

# Association Between Body Mass Index and Treatment Response to Intranasal Esketamine in an Outpatient Clinical Setting

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## RESEARCH QUESTION

•Does body mass index (BMI) influence the response rates of patients treated with intranasal esketamine after 8 treatments in the real-world clinical setting at UT Southwestern?

## BACKGROUND

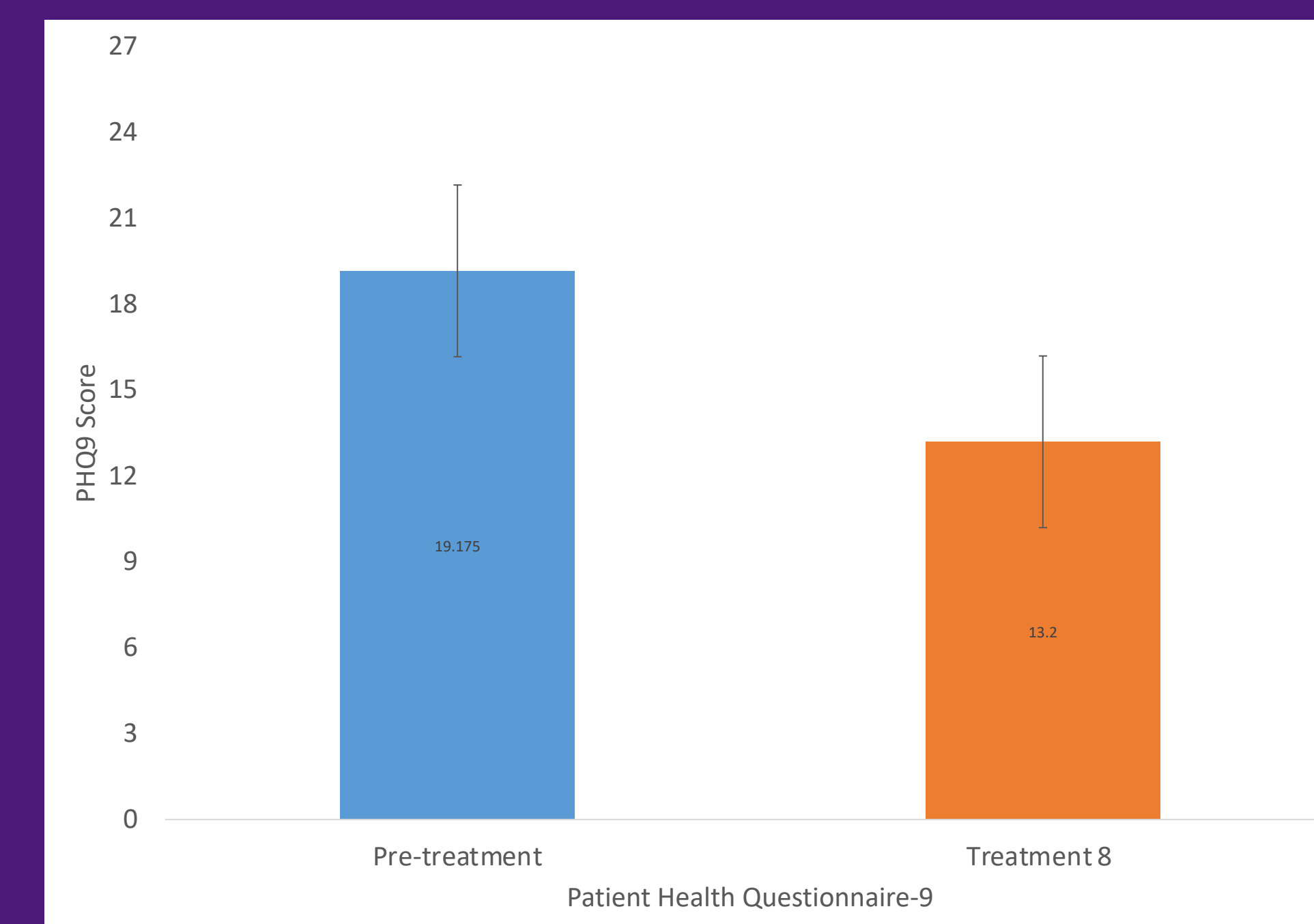
- Major depressive disorder (MDD) is the most common psychiatric illness in the United States, with significant economic, emotional, and healthcare burdens.
- Treatment-resistant depression (TRD), is especially challenging. Most interventions are unsuccessful at long-term remission.
- Intranasal esketamine was approved as the first mechanistically distinct medication for depression in over 50 years, showing promising results for patients with TRD.
- While weight-based dosing effects have been demonstrated for intravenous ketamine, no similar work has been performed for intranasal esketamine to determine if BMI impacts treatment response.

## METHODS

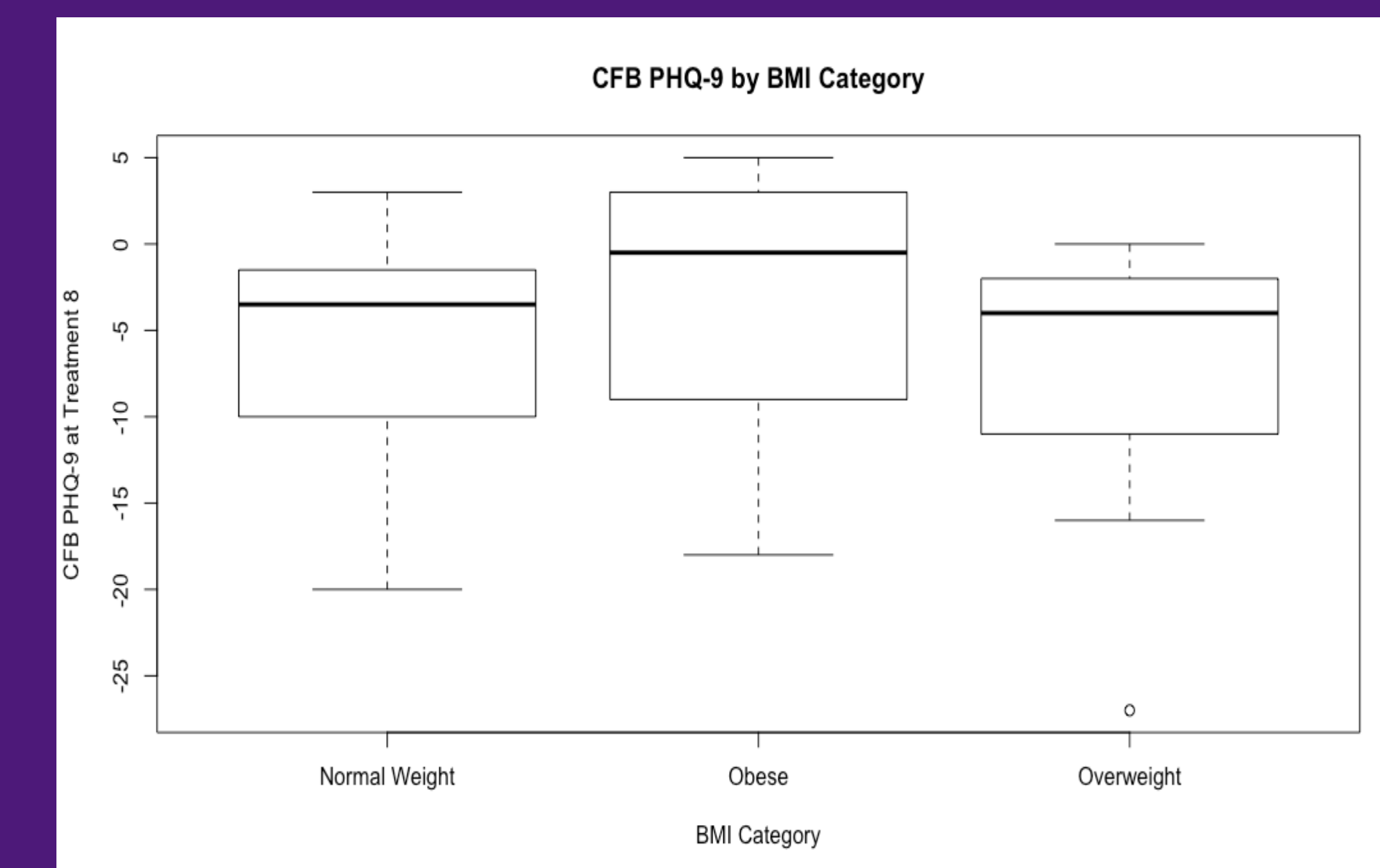
- Retrospective chart review of 40 pts
- Inclusion criteria: >18yo, diagnosis of MDD, failure of  $\geq 2$  oral antidepressants in current depressive episode
- 56mg starting dose escalated 86mg dose on a standardized 8-week plan.
- All patients were treated with a 56mg starting dose of intranasal esketamine, unless otherwise specified, and received treatment at an escalated 86mg dose on a standardized 8-week schedule.
- The efficacy of treatment was determined by collecting survey data of indexes of depression and suicidality: PHQ-9, QIDS-SR/C, CGI, and GAD-7.

Intranasal esketamine is an effective therapeutic option for patients with treatment resistant depression. There is no statistically significant association between body mass index and treatment response across 3 measures of depression severity and 1 measure of anxiety severity.

PRETREATMENT VS TREATMENT #8

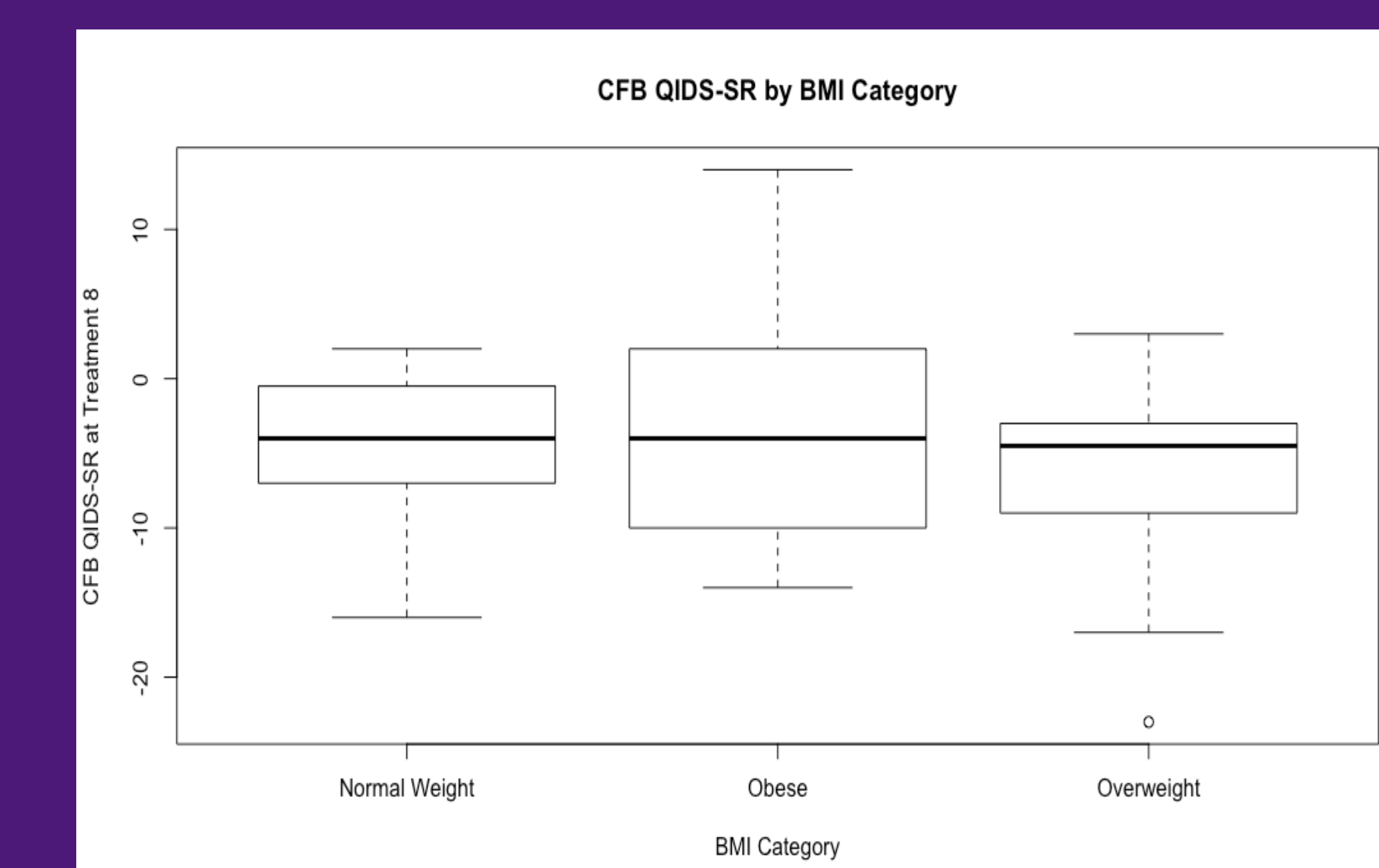
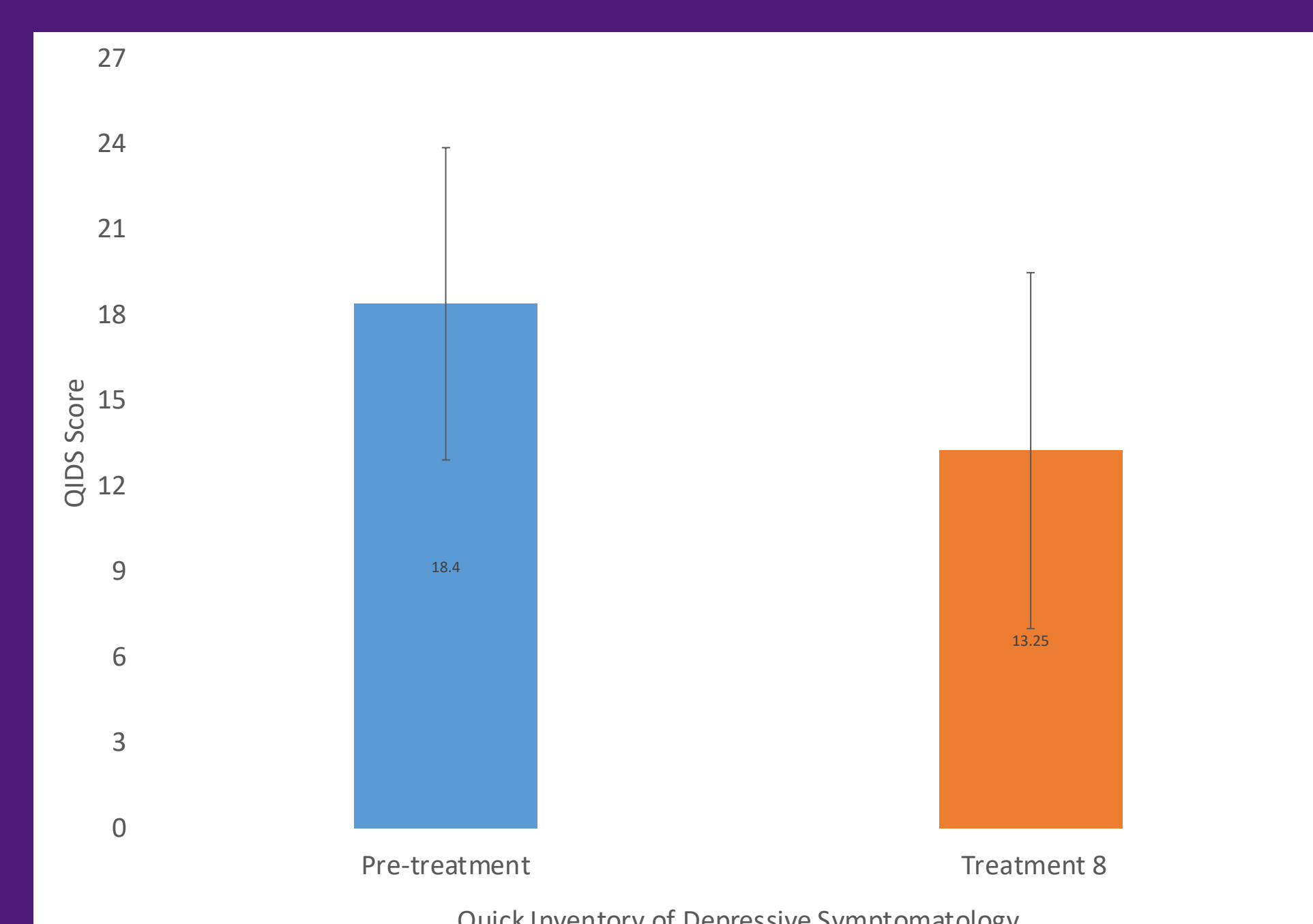


CHANGE FROM BASELINE BY BMI GROUP

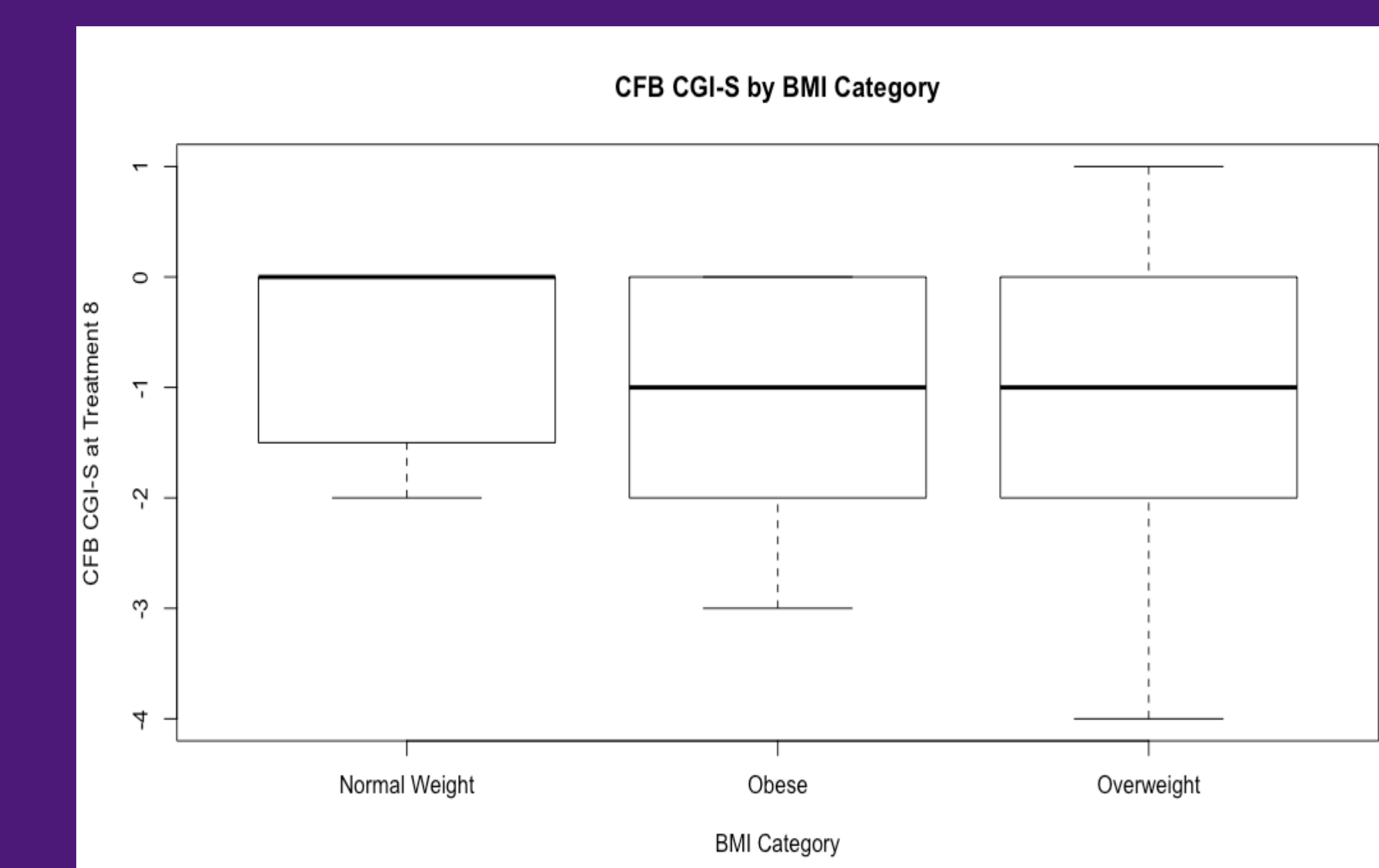
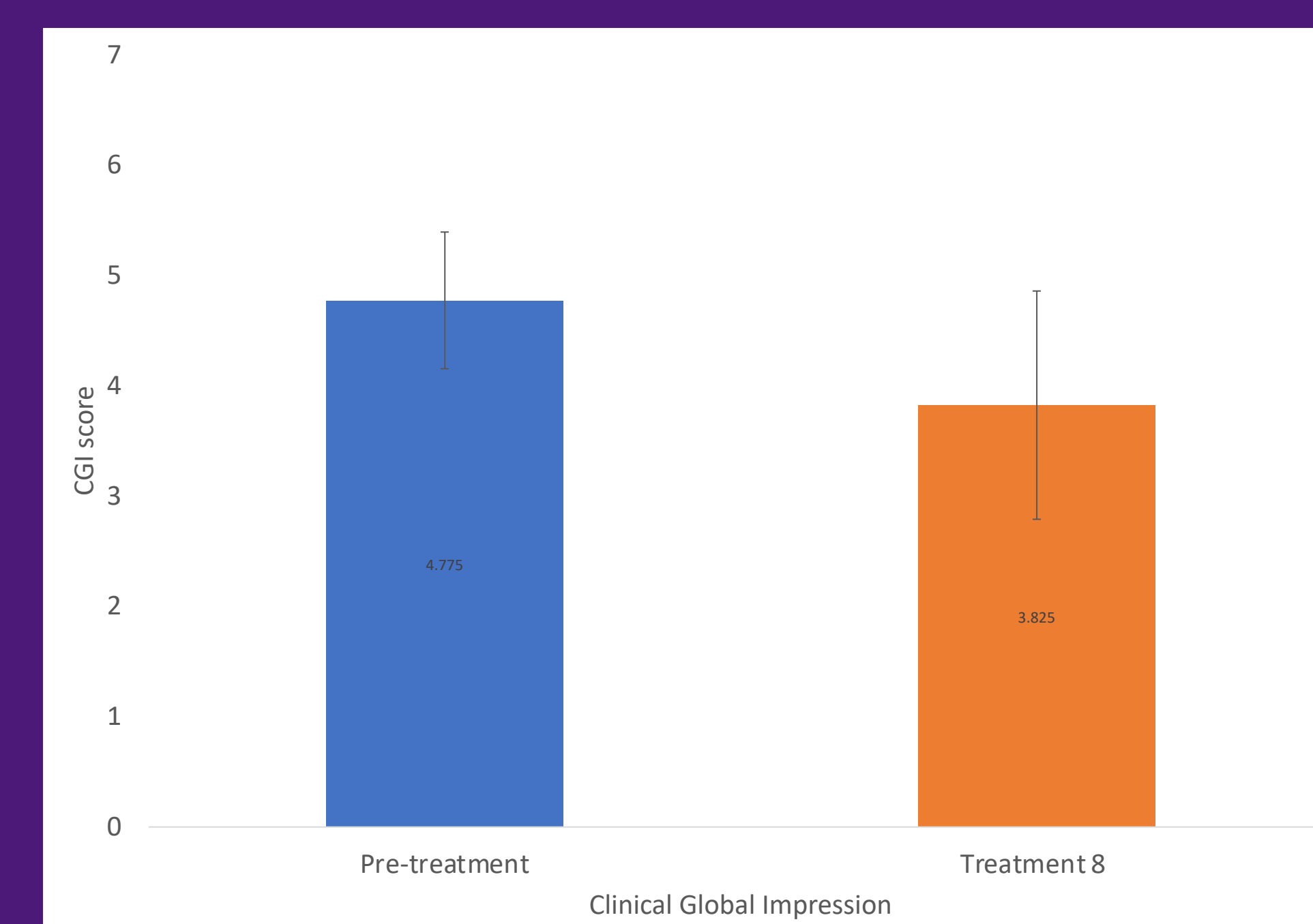


PHQ-9

QIDS



CGI



## RESULTS

After 8 treatments of intranasal esketamine, patients experienced a statistically significant reduction in the PHQ-9, QIDS-SR, and CGI depression questionnaires. The GAD-7 questionnaire likewise revealed a statistically significant reduction in anxiety symptoms after 8 treatments.

Prior to the stratification of BMI, analysis of efficacy on the full cohort of 40 patients deemed esketamine effective at reducing the severity of depression and anxiety. After stratification, observational results demonstrate some moderate changes in efficacy by BMI. No statistical analysis can support these observations due to the limited cohort size. Overall, the data provide no clear link that weight or BMI are linked to esketamine efficacy, echoing the results of the intravenous ketamine study.

## Major depressive disorder is a major issue

In 2017, 17.3 million American adults, equaling 7.1% of the total population, experienced at least one major depressive episode.

The total economic burden of MDD in the United States is now estimated to be \$210.5 billion per year.

For each dollar spent on direct depression care, \$4.70 is spent on the medical and social sequela of the disease

Until 2019, when esketamine was introduced, there had not been a mechanistically new drug for depression in over 50 years.



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