

# Mindfulness Meditation as an Adjunct to Esketamine Treatment for Major Depressive Disorder

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## Introduction

- Gaps in utilization of traditional depression care and failure to achieve remission on monoaminergic antidepressants call for innovations in treatment approaches
- Intranasal esketamine, an NMDAR antagonist, received FDA approval for treatment resistant depression in 2019
- Mindfulness meditation also has a growing body of evidence supporting its use in depression
- Mindfulness meditation is hypothesized to enhance esketamine's pharmacological action based on the neuroplasticity theory of depression

## Purpose

To examine the feasibility and efficacy of implementing mindfulness meditation with esketamine for major depressive disorder

## Methods

**Design:** Quasi-experimental clinical quality improvement pilot

**Sample:** 19 adults with major depressive disorder receiving esketamine; patients self-selected to the mindfulness intervention (n=10) or usual care (n=9)

**Setting:** Interprofessional outpatient psychiatric clinic in Orange County, California

**Measures:** Patient Health Questionnaire-8 (PHQ-8), Five Factor Mindfulness Questionnaire: Short-Form (FFMQ-SF) self-compassion & acting mindfully subscales, Hope, Agency, and Opportunity (HAO)

**Analysis:** Independent samples t-tests and chi-square tests; paired samples t-tests; Pearson R correlations

**Mindfulness Intervention:** Four web-based, self-guided mindfulness meditation sessions

- Sessions 1 & 2:** 18 minutes, awareness of breath
- Sessions 3 & 4:** 15 minutes, compassionate present moment awareness

## Results

- Participants in mindfulness intervention had clinically significant improvement in depressive symptoms, with a mean PHQ-8 score reduction of 4.7 points compared to 1 point in the usual care group ( $p=.014$ )
- Improvements in self-compassion scores correlated with reduced depressive symptoms ( $r=-0.71$ ,  $p<.01$ )
- No patient drop-out from either group
- Comments from mindfulness group indicated that meditations were helpful, 100% of patients reported they were satisfied or extremely satisfied with the intervention

Figure 1: PHQ-8 Score Changes after 2 Weeks

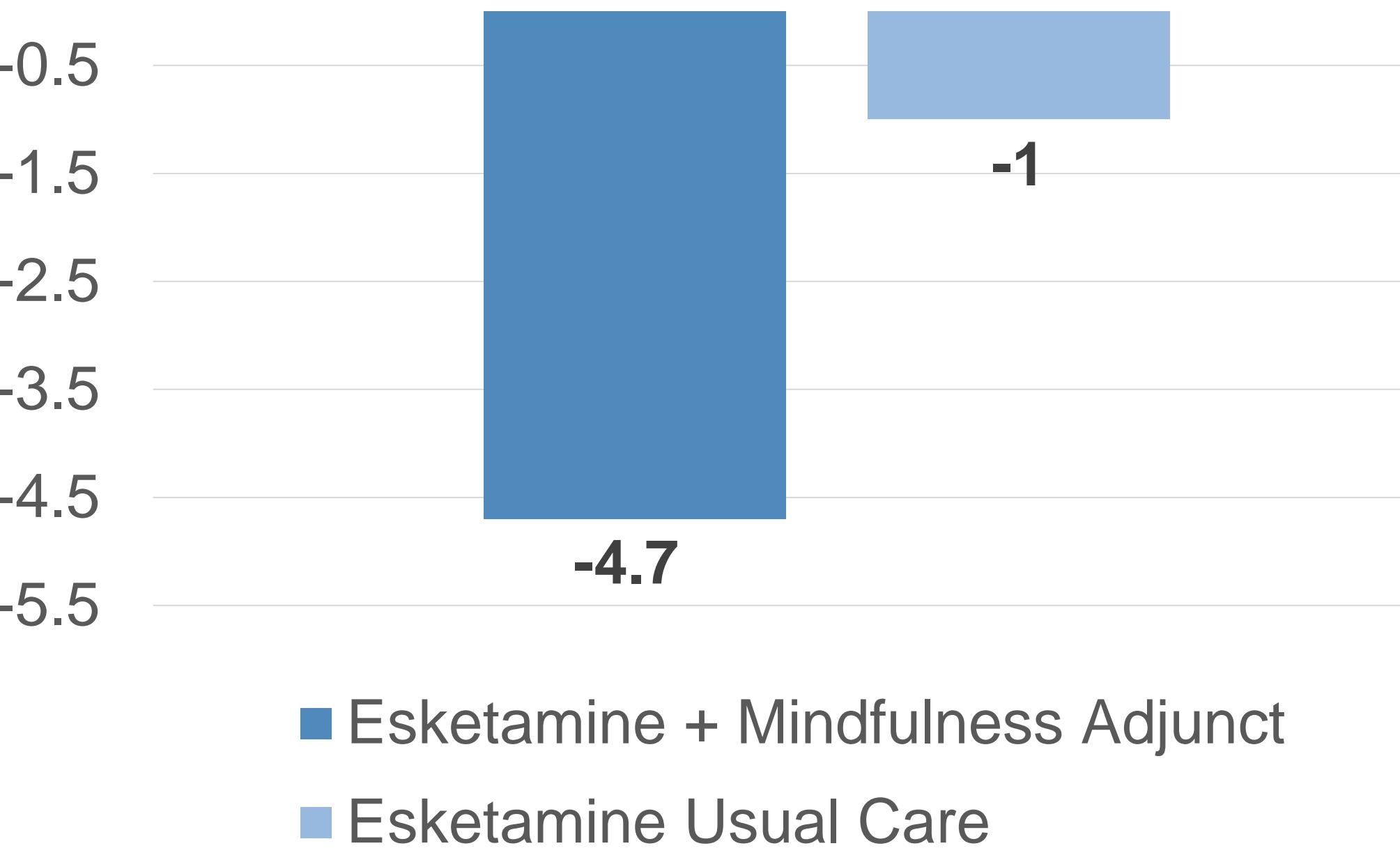


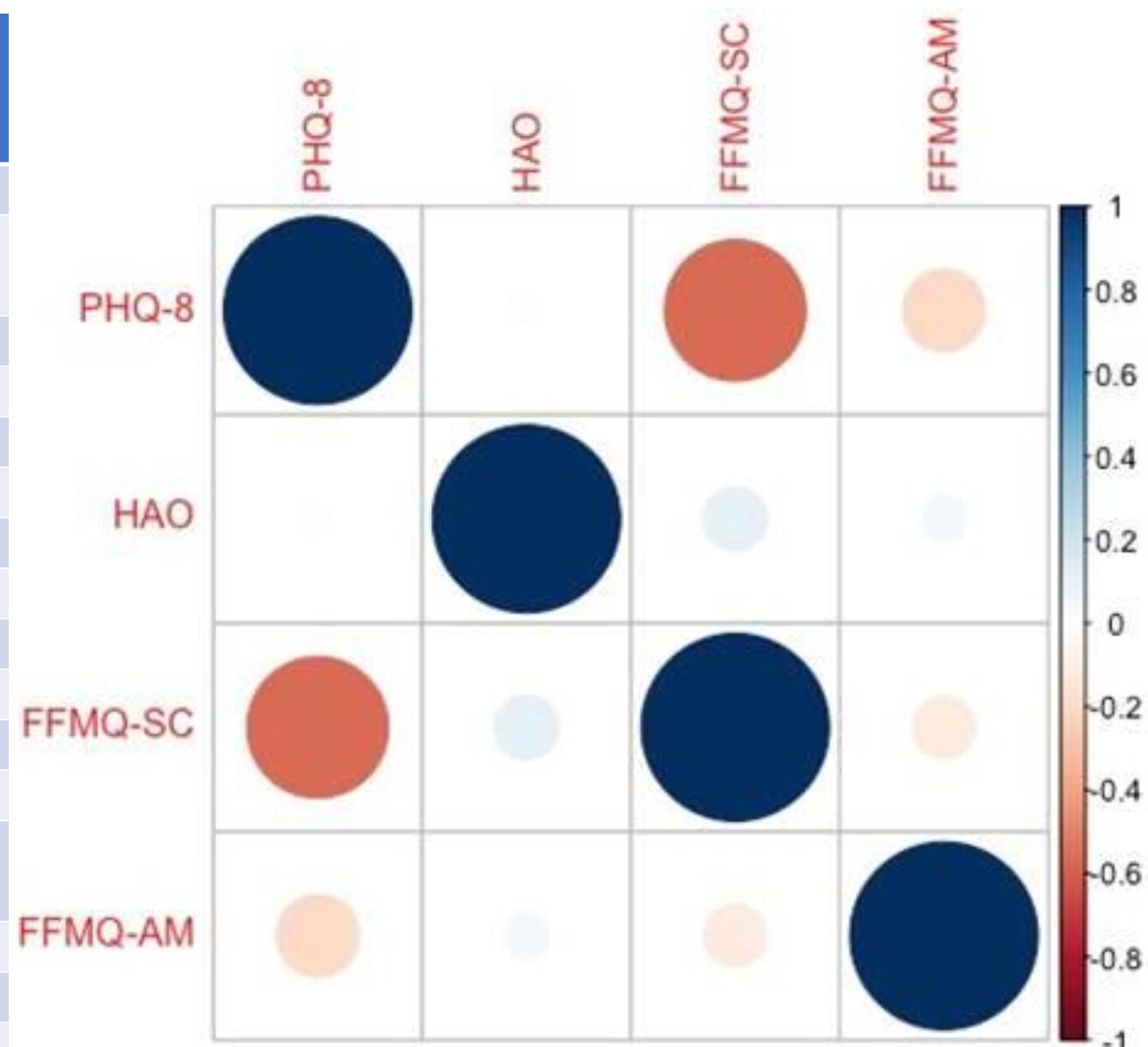
Figure 2: Pre/Posttest Changes in Outcome Measures

	Pretest		Posttest		P
	M	SD	M	SD	
HAO	7.44	3.06	8.89	2.83	0.140
Self-compassion	11.44	3.83	14.78	3.89	<.010
Acting mindfully	12.44	4.22	15.44	2.22	0.064

Table 1: Patient Demographics

	Overall		Esketamine + Mindfulness		Esketamine Usual Care		p
	N	%	n	%	n	%	
Age (M [SD])	19	41.7 (17.3)	10	34.9 (12.6)	9	49.2 (19.0)	.040
Gender							.483
Male	10	52.6	4	40.0	6	66.7	
Female	9	47.4	6	60.0	3	33.3	
Unspecified	0	0.0	0	0.0	0	0.0	
Race/ethnicity							.582
White	12	63.2	6	60.0	6	66.7	
Asian	2	10.2	1	10.0	1	11.1	
Hispanic/Latino	4	21.1	3	30.0	1	11.1	
Black	0	0.0	0	0.0	0	0.0	
Other	1	5.3	0	0.0	1	11.1	
History of ketamine treatment	2	10.5	0	0.0	2	22.2	.408
Insurance Carrier							.999
Public	13	68.4	7	70.0	6	66.7	
Private	6	31.7	3	30.0	3	33.3	
Baseline PHQ-8 score (M [SD])			10	15.5 (5.99)	9	15.0 (5.43)	.852
PHQ-8 change score (M [SD])			10	-4.7 (3.06)	9	-1.0 (2.78)	.014

Figure 3: Outcome Measure Pearson R Correlations



## Conclusions

- A brief mindfulness meditation program as an adjunct to standard esketamine treatment for MDD showed promising results in a small clinical sample
- Lack of participant drop-out and high completion rates of the mindfulness meditation suggest that mindfulness group participants found the meditation feasible and acceptable
- While mindfulness group participants showed improvements on all outcome measures, self-compassion outcomes reached statistical significance and showed a strong correlation to reduction in depressive symptoms

## Implications & Next Steps

- The results of this project contribute to clinical practice through the provision of a novel, integrative approach to the alleviation of distressing symptoms in patients diagnosed with MDD
- Adoption of this approach by outpatient psychiatric centers can offer patients a complementary treatment strategy that will enhance efficacy of esketamine treatments
- Future studies should consider emphasizing self-compassion aspects of mindfulness as this factor was highly correlated with symptom improvement
- Greater racial diversity in future projects will yield more generalizable findings
- Larger-scale mindfulness implementation projects in mental health systems should focus on patient satisfaction as a metric of improved care quality

## Acknowledgements

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