



## Impact of Yoga Therapy on Anxiety and Depression

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### Abstract

*The present study was undertaken to provide evidence for the positive effect of yoga therapy on anxiety & depression on geriatric patients. A sample group of 10 geriatrics referred as outpatient from different depts such as Medical, ENT, neurology were trained by simple yogic exercises according to their underlying problems and compliance of each patient. The subjective improvement was assessed by HAD scale (Hospital Anxiety & Depression scale as HAD is a simple & valuable valid measure of disorders of mood due to anxiety & depression and so was used for the present study for assessment of clinically significant anxiety & depression in these patients). Blood samples were collected for Haematological and Biochemical indices before and after completion of yoga training for 2 weeks and results were analysed. The effect of yoga therapy on autonomic functional changes were also observed for each patient by recording BP, HR, RR for each subject.*

*There is. Improvement in autonomic function by a fall to normalcy in BP, HR, RR after yoga training. There Is also reduction in serum cholesterol level & blood sugar level to normalcy after yoga training. Improvement in immunemechanism and anaemia were confirmed by Haematologic changes such as eosinopenia, and lymphocytosis with compensatory neutophilia, and a rise in total WBC, HB, RBC count. There is significant reduction in depression & anxiety in stress after practising yoga poses. The Results presented over here are statistically significant.*

### Introduction

Over the past few years, clinicians, researchers, and yoga practitioners have shown increasing interest in the use of yoga as a way to manage or treat depression and anxiety<sup>1</sup>. Yoga disciplines the body and mind and yoga practice is of ancient origin in India<sup>2</sup>for the holistic approach of providing subtle energy and tranquility of mind. There are studies evidencing the practice of some of the yogic postures for stress anxiety and depression found to be bringing about significant relief<sup>3</sup> and grater improvements in multiple

domains of sleep quality and mood, reduction in insomnia, anxiety, stress and fall in HR, BP, Pulse pr, Mean pr<sup>4</sup>, suggesting correction of autonomic and HPA axis dysfunction by yoga therapy<sup>5</sup>. yogasanas improves blood circulation, and balance by direct impact on sympathetic nervous system and improves the functioning of nervous system<sup>4,5</sup>. There are studies on yoga as an ancient mind-body discipline<sup>6</sup> representing promising non pharmacologic therapy for vertigo dizziness and anxiety<sup>7</sup>. We wanted to investigate the already established effect of this ancient relaxation

therapy for treatment of vertigo dizziness & anxiety syndrome in geriatrics<sup>8</sup> so that to be utilized for our elderly people who are referred to our rehabilitation clinic who are otherwise prone for more side effects of medications<sup>9</sup>.

### Materials and Methods

10 geriatric op patients with age varying from 65- 78 yrs with the clinically significant frequent attack of vertigo with anxiety & depression who are attending Medical, Neurological, ENT OP with diagnostic evidence of central medical & psychogenic etiologies based on history, clinical examinations and relevant ontological tests volunteered for free yoga training for rehabilitation. Written consent was obtained from each one of them before training. The subjects involved in study are not on alcohol/ nicotine/ drug. They are not on any steroids or on any mental / somatic disorders. They are not on any cardio respiratory disorders. The subjects were screened with HAD scale (hospital anxiety and depression test) for clinically significant anxiety and depression. It is a valid measure of assessing the disorder of mood in very short time (time required is 2-5 mints) suitable for clinical professionals and researchers for assessment of emotional disorders. The scale has 14 questions, 7 for depression and 7 for anxiety. HAD facilitates the early identification of both anxiety and depression, simultaneously giving separate score for each. Easy to score & simple to interpret.

Integrated yogic practice coupled with simple breathing exercises were designed according to their depth of problems and compliance of body to be done for

20- 25 mints twice a day were taught in 2 sittings (weekly once) for first 2 weeks which to be practiced by them at home regularly for 2 weeks (with a review every week). At the end of 2 weeks the subjective improvement was assessed for each patient by HAD scale which to be filled up by the patient themselves. Blood samples were collected for biochemical investigations and for estimation

of blood cell count. The results were statistically analysed. P value<0.05 was taken as significant.

### Results and Observation

Depression and anxiety scores before and after application of yoga therapy are presented. Pre intervention of anxiety and depression score for all 10 patients were more or less similar while the depression, anxiety stress scores were significantly reduced ( $p<0.001$ ) after receiving yoga therapy (figure 1). Statistically significant subjective improvement of reduction in anxiety and depression and stoppage of vertigo symptoms after yoga training in these geriatric subjects was confirmed by HAD SCALE (figure 1) ( $p<0.001$ ).

There is highly significant fall of about (5.27%) in BP, SBP, DBP & (1.94 %) in HR, (3.74%) in RR after yoga training in these geriatric subjects ( $P<0.01$ ) ( Table1) (almost to normal values).

The blood glucose and serum cholesterol reaches normal level after yoga training (Table 2). $P<0.05$  Also there is significant rise in RBC, HB & Total WBC count (Table3) with

Significant rise in lymphocyte count which signifies the improvement in immune mechanism in geriatrics (Table4).  $P<0.05$ .

Thus Yoga training alleviates stress symptoms of anxiety and depression.  $P<0.001$ .

**Table-1** Effect of yoga on cardiovascular parameters

INDICES	PRE TRAINING	POST TRAINING
PULSE	130	115
SYSTOL .BPmm hg	159	114
DIAST.BP mm hg	93	78
PULSE PR	65.5	47.6

**Table-2** Effect of Yoga Therapy on Biochemical parameters

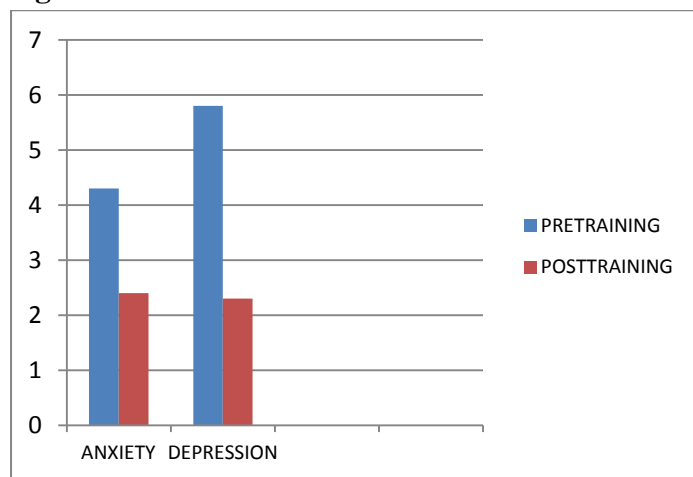
INDICES	PRE TRAINING	POST TRAINING
BLOOD GLUCOSE- (RANDOM)	168MG/DL	126MG/DL
SERUM CHOLESTEROL	174MG%	144MG%

**Table-3** Effect of Yoga Therapy on Blood Indices

INDICES	PRE-TRAINING	POST TRAINING
RBC mill/cmm	4.5	4.96
HB gm%	11.2	12.0
WBC cells/cmm	4800	5120.

**Table-4** Yoga Training on Differtial Count

INDICES	PRETRAINING	POST TRAINING
NETROPHIL%	58	50
LYMPHOCYTE%	39	51
EOSINOPHIL%	7	3

**Figure.1** Had Scale

## Discussion

Yoga is an ancient practice<sup>10</sup>. It is associated with cultural religious and physical activity for more than 200 yrs. Its practitioners have asserted its effect on balancing emotional physical and spiritual health for decades<sup>11</sup>. Despite rapid advances in medical technology and continuing pharmaceutical research into using medications to relieve symptoms, lot of side effects occur in long run of usage<sup>12</sup>. yoga provides broad ranging health care benefits for body and mind and enhance emotional wellbeing<sup>13</sup>. Anxiety and depression is the psychiatric disorder of major public health in geriatrics. Depression and anxiety coexists with vertigo. yoga relieves most of the symptoms of depression, anxiety<sup>13</sup>.through its connection with structure of brain involved in emotion , behavior and cognition<sup>14</sup>. yoga therapy causes no side effects<sup>15</sup>. yoga training alleviates stress symptoms of anxiety and depression<sup>16</sup>. Unlike psychoactive drugs simple yogic exercises cause no side effects and easily adoptable and

affordable to general population. Hence can be incorporated both as a treatment and as a preventive form of medicine in clinical practice and to be incorporated as a “complimentary therapy” in routine day lifestyle of geriatric subjects to prevent anxiety and depression for health care<sup>17,18</sup>.

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