

## ***Manobalam : An Evaluative Study of Individualized Yoga Therapy for Psychological Wellbeing***

**Satish, Latha<sup>1</sup>, Cruceana, Ruxandra Passieux<sup>2</sup>, Shah, Devi<sup>3</sup> & Chandrasekar, Sandhya<sup>4</sup>**

- 1 Trustee and Senior Yoga Consultant, Krishnamacharya Yoga Mandiram  
2 Research Intern, Krishnamacharya Yoga Mandiram  
3 Research Associate, Krishnamacharya Yoga Mandiram  
4 Research Associate, Krishnamacharya Yoga Mandiram

### **Abstract**

The standardized yoga protocols have been used so far in addressing psychological issues with a focus on relaxation, behavioural control and changing the cognitive orientation. The present study which employed a single group before and after experimental design, aims to explore the individualized application of the tools of yoga to address the mental health needs of depression, anxiety and stress. In addition to assessing physiological changes, the main objectives of this study were to evaluate the levels of state and trait anxiety, depression and stress, both before and after yoga practice, and also to assess these psychological changes through the qualitative narratives of the participants during and after yoga practice. The quantitative measures utilized, included State-Trait Anxiety Inventory (STAI), Beck's Depression Inventory-21 (BDI-21) and Depression Anxiety Stress Scales-21 (DASS-21). Out of the 31 participants included in the program which was a course of 8 intensive one-on-one yoga therapy sessions, 18 of them completed it successfully. There was a marked reduction in their anxiety scores on both the measures of anxiety. Likewise, their depression symptoms also dropped significantly as indicated by the BDI-21 as well as DASS-21. The qualitative reports of the participants indicated improvement in emotional regulation in terms of better calmness, anger control and overall stability, improved cognitive regulation in terms of greater focus, alertness and work performance, and reduced negative thoughts and finally, better interpersonal relationships characterized by an enhanced quality of communication, acceptance and social network.

### **Introduction**

In the public health domain, blood sugar, lipid status and blood pressure are considered as a physiological toxic triad. Likewise, anxiety, depression and stress are mental toxins which pervasively affect the quality of life of a person. Psychological distress particularly, oftentimes goes unnoticed but its effects are seen in performance, relationships and long term personal disability or inadequacy.

Clinically identified depression, anxiety and stress burnout have been typically managed medically with drugs, cognitive and behavioural therapies and other forms of supportive counselling. In addition,

body-mind oriented approaches have also been explored as another possible management technique to enhance the mental wellbeing. In this context, Yoga practices have been widely used as an alternative healing strategy to enhance autonomic balance and has revealed its effectiveness in stress amelioration (Sharma, 2014).

Numerous studies (Khalsa, Cohen, McCall & Telles; Sinha, Deepak & Gusain, 2013) have shown that yoga practices, specifically breath regulation techniques like Pranayama have a rapid normalizing effect on the Autonomic Nervous System (ANS). Hence, yoga is considered to be a mechanism to balance the stress response

system. Yoga has been found to reduce sympathetic over activity and increasing the activity of the Parasympathetic Nervous System (PNS).

Yoga postures when done slowly while coordinating with the breath, help in relaxing the peripheral muscles. The breath ratios accompanying the postures and pranayama practices are effective in achieving concentration. Therefore, Yoga provides various focusing techniques which are also found to be beneficial in curbing impulsive reactivity, thereby enabling emotional regulation. Review studies have also emphasized that Yoga practices are supposed to augment the functioning of cortical centres which serve to inhibit and modulate the Limbic system, Amygdala and as well as the Hypothalamus (Riley & Park, 2015).

Several Yoga trials reviewed on conditions of depression and anxiety disorders (Uebelacker Lavretsky & Tremont; Pilkinson, Gerberg & Brown, 2013), have been summarised to state that evidence is positive, i.e., in favour of Yoga. The reviews report that Yoga exercises including meditative practices promote reduction in distractive or negative thoughts and facilitate cognitive functions by correcting the misappraisal of threats and events.

Thus, in this manner, Yoga involves a host of body-mind oriented tools which have a significant place in reducing internally generated ruminative anxiety, thoughts and worries. The practices of postures, pranayama, meditation as well as certain lifestyle practices, ethics and modelling, not only balance physiology but also correct cognitions, emotions and behaviours through a feedback loop. These practices are considered to be self-regulatory which reduce impulsive and maladaptive responses and in turn enhance proactive responses.

There is a strong orientation to develop standardised Yoga modules and protocols to address the therapeutic needs of

Psychiatric clients and efforts are also being made to validate these practices in clinical trials, but which are still in the nascent stage (ManjunathVarambally, Thirthahalli, Basavaraddi, &Gangadhar; Naveen et al., 2013). However, it is unlikely that one specific set of practice would be fitting or adequate for everyone, the reason being that Yoga is a mind-body oriented therapy where the relationship between the Yoga therapist and the care-seeker is similar to that which exists in a Psychotherapeutic process. Hence, there is a need to look at Yoga therapy as an approach that suits the mental and emotional needs of the care-seekers.

A review done by Dwarakanath and Duraiswami (2017) analyses this individual centric approach to address many inherent problems of Yoga therapy based research, since sample heterogeneity, retention and follow-up are major roadblocks particularly in Yoga studies. Therefore, the present study aims to explore the individualized application of the tools of Yoga to address mental health needs with the primary objectives of measuring the levels of state and trait anxiety, depression and stress before and after Yoga practice, and to also evaluate the relative impact of individualized Yoga practice in reducing these symptoms, in addition to understanding the qualitative changes that occur with adherence to Yoga practice through the psychological narratives of the participants.

The study which employed a single group before and after experimental design involving both quantitative and qualitative approaches to data gathering, was conducted in Chennai, India, at Krishnamacharya Yoga Mandiram (KYM) by the research team.

### **Tools of Measurement**

The quantitative tools used for measuring the above mentioned symptoms included State and Trait Anxiety Inventory by Speilberger, Beck's Depression Inventory-

21 by Beck and Depression Anxiety Stress Scales-21 by Lovibond&Lovibond. The qualitative data was gathered using interview method as interviews are essential to validate the questionnaire data. Decision about the focus of the interview queries was made at the inception of the study itself.

### **Sample**

The sampling procedure used was Convenience sampling. Following a detailed qualitative intake interview for screening eligible participants exhibiting symptoms of depression, anxiety and stress with or without medical intervention, they were then included in the program if they fulfilled the age criterion which was set as 22 to 45 years in order to avoid the effects of hormonal changes caused by puberty, menopause and andropause. Those individuals who exhibited more serious forms of psychological conditions like Bipolar disorder, Psychosis and OCD were not included in the study. Further, those who were themselves Yoga therapists or trainers, psychologists, psychiatrists or doctors were also excluded from the program. Some eligible candidates agreed to participate in the program but were unwilling to fill out the quantitative measures of assessment. Hence, they too had to be excluded from the study.

### **Procedure**

The chosen sample underwent a program of 8 one-to-one, individualized yoga

therapy sessions alongside regular individual home practice without the supervision of a teacher, but each care-seeker was given a practice sheet with instructions about the Yoga course plan depicted diagrammatically, which served to guide their home practice. The practice was “tailor-made” for each participant by the respective therapist, which included a combination of Asana (postures), Pranayama (breath regulation exercises), and chanting and meditation techniques to suit each individual’s physiological and psychological conditions. Hence, the duration of each session and the intensity or length of practice varied accordingly. In addition to the individualized yoga practice, the participants were also given global lifestyle and dietary advices to be adhered to.

### **Results**

Quantitative data were collected during the baseline assessment, midline assessment (after completing 4 or 5 classes) and post assessment (after completion of the 8<sup>th</sup> and final class). Qualitative data were collected using one-on-one interviews with specific questions, during midline assessment (after the 4<sup>th</sup> or 5<sup>th</sup> class) and post assessment (after the 8<sup>th</sup> class). The total number of participants who remained throughout the completion of the entire program of 8 sessions, attenuated to 18 from an initial pool of 31 candidates included in the study.

**Table 1: Characteristics of the final study sample**

N	Gender		Age (in years)	
	Males	Females	Minimum	Maximum
18	6	12	22	42

All the assessments were carried out by trained psychologists who were not involved in yoga training and the yoga

trainers in turn were blind to the assessment content and schedules. The data obtained quantitatively was analysed using SPSS (Version-20)

applying basic Descriptive statistics, Paired *t* tests and Non-Parametric measures keeping in mind the small sample of the study.

**Table 2: Baseline Profile on State-Trait Anxiety Inventory (STAI), Beck's Depression Inventory (BDI) and Depression Anxiety Stress Scales-21 (DASS-21) for N=18**

Variables	Mean	Standard Deviation	Interpretation
STAI			
State Anxiety	38.72	10.64	Minimal
Trait Anxiety	49.83	10.36	Mild Anxiety
BDI	17.72	9.66	Borderline
DASS-21			
Depression	7.28	4.68	Moderate
Anxiety	6.44	4.47	Moderate
Stress	8.44	5.33	Mild

**Table 3: PairedSamples Test for baseline and midline assessments on STAI, BDI and DASS-21(N=18)**

Variables	Baseline		Midline		MeanDifference	Standard Deviation	<i>t</i>
	Mean	SD	Mean	SD			
STAI							
State Anxiety	38.72	10.64	32.22	12.66	6.50	13.04	2.11*
Trait Anxiety	49.83	10.36	41.67	11.14	8.16	12.09	2.86**
BDI	17.72	9.66	8.11	7.02	9.61	9.35	4.35**
DASS-21							
Depression	7.28	4.68	3.06	3.33	4.22	4.63	3.86**
Anxiety	6.44	4.47	2.78	3.52	3.66	4.27	3.64**
Stress	8.44	5.33	4.39	3.03	4.05	5.36	3.20**

\*\* *p* < .01, \* *p* < .05

The above tables clearly indicate that from baseline to midline yoga sessions, the improvement in self-rated anxiety, depression and stress levels are significant, with the percentages of reduction being 17% in both state and trait anxiety, and 53.39% in depression.

**Table 4: PairedSamples Test for baseline and post assessments on STAI, BDI and DASS-21(N=18)**

Variables	Baseline		Post		MeanDifference	Standard Deviation	<i>t</i>
	Mean	SD	Mean	SD			
STAI							
State Anxiety	38.72	10.64	27.22	7.51	11.50	12.90	3.78**
Trait Anxiety	49.83	10.36	35.83	9.85	14.00	11.13	5.33**
BDI	17.72	9.66	5.00	5.76	12.72	11.08	4.87**
DASS-21							
Depression	7.28	4.68	1.50	1.91	5.77	4.38	5.58**
Anxiety	6.44	4.47	2.17	2.28	4.27	3.72	4.87**
Stress	8.44	5.33	3.11	2.98	1.27	2.74	1.97*

\*\* *p* < .01, \* *p* < .05

On comparing the point from where the participants started yoga therapy to the point of completion of 8 sessions, the self-reported anxiety, depression and stress levels indicate further significant reduction. The state and trait anxiety levels exhibit a reduction of 30% and 28% respectively, thus having come down to normal levels that is typical of the general population. The indices of depression have reduced by 71% and the group can be rated as normal in its mood. Stress reactivity level has also reduced significantly by 15.05%.

About 7 participants have scores below 19 in state anxiety and below 25 in trait anxiety over the duration of 8 sessions, indicating that yoga practice encourages confidence and emotional regulation. Similarly, about 8 participants have reported either 1 or 0 symptoms of depression, suggesting that yoga practice enhances a positive mood state. There were 8 candidates who had scores above 17 on BDI at baseline, and all of them have reached near normal scores at post intervention indicating that yoga therapy is definitely effective in reducing depression related symptoms.

For collecting the qualitative data, trained psychologists who were naive to the yoga therapy content had a prolonged engagement with each participant in conducting the interviews during the midline and post intervention periods of the study, and the verbal responses of the interviewees were noted down and later transcribed onto a word file in a systematic manner.

The qualitative narratives provide an opportunity to understand **What** is happening in a particular setting (ambience of practice) and **How** certain goals of everyday life are accomplished. It identifies specific insights experienced by the participants during their yoga therapy intervention. The uniqueness of each participant and individualized yoga therapy establish the role of qualitative analysis.

According to yoga philosophy and practice, the mind or *Chitta* is a material concept that can be regulated, refined and controlled for it to be used optimally and efficiently. The experience of yoga practice facilitated the practitioners to explore their own mental status and how it functioned, which is evidenced by the psychological transformations reported by them.

In terms of emotional regulation, they expressed feeling calm and relaxed with reduced reactivity and greater anger control in addition to reduction in stress and anxiety, thus experiencing an overall mood stabilization.

Cognitively, they articulated a reduction in negative thoughts and an improved ability to focus, thereby experiencing increased alertness, task orientation and work performance in their daily activities.

With regard to interpersonal relationships, they conveyed feeling more confident and accepting, thereby seeing a noticeable improvement in their ability to communicate which in turn strengthened their relationships with family members including parents and children, spouse, friends and an overall betterment of social life and network.

The physiological outcomes are also critical in augmenting the psychological wellbeing. The main components of these experiences were improved quality of sleep and bowel movement, reduced pain, thereby increasing flexibility, and a decrease in fatigue thus enhancing the overall energy level, which in turn resulted in greater work capacity. Each care-seeker also suffered from specific symptoms or illness related issues in which also they experienced relief after regular and continued yoga practice. There were also reports of reduced snoring and improved discipline in daily habits like eating and sleeping, and better work focus, all of which facilitate overall self-regulation. Thus, the practice made the respondents

narrate their awareness about the body level changes too.

### **Discussion**

Each care-seeker had a combination of Asana, chants and Pranayama practices, and the course plan evolved gradually keeping in mind their learning capacity, yoga practice capacity and the progress in their psychological state.

Breath regulation is central to all practices. It is fundamental in gaining focus, orientation to the present and enhancing the relaxation response of the body, thus facilitating the parasympathetic activity. This close link between breath regulation as a medium to achieve present orientation and curbing the distractions of the mind, controlling thoughts and emotions, reinforces the concept of Hatha Yoga stating “ChalevateChalamChittam” and “NishchaleNishchlamBhavet”.

Asanas which are simple and dynamic, not only help to loosen muscular tension, but when coordinated with breath, these movements can increase lightness and flexibility thereby resulting in a positive body image and control. The concept of centering i.e., the ability to remain in a calm and nonreactive state is essential. Thus, the Asanas are chosen keeping in mind the physical capacity of the individual since not all care-seekers are capable of vigorous movements and may also not have the focus to do an hour of Yoga practice, which may induce more agitation or anxiety among the vulnerable group. This proves that it is possible to provide a simple solution with focus on breath regulation in some dynamic movements, and chanting as an aid to breath, body and mind. In many cases, chanting and related visualizations were the meditative practices given to the care-seekers, and the chants given were also individualized or tailor-made in accordance to their beliefs and background.

Thus, Yoga through its integrated mind-body approach brings about a state of self-awareness and diminished physiological arousal which is a dynamic state and the possibility of expanding this state for a longer duration is possible with continued practice. Many care seekers who identified as being relaxed, associated it with practice and were also able to differentiate what happens when they do not practise.

The impulsive and overwhelming feelings of worry and catastrophizing thoughts are addressed by the traditional Cognitive Behavioural Therapy, typically by questioning such beliefs or ruminations and reframing them with supportive counselling. However, in Yoga, breath regulated postures, Pranayama and chanting empower the care-seekers to gain control over their feelings. Further, a shift like this to behavioural activation adhering to a discipline, be it at work or at home, can enhance confidence and acceptance of life situations, people and events thereby serving as a shield against depression and anxiety.

Overall, the participants felt that their expectations were fulfilled to a large extent and were quite hopeful of achieving greater results through sustained practice. In fact, those who were sceptical about yoga initially, also started having positive benefits and wanted to continue the practice, and such a positive influence of their practice made them encourage even their family members to join Yoga.

Apart from the techniques of Yoga, many of the narratives of the care-seekers imply that the therapist relationship, care and ambience of the Yoga institute were also important ingredients of the therapy process. Several instances of a positive relationship with the Yoga therapist and the ambience suggest that the therapy environment plays a crucial role in achieving wellbeing.

### **Limitations of the Study**

The study being a single group before and after evaluation, lacked a control group.

Although it aimed for an adequate samplesize, the recruitment and retention challenges resulted in a smaller size. Secondly, some of the care-seekers experienced certain obstacles related to the practice of Yoga itself such as lack of time due to which practising consistently became pressurizing and therefore attending 8 sessions on a regular basis turned into a challenge for them, which also accounted for the high dropout rate of candidates from the study. Fear of wrong practice, night shift at work which adversely affected practice, drifting away of the mind, fatigue and tiredness, scepticism or loss of faith in God which particularly expressed itself as a barrier to chanting, overwhelming family responsibilities, etc., were among the other difficulties articulated by the care-seekers. Further, there were certain individuals who even after completing the entire course of 8 sessions, continued to experience slight anxiety and the persistence of some ruminative thoughts, but at the same time they were also quite hopeful that more intense practice would facilitate the desired outcome.

### Conclusion

Individualized Yoga therapy is a feasible solution to address psychological issues such as generalized anxiety, mild to moderate depression and stress.

Yoga practices with coordinated breath/chant activities and specific

Pranayama practices facilitate emotional regulation and therefore, Yoga is akin to a state of relaxation as it enhances subjective wellbeing. Furthermore, it is an opportunity to stabilize the wavering mind and focus it on purposeful objectivity, thus giving moments of ‘clarity’ which is much needed to achieve self-control. In this manner, the *Manas* which is agitated and in a state of flux can reach a state of strength and stability, which has been well substantiated by the qualitative and quantitative data. Individualized Yoga therapy in particular, is more amenable to qualitative analysis as the subjective experiences are primary to this form of healing. Taking this as a preliminary effort, the need is to conduct a controlled trial to demonstrate the relative efficacy of Yoga over counselling, medical management and other alternative forms of intervention.

All the participants had good family support to practise and hence most of them remained motivated to practise, and even considered an extended number sessions with their respective teachers to further support their practice.

To conclude, the need to begin a practice primarily requires motivation followed by application of appropriate tools, an encouraging teacher and an ambience which sustains that motivation and also serves to empower the mind of the care-seeker.

### References

- 1) Dwarakanath, D. & Duraiswami, V. (2017). Studying efficacy of yoga therapy: Individual centric approach. *International Journal of Ayurveda and Pharma Research*, 5(4), 49- 54.
- 2) Gangadhar, B. N., Naveen, G. H., Rao, M.G., Thirthahalli, J. & Varambally, S. (2013). Positive antidepressant effects of generic yoga in depressive outpatients – A comparative study. *Indian Journal of Psychiatry*, 55, 364-369.
- 3) Manjunath, R. B., Varambally, S., Thirthahalli, J., Basavaraddi, I. V. & Gangadhar, B. N. (2013). Efficacy of yoga as an add-on treatment for inpatients with functional psychotic disorders. *Indian Journal of Psychiatry*, 55, 374-378.

- 4) Naveen, G. H., Rao, M. G., Vishal, V., Thirthahalli, J., Varambally, S. &Gangadhar, B. N. (2013). Development and feasibility of yoga therapy module for outpatients with depression in India. *Indian Journal of Psychiatry*, 55, 350-356.
- 5) Pilkington, K., Gerberg, P. L. & Brown, R. P. InS. S. Khalsa, L. Cohen, T. McCall & S. Telles, (Eds.). (2013). *The principles and practice of yoga in healthcare*. Edinburg: Handspring Publishing.
- 6) Riley, K. F. & Park, C. L. (2015). How does yoga reduce stress? A systematic review of mechanisms of change and future inquiry [Abstract]. *Health Psychology Review*, 9(3), 1-30.
- 7) Sharma, M. (2014). Yoga as alternative and complementary approach to stress management : A systematic review. *Journal of evidence based Complementary and Alternative Medicine*, 19(1), 59-67.
- 8) Sinha, A. N., Deepak, D. &Gusain, V. S. (2013). Assessment of effect of pranayama/alternate nostril breathing on the parasympathetic nervous system in young adults. *Journal of Clinical and Diagnostic research*, 7(5), 821-823.
- 9) Uebelacker, L., Lavretsky, H. & Tremont, G. In S. S. Khalsa, L. Cohen, T. McCall & S. Telles, (Eds.). (2013). *The principles and practice of yoga in healthcare*. Edinburg: Handspring Publishing.

\*\*\* \*\*\*