

# **YOGA THERAPY IN MENTAL HEALTH: BUILDING EVIDENCE**

**By**

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## **Abstract**

**(A thesis compilation of his research work)**

**Background:** Mental disorders are highly prevalent and cause significant disease induced burden. Even low prevalent conditions contribute to very high burden due to chronicity and progression to deficit states. Medications have made a change albeit with certain limitations. However, availability of psychiatrists as well as fear of stigma leaves a wide treatment gap. Indian systems of interventions like yoga carry a potential to complement these limitations.

## **Aim:**

The specific aim of these investigations was to build sufficient evidence for a role of yoga in mental disorders in clinical practice.

## **Objectives:**

Following have been the research questions in depression, schizophrenia and other conditions;

- i. Does yoga carry a therapeutic efficacy in depression independently?
- ii. If so, how does this compare with existing treatments?
- iii. Are there specific components of yoga that carry this potential?
- iv. Does yoga produce objective evidence of a change in biology of depressive patients?
- v. Can independent generic yoga package be developed for treating depression?
- vi. What are the benefits of add-on yoga in stabilized schizophrenia patients?
- vii. Does add-on yoga also reverse cognitive deficits in schizophrenia?
- viii. Does yoga benefit cognitive disorder in children?
- ix. Does yoga produce

cognitive benefit in elderly at risk for dementia? x. What are the neurobiological effects of yoga?

### **Methods:**

1. Patients- The samples for depression, schizophrenia, other psychoses, alcoholism and attention deficit hyperkinetic disorder were selected from the hospital population at NIMHANS. The kin attending to these patients in the wards and OPD also formed subjects for the yoga-caregiver study. Senior citizens dwelling in care-homes formed the subjects for yoga and cognition in elderly. Healthy volunteers in the campus participated in the neurobiology of yoga (OM) studies. 2. Design- The designs adopted included open trials, randomized comparisons with active treatment as well as waitlisted controls. Cross-over comparisons were also carried out. 3. Yoga therapy packages included Sudarshan Kriya Yoga (SKY) in depression and alcoholism. Generic yoga package was used in schizophrenia, childhood ADHD, elderly, caregivers and also more recently in depression. Loud chanting of OM was used in volunteers; the crossover comparison was pronouncing a consonant ---sssss--- for the same duration that of OM. Other comparison groups in depression included imipramine, ECT, partial Kriya (excluding the cyclical breathing of SKY). Wait-listing the patients

and use of exercise for comparable duration were other comparison groups in schizophrenia or caregiver projects. 4. Assessments included rating scales, both clinician- and self-administered. The patients were tested on emotion-detection tests. Rater-blinding was

possible with some limitations in schizophrenia. 5. Biological measures included, P300 auditory event related potential, serum levels of prolactin, cortisol, ACTH, Brain derived neurotrophic factor (BDNF) and tumor necrosis factor alpha. Neurohemodynamic studies were conducted in OM chanting using functional magnetic imaging studies (fMRI).

### **Results:**

1. SKY alone produced clinically significant antidepressant

effects.

2. The antidepressant effects of SKY compared favorably with drugs.

3. Ujjayi and bhastrika components of SKY too carry antidepressants potential albeit less potently.

4. SKY also has antidepressant effects in alcoholism patients during withdrawal.

5. Generic yoga packages are developed and have a potential for use in depression, ADHD, caregiver stress and in elderly. 6. Addon yogasana improves psychotic symptoms and cognitive function in schizophrenia and may better than exercise or mere waiting.

7. Caregivers of neurological inpatients benefited from yoga.

8. Children with ADHD can learn and benefit from yoga. 9.

Cognitive

function improves after yoga in elderly. 10. SKY elevated prolactin in serum and lowered cortisol 11. SKY also ‘normalized’ P300 event related potential 12. Yogasana may ‘correct’ the neuroplastic and immunological functions in depression. 13. OM Chanting produced neurohemodynamic changes suggesting deactivation in limbic areas of the brain, an effect that potentially reduce emotional disturbance in mental disorders. 14. Add-on Yoga improves socialcognition in patients with schizophrenia, possibly mediated through normalizing oxytocin levels.