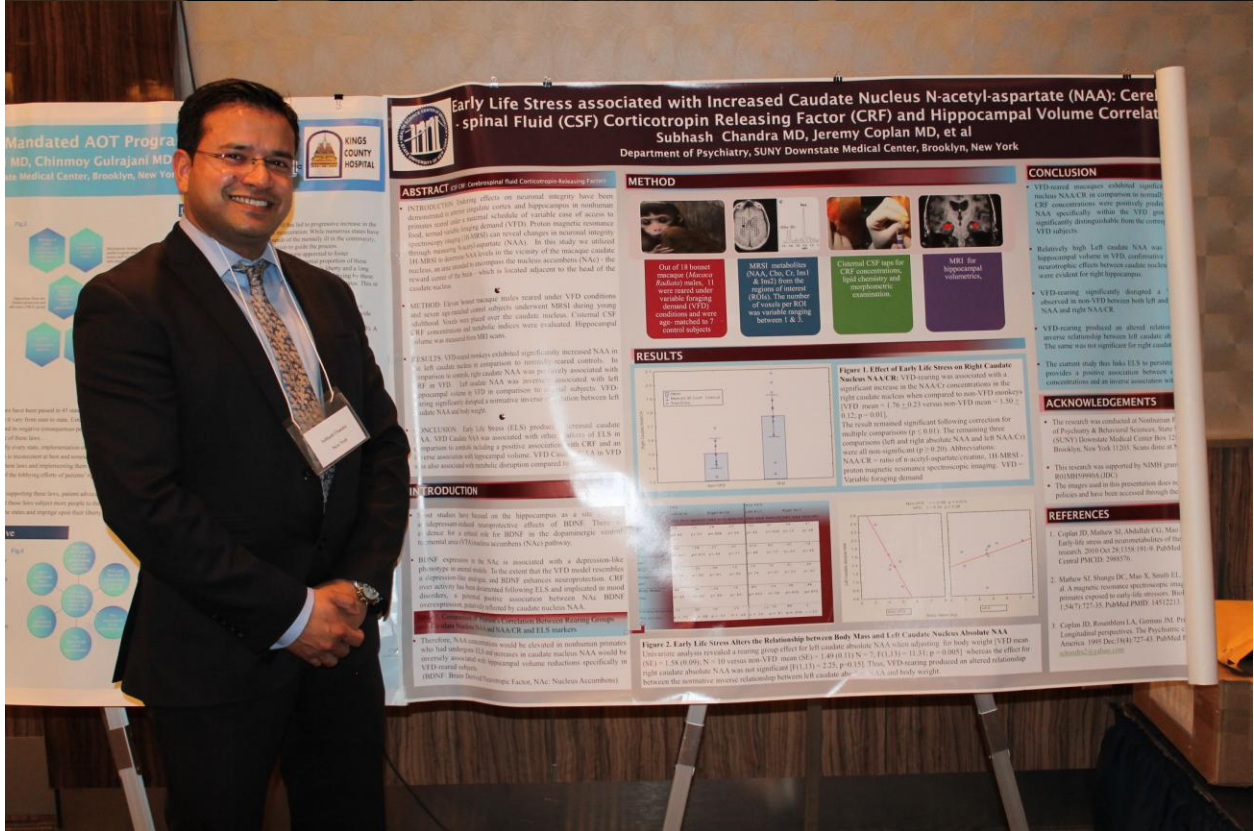
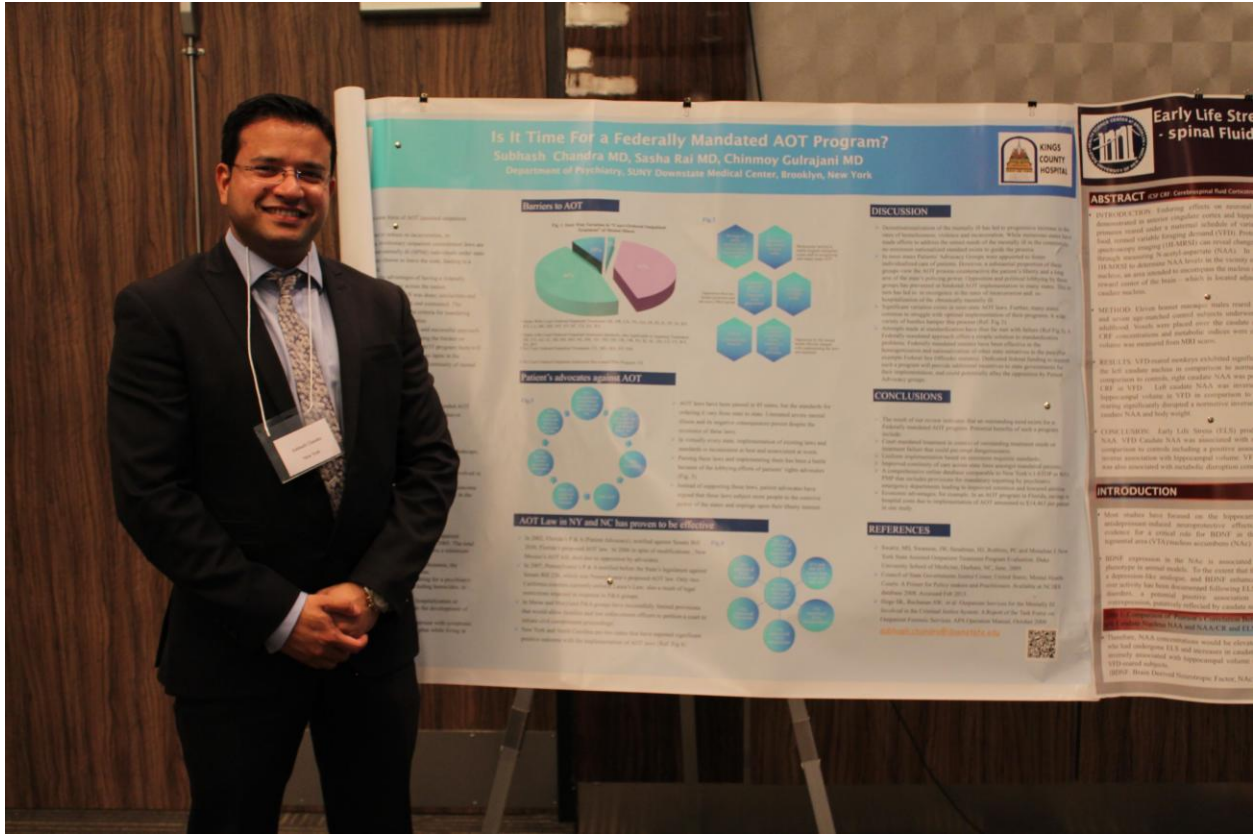


## The efficacy of a comprehensive yogic intervention on major depression – A randomized pilot study

Anup Sharma<sup>1</sup>, Frank Rose<sup>1</sup>, Tamar Halpern<sup>1</sup>, Mary Foley<sup>1</sup>, Marna Barrett<sup>1</sup> and Michael E. Thase<sup>1</sup>  
 Departments of Psychiatry<sup>1</sup> University of Pennsylvania, Philadelphia, PA 19104

Background	Methods	Results																								
<p>• Psychopharmacology and psychotherapy are effective treatments for Major Depressive Disorder (MDD), however, each typically provides remission rates between 35%-50%. Moreover, approximately 50% of patients treated with two trials of antidepressant interventions do not achieve clinical remission. Thus, additional evidence-based treatment modalities that can further treat this devastating disorder are needed.</p> <p>• Mind-Body practices constitute a large and diverse group of practices that can substantially affect neurophysiology in both healthy individuals and those with psychiatric disorders. Initial studies with different mind-body interventions have been shown to improve outcomes in MDD.</p> <p>• Studies utilizing Sudarshan Kriya Yoga (SKY) have demonstrated promising clinical benefits in patients ranging from dysthymic disorder to severe forms of MDD. However, these studies have had methodological limitations.</p> <p>• This pilot study employs a randomized design and blind clinical raters to assess the clinical and biological impact of a multi-component yogic intervention featuring SKY as an adjunctive treatment for MDD.</p>	<p>• Response is defined by absence of DSM MDD, at least 50% reduction in HAM-D and a 17-item HAM-D <math>\leq</math> 10. Responders who end treatment with a HAM-D <math>&gt;</math> 7 are considered to be in clinical remission.</p> <p>• Additional clinical assessments include the Beck Depression Inventory (BDI-II), Beck Anxiety Inventory (BAI), Mood Disorders Questionnaire (MDQ) and Columbia-Suicide Severity Rating Scale (C-SSRS).</p> <p>• Additional biological assessments including serum cortisol, serum TNF-alpha, serum IL-10 are being conducted at the three time points.</p>	<p style="text-align: center;"><b>Effect of Yoga Intervention on BAI</b></p> <table border="1" style="margin: 10px auto;"> <caption>Effect of Yoga Intervention on BAI</caption> <thead> <tr> <th>Timepoint (days)</th> <th>Yoga (n=5)</th> <th>Waitlist (n=6)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>13</td> <td>13</td> </tr> <tr> <td>30</td> <td>8</td> <td>13</td> </tr> <tr> <td>60</td> <td>8</td> <td>13</td> </tr> </tbody> </table> <p style="text-align: center;"><b>Effect of Yoga Intervention on 17-item HAM-D</b></p> <table border="1" style="margin: 10px auto;"> <caption>Effect of Yoga Intervention on 17-item HAM-D</caption> <thead> <tr> <th>Timepoint (days)</th> <th>Yoga (n=5)</th> <th>Waitlist (n=6)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>20</td> <td>20</td> </tr> <tr> <td>30</td> <td>10</td> <td>20</td> </tr> <tr> <td>60</td> <td>10</td> <td>20</td> </tr> </tbody> </table>	Timepoint (days)	Yoga (n=5)	Waitlist (n=6)	0	13	13	30	8	13	60	8	13	Timepoint (days)	Yoga (n=5)	Waitlist (n=6)	0	20	20	30	10	20	60	10	20
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<p><b>Methods</b></p> <p>• Consenting outpatients were diagnosed with the Structured Clinical Interview for DSM-IV. All enrolled patients are diagnosed with MDD, have ongoing clinical symptoms (Hamilton Rating Scale for Depression (HAM-D) <math>\geq</math> 14) and continue pre-study psychotropic medications for the entire duration of the study.</p> <p>• Using a blocked randomization procedure, enrolled subjects are randomized to either the yoga intervention (n=5) or waitlist control group (n=6). Recruitment efforts are ongoing at the University of Pennsylvania.</p> <p>• Assessments at baseline, 1 month and 2 months are conducted for both the yoga intervention and waitlist arms. All clinical evaluators are blind to the treatment assignment.</p>	<p><b>Results</b></p> <p>Fig. 1 A comprehensive yogic intervention decreases depression severity in unipolar depression. A direct comparison between the yoga intervention (n=5, blue) and waitlist control (n=6, red) groups at baseline, 30 days and 60 days on the 17-item Hamilton Rating Scale for Depression (HAM-D).</p>	<p><b>Discussion</b></p> <p>• This pilot study evaluates feasibility and efficacy of a multicomponent yoga intervention for MDD on clinical measures and serum biomarkers of stress and inflammation.</p> <p>• Early clinical data reveals an antidepressant and anti-anxiety effect of a comprehensive group yoga intervention in patients with major depressive disorder.</p> <p>• Further analysis will quantify this effect and correlate to markers of inflammation.</p>																								
<p><b>Acknowledgments -- Disclosures</b></p> <p>Study funded by the Indo-American Psychiatric Association, APA/SAMSHA Minority Fellowship Program, SAMSHA and the Clinical Translational Research Center (CTRC) at the University of Pennsylvania. No conflict of interests reported.</p>																										





**Is It Time For a Federally Mandated AOT Program?**

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**Drivers to AOT**



**Patient's advocates against AOT**



**AOT Law in NY and NC has proven to be effective**



**DISCUSSION**

The main objective of this study was to evaluate the effectiveness of the AOT program in New York and North Carolina. The study found that the AOT program was effective in reducing the number of hospitalizations and the number of days in hospital for patients with mental illness. The study also found that the AOT program was cost-effective and that it was well accepted by patients and providers.

**CONCLUSIONS**

The AOT program in New York and North Carolina has proven to be effective in reducing the number of hospitalizations and the number of days in hospital for patients with mental illness. The study also found that the AOT program was cost-effective and that it was well accepted by patients and providers.

**REFERENCES**

- 1. Subhash Chandra MD, et al. (2018) Is It Time For a Federally Mandated AOT Program? *Journal of Clinical Psychiatry*, 79(10), 1000-1005.
- 2. ...

**Early Life Stress and Cerebrospinal Fluid**

**ABSTRACT**

Early life stress (ELS) is a risk factor for mental illness. ELS is associated with increased levels of corticotropin-releasing factor (CRF) in the cerebrospinal fluid (CSF). CRF is a stress hormone that is released by the hypothalamus and acts on the brain to increase the release of stress hormones. ELS is also associated with decreased levels of hippocampal volume, which is a risk factor for mental illness.

**INTRODUCTION**

Most studies have focused on the hippocampus as a key brain region involved in the pathogenesis of mental illness. However, recent studies have shown that the caudate nucleus is also involved in the pathogenesis of mental illness. The caudate nucleus is a part of the basal ganglia and is involved in motor control and learning. The caudate nucleus is also involved in the regulation of dopamine levels in the brain, which is a risk factor for mental illness.

**CONCLUSION**

Early life stress is associated with increased levels of CRF in the CSF and decreased levels of hippocampal volume. These findings suggest that ELS is a risk factor for mental illness and that the caudate nucleus is also involved in the pathogenesis of mental illness.

**Mandated AOT Program**

MD, Chinmoy Gujrani MD  
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**Early Life Stress Associated with Increased Caudate Nucleus N-acetyl-aspartate (NAA): Cerebrospinal Fluid (CSF) Corticotropin Releasing Factor (CRF) and Hippocampal Volume Correlates**

Subhash Chandra MD, Jeremy Coplan MD, et al  
Department of Psychiatry, SUNY Downstate Medical Center, Brooklyn, New York

**ABSTRACT**

Early life stress (ELS) is a risk factor for mental illness. ELS is associated with increased levels of corticotropin-releasing factor (CRF) in the cerebrospinal fluid (CSF). CRF is a stress hormone that is released by the hypothalamus and acts on the brain to increase the release of stress hormones. ELS is also associated with decreased levels of hippocampal volume, which is a risk factor for mental illness.

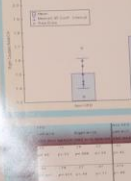
**INTRODUCTION**

Most studies have focused on the hippocampus as a key brain region involved in the pathogenesis of mental illness. However, recent studies have shown that the caudate nucleus is also involved in the pathogenesis of mental illness. The caudate nucleus is a part of the basal ganglia and is involved in motor control and learning. The caudate nucleus is also involved in the regulation of dopamine levels in the brain, which is a risk factor for mental illness.

**METHOD**

Out of 18 former foster care children, 11 were included in the study. The number of subjects with ELS was significantly higher than those without ELS. The study was conducted in a hospital setting and involved the use of MRI and CSF sampling.

**RESULTS**



**CONCLUSION**

Early life stress is associated with increased levels of CRF in the CSF and decreased levels of hippocampal volume. These findings suggest that ELS is a risk factor for mental illness and that the caudate nucleus is also involved in the pathogenesis of mental illness.

**ACKNOWLEDGEMENTS**

This research was supported by NIMH grant MH099044 (JC).

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- 1. Coplan JD, et al. (2018) Early Life Stress and Neurobiology of the Brain. *Journal of Clinical Psychiatry*, 79(10), 1000-1005.
- 2. ...

**Figure 1. Effect of Early Life Stress on Right Caudate Nucleus NAA:CRF.** VED rating was associated with a significant increase in the NAA:CRF concentrations in the right caudate nucleus when compared to non-VED controls (VED mean = 1.76, 2.23 versus non-VED mean = 1.30, 2.12, p < 0.01).

**Figure 2. Early Life Stress Alters the Relationship between Body Mass and Left Caudate Nucleus Absolute NAA.** Divergent analysis revealed a strong group effect for left caudate absolute NAA concentration for body weight (VED mean [SD] = 1.58, 0.09; N = 18 versus non-VED mean [SD] = 1.49, 0.10; N = 7; F(1,13) = 13.31, p < 0.001) whereas no effect for right caudate absolute NAA was seen (VED mean [SD] = 1.11, 0.22, p > 0.05). Thus, VED rating produced an altered relationship between the normative inverse relationship between left caudate absolute NAA and body weight.





**Depression and anxiety disorder: Review of neuroimaging correlates**  
Nutan Rajan, Shabbir Amanullah,  
University of Western Ontario, London, ON

**BACKGROUND:** Depression and anxiety disorder are common mental health conditions. Neuroimaging studies have shown that these conditions are associated with changes in brain structure and function. This review examines the neuroimaging correlates of depression and anxiety disorder.

**RESULTS:** The review found that depression and anxiety disorder are associated with changes in brain structure and function. Specifically, there are changes in the amygdala, hippocampus, and prefrontal cortex. These changes are thought to be related to the emotional and cognitive symptoms of these conditions.

**CONCLUSIONS:** The review highlights the importance of neuroimaging in understanding the underlying mechanisms of depression and anxiety disorder. Further research is needed to clarify the role of these brain regions in these conditions.

**Effects of Escitalopram on Autonomic Function in Posttraumatic Stress Disorder Among Veterans of Operations Enduring Freedom and Iraqi Freedom**

**OBJECTIVE:** To evaluate the effects of escitalopram on autonomic function in PTSD veterans.

**DESIGN:** A randomized, double-blind, placebo-controlled trial.

**SETTING:** A tertiary care hospital.

**PARTICIPANTS:** 20 veterans with PTSD.

**MEASUREMENTS AND MAIN RESULTS:** The study found that escitalopram treatment led to improvements in autonomic function, including heart rate variability and skin conductance response.

**CONCLUSIONS:** Escitalopram may be a useful treatment for PTSD, particularly for its effects on autonomic dysfunction.

**Stimulants Vs Behavioral Interventions for ADHD: What's better?**  
Dr Adnan Rajeh<sup>1</sup>, Dr Shabbir Amanullah<sup>2</sup>, Dr K. Shivakumar<sup>3</sup>

**OBJECTIVE:** To compare the effectiveness of stimulants and behavioral interventions for ADHD.

**DESIGN:** A meta-analysis of randomized controlled trials.

**SETTING:** Academic medical centers.

**PARTICIPANTS:** Children and adolescents with ADHD.

**MEASUREMENTS AND MAIN RESULTS:** The meta-analysis found that stimulants were more effective than behavioral interventions in improving ADHD symptoms.

**CONCLUSIONS:** Stimulants are the preferred treatment for ADHD based on the current evidence.

**The Mental Experience of Catatonia: A Case Report and Literature Review**  
Rachit Patel MD\*, Andrew Francis PhD MD\*\*  
Department of Psychiatry, Stony Brook University Medical Center, Stony Brook, NY 11794

**Abstract**

**Introduction**

**Case Report**

**Conclusion**

**References**

**Figure 1. Percentage of Cases Reporting on the Mental Experience of Catatonia**

Author	Percentage of Cases (%)
Kahlbaum 1874	15.4% (4/26)
Hoch 1921	72.9% (18/25)
Northoff et al. 1996	80.0% (24/30)

**Figure 2. Northoff Self-Rating Questionnaire for the Assessment of Subjective Experience in Catatonia Administered 3 Weeks Post Recovery**

**Table 1. Retrospective Interview 9 Days Post Recovery**

**Mortality associated with review and**  
Ajay K Parulkar MD MS, Sonia S Masco  
Chaulouss Oussoums MD  
The University of Texas Health

**Abstract**

**Objectives**

**Materials & Methods**

**Results**



