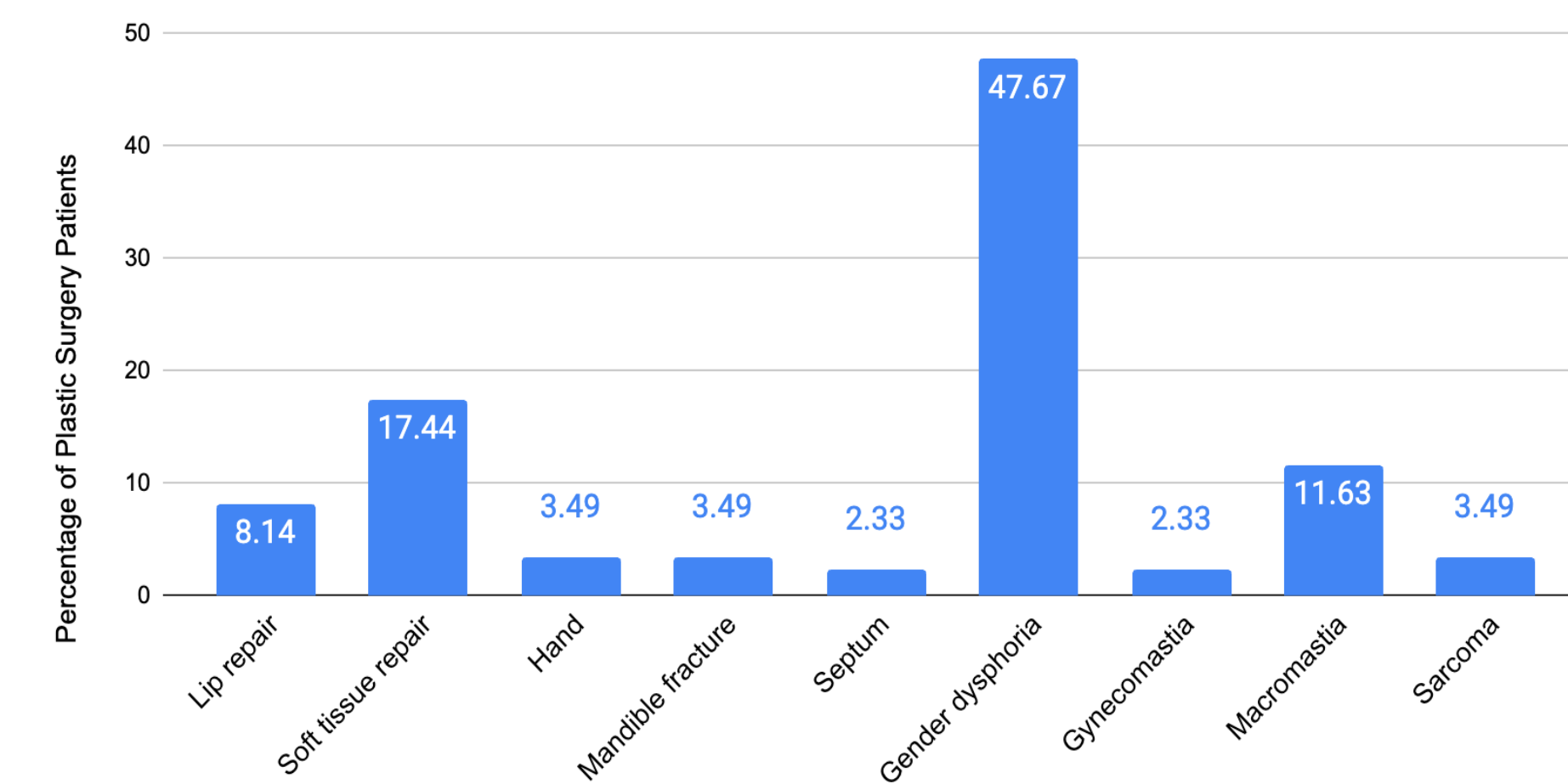


Table 2. Odds ratios for the presence of a concurrent depression or anxiety diagnosis among gender dysphoria patients seen by surgical specialties compared to those seen by plastic surgery. Significant findings are highlighted in red ($p^* < 0.001$).

Surgical Specialty	Gender Dysphoria Patients (N= 2,181)	
	Depression	Anxiety
Plastic Surgery	1.000	1.000
Non-Plastic Surgery	10.485*	64.726*

Conclusions

Rates of depression and anxiety are higher in pediatric plastic surgery patients compared to other surgical subspecialties.

Diagnoses of gender dysphoria, soft tissue repair, and macromastia were most associated with mental health comorbidities.

Intentional efforts must be made while caring for patients holistically and provide appropriate supplementary care to promote improved surgical outcomes.