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# EFFECT OF SAHAJ YOGA ON DEPRESSIVE DISORDERS

V. K. SHARMA#*, S. DAS*, S. MONDAL**
U. GOSWAMI*** AND A. GANDHI**

*Department of Physiology,
Vardhaman Mahavir Medical College,
New Delhi – 110 029

and

Departments of **Physiology & ***Psychiatry,
Lady Hardinge Medical College,
New Delhi – 110 001

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**Abstract :** Sahaj Yoga is a meditative technique that has been found to have beneficial effects in some psycho-somatic illnesses. The study was carried out on 30 cases (19 Males, 11 females, age 18–45 years) of major depression diagnosed on the basis of DSM IV criteria. The patients were then randomly divided into two groups: Group 1: (10 Males & 5 Females) Patients who were practising Sahaj Yoga and also received conventional anti-depressants. Group 2: (9 Males & 6 Females) Patients who were only receiving conventional anti-depressants. Training in Sahaj yoga was conducted under the supervision of a trained Sahaj Yogi for 8 weeks. At start of the study, all the patients were subjected to Hamilton Rating Scale for Depression (HAM-D) and Hamilton Rating Scale for Anxiety (HAM-A). Above scales were again assessed after two months of treatment. There was significant improvement in HAM-D as well as HAM-A scores in both Group 1 and Group 2 patients ($P<0.001$). However, percentage improvement in HAM-D scores and HAM-A scores in patients receiving Sahaj Yoga was significantly higher than in Group 2 patients. The number of patients who went into remission after two months of intervention were also significantly higher in Group 1 patients ($P=0.02$). The present study demonstrates that Sahaj Yoga has got a potential role as a component in the management of depressive disorders.

**Key words :** sahaj yoga, major depression, hamilton rating scale for depression, hamilton rating scale for anxiety

## INTRODUCTION

Anxiety, stress, mental tension, depression and resultant psychosomatic illnesses have become almost inevitable companions of human life. There has been an increase in the incidence of depression with each decade and currently major

*Corresponding Author : E-Mail : drviveksharma@yahoo.com

depressive disorder (Unipolar depression) has been reported to be the most common mood disorder (1). W.H.O. has ranked Depression fourth in the list of the most urgent health problems worldwide with life time prevalence of depressive disorders of around 10–25% for women and 5–12% for men (1).

In mild to moderately severe unipolar depression, psychological and pharmacological approaches are comparably effective. Although there is robust evidence for the efficacy of pharmacotherapy in the treatment of depressive disorders, patient preference for non-drug therapies, noncompliance, and side effects of drugs, have increased the interest in psychological treatments for depression. Even brief manual-based psychotherapies require considerable time of both patient and therapist and hence, may not be cost effective (2).

Techniques of Yoga, such as meditation, have consistently yielded encouraging results in the treatment of generalized anxiety disorder, panic disorder, panic disorder with agoraphobia and stress related neurotic disorders (3, 4). Yoga practice has also been shown to be effective in improving mood, decreasing the symptoms of depression and trait anxiety in young depressive patients (5). Recent studies on Sudarshan Kriya Yoga have demonstrated its efficacy in the management of dysthymia, melancholia and depression (6, 7). Sahaj Yoga is a form of “Kundalini Yoga” or “Laya Yoga”. It describes a technique to arouse the latent potential of man by a simple meditative process. This technique was given in a unique form by H.H. Shri Mataji Nirmala Devi (8, 9).

Although the role of Sahaj Yoga has been demonstrated in reducing anxiety and stress (10), (11), enhancing psychomotor function in normal subjects (12) and in management of psychosomatic disorders (viz. Bronchial asthma, Hypertension) (13) and epilepsy (14), no studies have been carried out on its role in the management of depression. These observations prompted us to take up this study on the efficacy of Sahaj Yoga in the management of depression.

## METHODS

The present study was carried out in the Department of Physiology and Department of Psychiatiy, Lady Hardinge Medical College and Smt. Sucheta Kriplani Hospital, New Delhi.

**Study design :**

Thirty patients suffering from Major Depression (19 Males & 11 Females) in the age group of 18–45 years were recruited from out patient services of the Department of Psychiatry, S.S.K.H. The diagnosis was confirmed independently by two Psychiatrists using DSM-IV criteria.

**Inclusion criteria :**

i) Patients in the age group of 18 to 45 years utilizing the services of the Department of Psychiatry, Lady Hardinge Medical College with the diagnoses of Major Depression according to DSM-IV criteria.

ii) At least six years of formal education.

iii) Had not been treated for the current episode of depression.

**Exclusion criteria :**

i) Patients with history of previous or current organic disease.

ii) Patients with past history or current evidence of substance dependence.

iii) Patients with epilepsy or mental retardation.

iv) Patients who were unwilling or unable to participate.

**Drop out criteria :**

i) Withdrawal of consent:

ii) Exacerbation of symptoms/emergence of newer symptoms.

**Experimental design :**

The patients were randomly divided into following groups –

GROUP 1 (n=15) (10 Males & 5 Females) 15 diagnosed patients suffering from Major depression who practiced Sahaj Yoga meditation in addition to the conventional antidepressant treatment.

GROUP 2 (n=15) (9 Males & 6 Females) 15 diagnosed patients suffering from Major depression who received conventional antidepressant treatment, but did not practice Sahaj Yoga meditation.

**Sahaj Yoga meditation :**

Sahaj Yoga meditation was done for 30 minutes, three times per week for a period of eight weeks by all the subjects of Group 1. To ensure regularity and uniformity in Sahaj Yoga practice, the training of Sahaj Yoga was given in the Department of Physiology, Lady Hardinge Medical College and Smt. Sucheta Kriplani Hospital by Sahaj Yogi trained in the art of Sahaj Yoga by H.H. Shri Mataji Nirmala Devi.

The subjects practiced meditation in a quiet, well illuminated room sitting in a comfortable posture. The technique used for Sahaj Yoga was as described in the literature. A typical session consisted of questions and assertions by the subject. Thereafter, the subjects practiced silent meditation. If a thought came to the mind, they were instructed to simply witness it but not to flow deeper into it. Gradually, with practice the subjects reported to be in a state of “thoughtless awareness”. Sahaj Yoga was also practiced at bedtime by sitting in silent meditation with the feet dipped in warm saline water. Group 2 subjects were provided the same environment and attention as Group 1 subjects. However, actual meditation was not practiced by these subjects. The subjects were instructed to simply place their hands at different positions as during Sahaj Yoga practice and thereafter sit quietly with their eyes closed.

Written informed consent was taken from the all the subjects. A semi-structured proforma was filled in with the socio-demographic details.

At the start of the study (Pre test value), all the patients were subjected to following tests :

- Hamilton Rating Scale for Depression (HAM-D).

- Hamilton Rating Scale for Anxiety (HAM-A).

The entire assessment took about 2–3 hours. Also the subjects were not allowed more than two breaks in the entire session if so desired.

Above scales were again administered after two months of Sahaj Yoga meditation practice (Post test value at 8 weeks). The data was recorded and 'analyzed statistically.

**Instruments of the study:**

I) *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (15).*

It is the official psychiatric coding system used in the United States of America and it provides specified diagnostic criteria provided for each mental disorder. These criteria include a list of features that must be present for a diagnosis to be made. These criteria increase the reliability of clinicians' process of diagnosis. It was due to this reason of high specificity that this instrument was used to confirm the diagnosis of depression in this study.

II) *Hamilton Rating Scale for Depression (HAM-D) (16).*

This scale consists of 17 variables with ratings from 0 to 4 for certain variables such as depressed mood, guilt, suicidal tendencies, work and interests whilst other variables like insomnia, agitation, and general somatic symptoms are rated from 0 to 2. The individual scores for each variable are added to provide for a cumulative score for the patient. It is used for quantifying the results of an interview. Reliability is good to excellent, including internal consistency and inter-rater assessments. Validity appears good on correlation with other symptom measures. Thus, it was included in this study to rate the depressive component in the patients suffering from major depressive disorder.

III) *Hamilton Rating Scale for Anxiety (HAM-A) (17)*

This scale consists of thirteen variables including the patients' behavior at interview. Each of these variables is defined in a series of brief statements, headed by the name of the variable. Assessments are made on a five-point scale. These variables include anxious mood, tension, insomnia, cognitive changes like difficulty in concentration and forgetfulness, depression, somatic symptoms of a general type, cardiovascular, respiratory, gastro-intestinal, genito-urinary and general autonomic symptoms. It is used for quantifying the results of an interview. Reliability is good to excellent, including internal consistency and inter-rater assessments. Validity appears good on correlation with other symptom measures. Thus it was included in this study to rate the anxiety component in the patients.

**Statistical analysis**

For each group, mean and standard deviation of the scores were calculated. Intergroup mean differences in Age, Hamilton Rating Scale for Depression, Hamilton Rating Scale for Anxiety were tested for significance by using Students' 't' test. For intra-group comparisons of HAM-D & HAM-A, paired 't' test was used. Chi-square test was used to compare the sex-distribution, drug regimes and percentage

remission. The interpretation of 'P' values was as follows: P>0.05, not significant. P<0.05, significant. P<0.01, highly significant. P<0.001, very highly significant.

## RESULTS

The subjects' characteristics and their relevant clinical data are shown in Table I.

Table I demonstrates that patients in both Group 1 and Group 2 had no statistically significant differences in the age and sex distribution. Revised Kuppuswami's scale was used for determining socio-economic status of the two groups. Both the groups had the majority of patients from middle socio-economic group and no significant difference wsb found in socio-economic status of the two groups. Table I also shows no significant differences in the number of patients receiving anti-depressants (T.C.A.'s and S.S.R.I.'s). Also, there were no significant differences in base-line (pre test) HAM-D & HAM-A scores in the patients of Group 1 and Group 2 . So, the two Groups were comparable for the study.

TABLE I: Characteristics of subjects.

| *Parameters* | *Group 1 (n=15)* | *Group 2 (n=15)* |
|---|---|---|
| Age (yrs) (Mean±S.D.) | 31.87±8.78 | 31.67±8.46 |
| Gender | | |
| • Females | 5 | 6 |
| • Males | 10 | 9 |
| Socio-economic status | | |
| • Upper | 0 | 0 |
| • Middle (upper & lower) | 12 | 11 |
| • Lower | 3 | 4 |
| Drug Regimen | | |
| • T.C.A. | 9 | 8 |
| • S.S.R.I. | 6 | 7 |
| HAM-D (Mean±S.D.) | 21.27±4.35 | 19.47±3.98 |
| HAM-A (Mean±S.D.) | 58.00±14.60 | 59.33±17.52 |

T.C.A. : Tri Cyclic Anti-depressants.
S.S.R.R.I. : Selective Serotonin Reuptake Inhibitors.

Table II shows that improvement in HAM-D & HAM-A scores is highly significant in both Group 1 and Group 2 patients (P<0.001).

TABLE II : Changes in HAM-D & HAM-A scores from 0 to 8 weeks in both Groups (Mean±S.D.).

| *Parameters* | *Group 1 (n=15)* | *Group 2 (n=15)* |
|---|---|---|
| **HAM-D** | | |
| • Pre | 21.27±4.35*** | 19.47±3.98*** |
| • Post | 8.27±4.37 | 11.53±4.26 |
| % change | –60.85±4.97 | –42.01±2.81** |
| **HAM-A** | | |
| • Pre | 58.00±14.60*** | 59.33±17.52** |
| • Post | 25.60±8.85 | 41.67±18.34 |
| % change | –52.71±4.90 | –30.39±5.22** |

**P<0.01; ***P<0.001.

Further, the percentage reduction in HAM-D and HAM-A scores is significantly more (P=0.003) in Group 1 as compared to Group 2.

A significantly higher number of patients (7, 46.6%) went into remission in Group 1 than in Group 2 (2, 13.3%) (P=0.02), remission being total HAM-D score of 7 or less.

## DISCUSSION

The groups were well matched for age, sex, socio-economic status, drug regime and there was no significant difference in the baseline depression and anxiety scores. After 8 weeks of intervention (post test), there was significant reduction in the scores on Hamilton Rating Scales for Depression and

Anxiety in both Group 1 (Antidepressants and Sahaj Yoga) (P0.001) and Group 2 (on Antidepressants only) (P<0.001). However, the percentage reduction in HAM-D and HAM-A scores at 8 weeks was significantly more in Group 1 patients than in Group 2 patients. In addition to the above findings, 7 out of 15 (46.6%) patients showed remission at 8 weeks in Group 1 whereas, only 2 patients i.e. 13. 3% showed remission in Group 2. The remission in patients was maintained until the end of the study. So, the response was stable. All the above findings demonstrate the additional antidepressant effects of Sahaj Yoga in the management of depressive disorders, and its role in reducing anxiety symptoms. Batra (10) reported similar reduction in anxiety scores in healthy medical students practicing Sahaj Yoga.

Neuro-imaging studies have implicated left dorso-lateral pre-frontal cortex (dlPFC), orbito-frontal-ventral region including hippocampus as major sites of functional and structural abnormalities in major depression with marked decrease in neuronal and glial density in these regions (18, 19). Several neurochemical studies suggest the disruption of monoaminergic neurotransmitter pathways, particularly serotonin and norepinenephrine systems with changes in monoamine receptors and transporters and related second messenger systems in these regions in patients having depression (20). Studies have also demonstrated that stress can lead to glucocorticoid mediated neurotoxicity and alterations in levels of neurotrophic factors (21), effects that lead to atrophy and cell loss in depressed patients. Lopez et al (22) have shown that chronic stress down regulates hippocampal $5HT_{IA}$ receptors and this effect is in part related to elevations of cortisol, thereby, raising the possibility that in depressive illness, stress and or recurrence may be associated with elevated cortisol and subsequently reduced $5HT_{IA}$ receptor function, both of which contribute to the reduced hippocampal neurogenesis and hippocampal atrophy and cell death and similar neuronal and glial changes in pre-frontal cortex. The cortical cell layers exhibiting altered density of neurons and glia are involved in making connections between cortical areas and subcortical regions. Loss of cells in these areas could contribute to affective, cognitive, psychomotor symptoms observed in depressive disorders (21).

The mechanism by which Sahaj Yoga helps in management of depression cannot be deciphered from the present study. Sahaj Yoga meditation may modulate the limbic system activity, which via hypothalamus may modulate the sympathetic activity and regulate endocrine secretions. Conditioning of these regions by practice of meditation may help in restoring normal homeostatic conditions. In the present study, no masking was done. Ethical constraints prevented having a drug free group or placebo group. However, no significant clinical side effects (confusion, hypomaniac switch or exacerbation of symptoms) occurred with Sahaj Yoga practice in the study. Further studies are needed on Sahaj Yoga practice for longer periods. Comparative studies with other forms of Yoga are also required.

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