

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

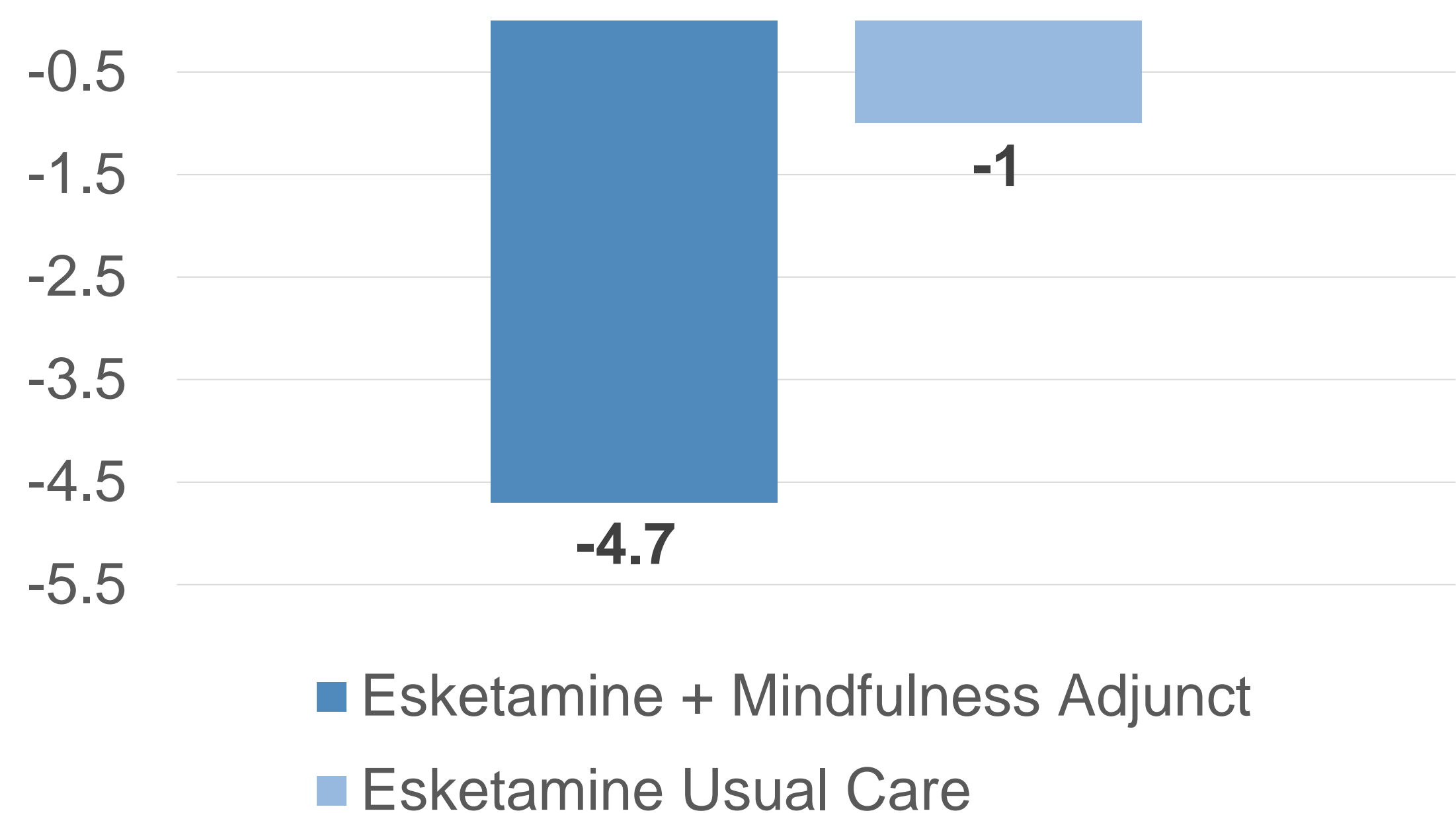


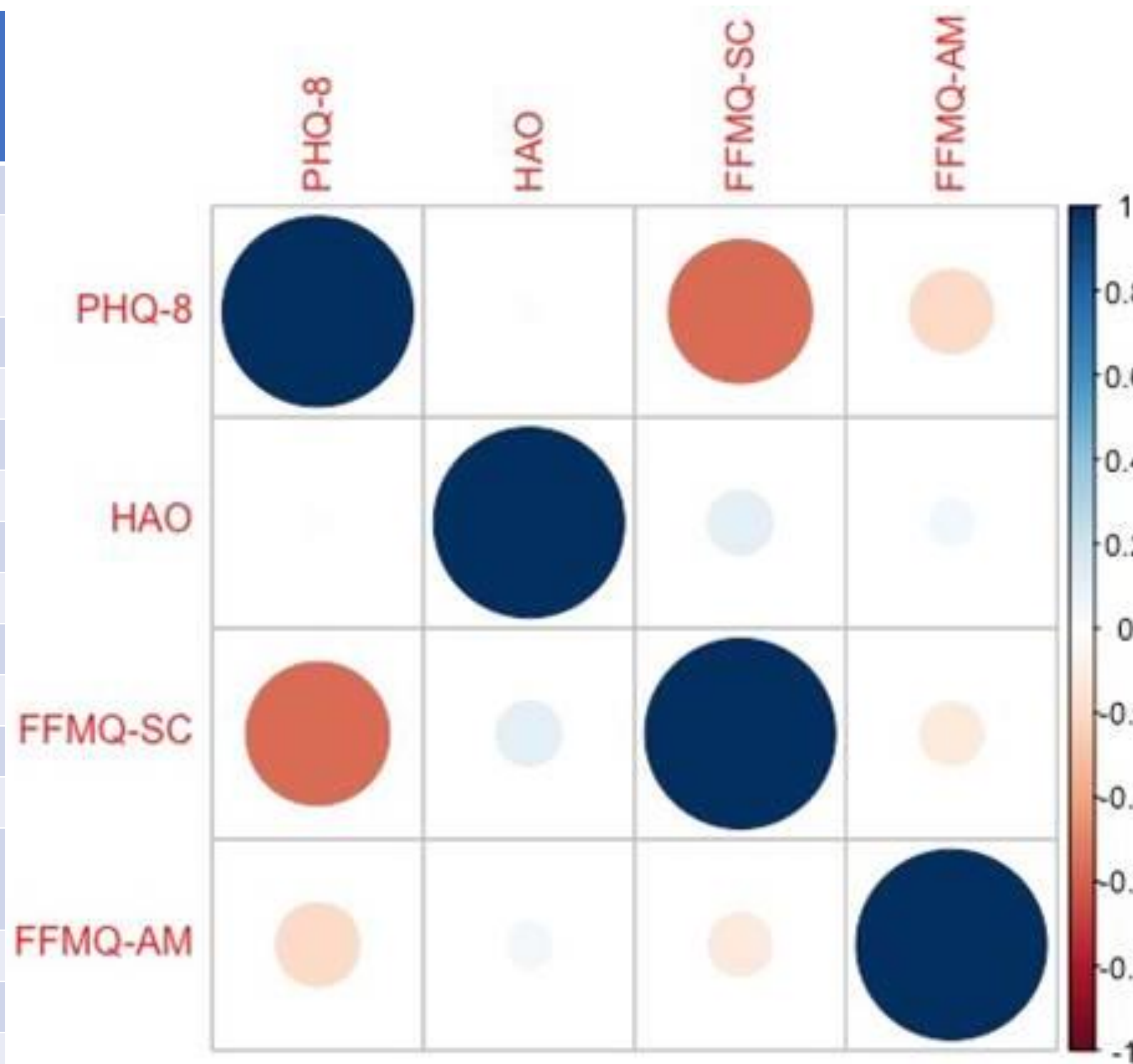
Figure 2: Pre/Posttest Changes in Outcome Measures

	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

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