Co-relation of Psychological Factors in Fibromyalgia Patients Diagnosed with Obstructive Sleep Apnea and other Co-morbidities
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Introduction

Fibromyalgia (FM) is a chronic pain condition that commonly co-occurs with obstructive sleep apnea (OSA) and obesity [1]. Patients with FM commonly experience depression and anxiety, which may be exacerbated by OSA and contribute to the severity of FM symptoms [2]. Obesity is also a common co-morbidity in FM and OSA patients, and it may contribute to the severity of FM symptoms [3]. By understanding the co-occurrence between these co-morbidities and psychological factors, healthcare providers can more effectively manage the health of FM patients.

Methods & Aims

- This IRB approved retrospective study was conducted using EPIC chart review. Patients with fibromyalgia were identified using ICD-9 (729.1) and ICD-10 (M79.7) codes, while patients with obstructive sleep apnea were identified using ICD-9 (327.23) and ICD-10 (G47.33) codes. The total number of medical diagnoses, including any psychiatric conditions, and BMI were documented for each patient. The prevalence of psychiatric conditions was compared between patients with fewer than 25 medical diagnoses and those with 25 or more diagnoses, as well as between patients with and without obesity (BMI > 30).

Category	Value
% With Anxiety	65%
% With Depression	67%
% With Both Anxiety and Depression	55%
Mean BMI	36.4
Mean Number of All Diagnoses	28.0
Mean Number of Psychiatric Diagnoses	2.5

Psychiatric Condition Distribution
n = 150
Note: Many Patients Had Multiple Psychiatric Conditions

*Other included ADHD, adjustment disorder, bipolar disorder, eating disorder, gambling disorder, multiple personality disorder, PMDD and suicidal behavior
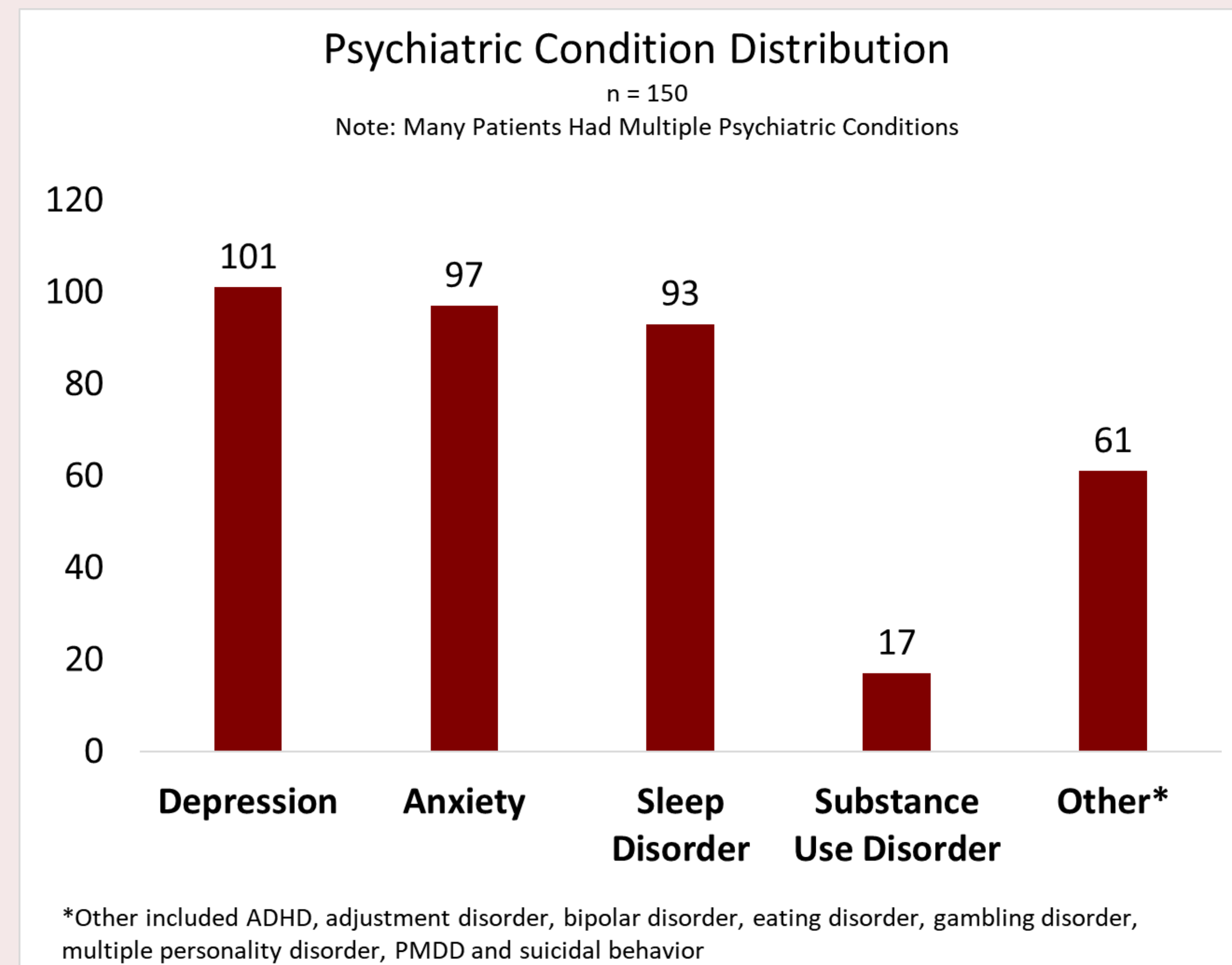
Figure 1. Distribution of psychiatric conditions among patients with fibromyalgia and obstructive sleep apnea

% of Patients With Anxiety and Depression
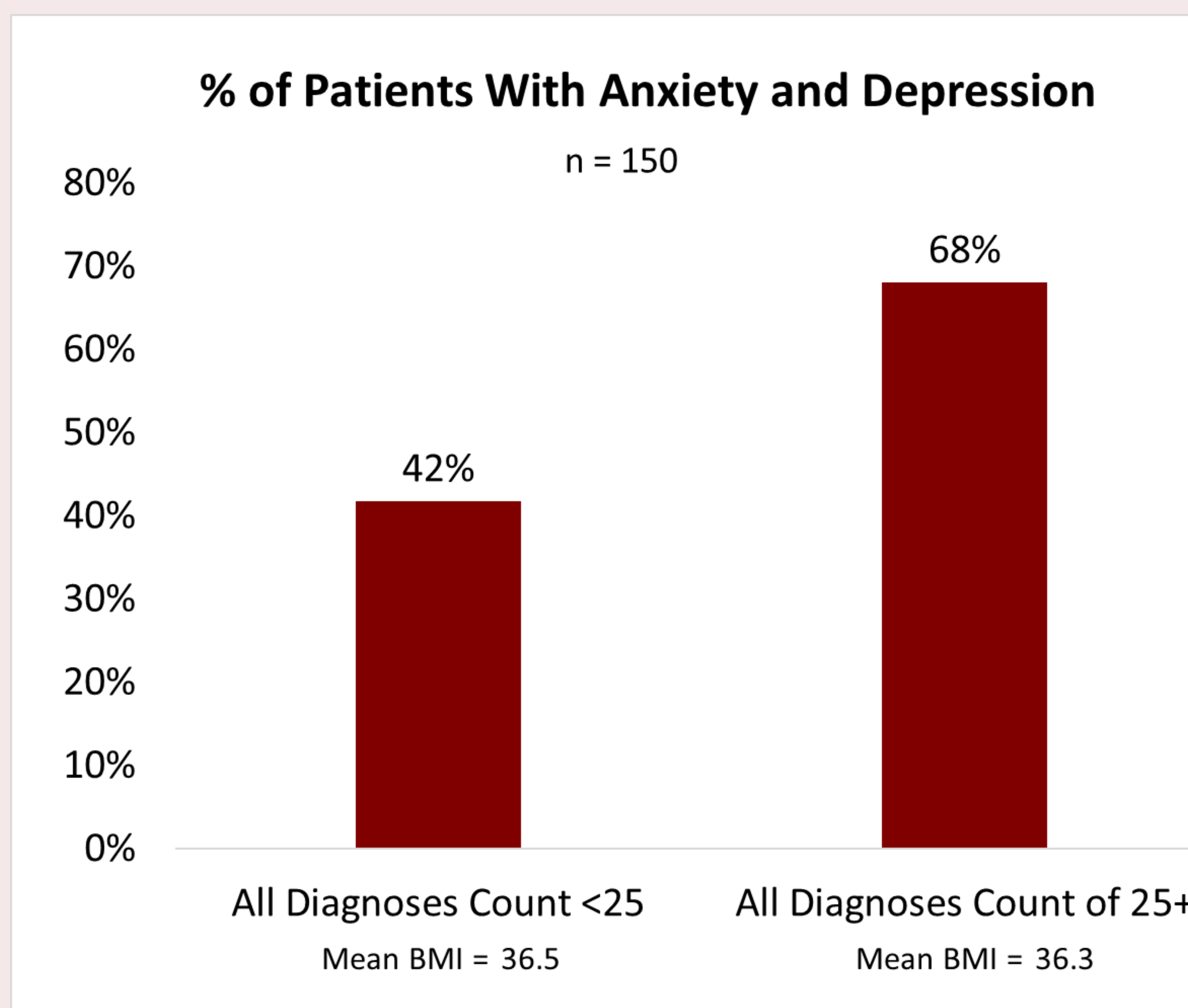n = 150

Figure 2. Percent of patients with comorbid anxiety and depression stratified by total number of diagnoses <25 or 25+ (BMI in kg/m^2)

Results

- The total FM and OSA N = 331. Mean BMI was 36.69 ± 8.86, with 77.95% of the patients having obesity. Diagnoses mean: 31.79 ± 17.25 and the mean total psychiatric diagnoses was 2.80 ± 1.66. Of patients with 25 or greater number of medical problems, 66.99% of patients had comorbid anxiety and depression vs. 33.01% of patients who had less than 25 medical problems (odds ratio = 1.50). Patients with a BMI < 30 (N=71) had rates of anxiety and depression at 64.79% and a mean total of 2.79 ± 1.66 psychiatric diagnoses, whereas patients with a BMI > 30 (N=258) had rates of anxiety and depression at 61.63% (odds ratio = 1.28) and a mean total of 2.80 ± 1.66 psychiatric diagnoses. In addition to depression and anxiety, the most common psychiatric conditions among FM/OSA patients included hypersomnia and substance use disorders.

Conclusion

- Discussion: Patients with 25 or more diagnoses had higher rates of anxiety and depression. The odds ratios indicate that a patient with 25 or greater number of medical problems were 1.5 times more likely to have anxiety and depression than those with fewer diagnoses. Additionally, those with a BMI > 30 were 1.3 times more likely to have anxiety and depression than those with a normal BMI.
- Conclusion: The high healthcare utilization and comorbidity burden of this patient population highlights the importance of addressing psychological factors in the management of FM and OSA.

References

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