

Effects of Maharishi Yoga Asanas on Mood States, Happiness, and Experiences during Meditation

Abstract

Context/Background: Many studies showed positive effects of Yoga Asanas. There is no study on Maharishi Yoga Asanas yet. This research replicated and expanded observed improvements on the profile of mood states (POMS) as a result of 2-week Maharishi Yoga Asanas course. Thirteen college students taking part in a 4-week course on Maharishi Yoga Asanas were matched with 13 students taking other courses at the university. **Aims and Objective:** The main objective of the study was to assess the effects of Maharishi Yoga Asanas on mood states, degree of happiness, and experiences in Transcendental Meditation (TM) practice. **Methods:** All students were given two psychological tests and additional question before and after their 4-week course: POMS, Meditation Depth Questionnaire, and question about the degree of happiness. **Results:** Repeated measure MANOVA showed the 4-week Maharishi Yoga Asanas course resulted in significant increase in happiness during the day and significant improvements in (1) sense of personal self, (2) transpersonal qualities, and (3) transpersonal self during their TM practice. **Conclusion:** This research shows that Maharishi Yoga Asanas affect more than body and mind. Rather they influence much deeper levels of one's subjectivity including one's transpersonal self.

Keywords: Emotional states, happiness, Maharishi Mahesh Yogi, meditation, Transcendental Meditation, transpersonal self

Introduction

Research has investigated interventions, such as yoga asanas (poses), pranayama (breath control), rest, and purification techniques on the functioning of mind and body. A common finding is that these practices improved mood states and emotional well-being.^[1-5] A national survey of yoga practitioners showed that Iyengar Yoga increased energy and happiness, improved social relationships and sleep, and reduced body weight.^[6] Better sleep has also been reported by practitioners of Gentle Yoga,^[2] Tibetan Yoga,^[7] Silver Yoga,^[8] Kundalini Yoga,^[9] Gentle Hatha and Restorative Yoga Asana,^[10] Mindful Yoga,^[11] Hatha Yoga,^[12] Sudarshan Kriya Yoga,^[13] TaiChi/Yoga,^[14] and long-term yoga practitioners.^[15]

Practice of yoga asanas reduced fatigue and improved mood status,^[16] enhanced emotional well-being,^[17,18] and quality of life.^[19-21] It improved emotional function^[22] and decreased emotional irritability,^[23] decreased fatigue,^[24] and increased vitality.^[25] Controlled studies

showed that asanas, breathing, and meditation practices significantly decreased anxiety, depression, and perceived stress.^[26,27]

Several studies reported that Integrated Yoga^[28,29] and Hatha Yoga^[30] increased satisfaction in life. Wood^[31] found that breath control and asana practice produced a marked increase in alertness and enthusiasm. These practices positively change one's personality. A recent study found that Hatha Yoga practice "brings a positive transformation in the personality traits, especially conscientiousness."^[25]

There is no research, yet, on Maharishi Yoga Asanas. In contrast to most other yoga asana practices, which involve at least some degree of effort, Maharishi Yoga Asanas are practiced in a slow and comfortable pace, with no strain required. The aim of Maharishi Yoga Asanas is to turn the attention within. Maharishi Yoga Asanas are considered to be preparation for Transcendental Meditation[®] (TM) practice, which follows.

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Maharishi Yoga Asanas typically include lying (supine and prone), inverting, kneeling, sitting, standing, and balancing postures as well as all possible six movements of the spine: axial extension (lengthening), flexion (bending forward), lateral flexion (bending sideways), extension (backward bending), and axial rotation (twisting). The set starts in a sitting pose with resolution to begin asana practice and to continue with tone up, followed by rolling on the back from side to side. Three more asanas are done on the back involving moving or lifting the legs. Next is the shoulder stand. Then, there is the “bridge,” followed by two asanas on the stomach. Next two asanas are done from a kneeling pose, and then, two sitting asanas, one includes rotating the spine. The last is a standing pose.

Between each asana, there is Shavasana (lying pose) which helps with normalizing of breathing and blood circulation and contributes to settling down the body and mind. During practice of Maharishi Yoga Asanas, eyes are usually closed and the attention is on the sensations in the body as well as general awareness. As the practice progresses, the practitioners usually experience “letting go” or momentarily expansion of awareness. This signifies the experience of the state of yoga – the union of body, mind, and spirit.

The sequence ends with pranayama and is followed by TM practice, which is practiced in comfortable sitting position with eyes closed for 20 min. TM involves effortless transcending active thoughts and perceptions to the state when the mind is quiet and awake.^[32]

Experiment I: Pilot Study

The pilot study investigated the effects of Maharishi Yoga Asanas on mood states and resilience. Mood states and resilience were selected since the majority of research on other forms of yoga report improvements in emotional well-being.

Methods

Subjects

The participants in the pilot study were 12 individuals, 7 men and 5 women. They were healthy and did not report significant mental or physical complaints. Their age ranged from 20 to 40 years (average 25.3 ± 5.2 years). All participants were students at Maharishi University of Management, where they practice TM in groups twice a day. Years of practice of TM ranged from 1 to 3 years (average 2.4 ± 1.4 years). All the students had received a one-session introduction to Maharishi Yoga Asanas in their first course at Maharishi University of Management.

The structure of the 2-week class was 1 h of theory followed by 45–50 min of Maharishi Yoga Asanas. The theory consisted of basics and principles about yoga and

yoga-based lifestyle according to Maharishi’s teaching. There were 14 yoga asana sessions in 8 days, one in the morning and one in the afternoon; 2 days only included one session in the morning.

Test measures

Students were given the two pencil and paper psychological tests the week before the course began and were posttested with the same measures a few days after the course ended.

Profile of mood states

Profile of mood states (POMS) is a “well-known, well-validated, reliable, and internally consistent self-report questionnaire.”^[9] It consists of 65 adjectives rated on a five-point scale. There are subscale scores for six mood states: tension, depression, anger, vigor, fatigue, and confusion. A combination of subscale scores gives total mood disturbance score.^[33]

Resilience scale for adults

Resilience is a “personality characteristic that moderates the negative effects of stress and promotes adaptation.”^[34] It has become an umbrella term to cover many aspects of overcoming adversity and adapting to one’s environment.^[34] The resilience scale for adults (RSA) has 33 items covering six dimensions assessing protective factors at multiple levels: (1) Perception of self, (2) planned future, (3) social competence, (4) structured style, (5) family cohesion, and (6) social resources. The four first factors assess protective factors at a personal level, and the two latter factors assess protective factors at a family and a social level.

Data analysis

Profile of mood states

POMS questionnaire asks participants to describe how they feel right now by circling a number after each of the 65 words. The numbers ranged from “not at all” (1) to “extremely” (5).

Resilience scale for adults

The RSA scale has 33 series of phrases with two statements on either side of five boxes. The participants were asked to check one of the five boxes that were closest to how the statement fits them. The 33 phrases are divided into these six categories:

1. Personal strength/perception of self,
2. Personal strength/perception of future,
3. Structured style,
4. Social competence,
5. Family cohesion, and
6. Social resources.

Statistical analysis

SPSS, version 13.0 was used to analyze the data, employing *t*-tests to assess pre-/post-differences on total Mood

disturbance and total resilience. Statistical significance and effect sizes are reported for these measures.

Results and Discussion

Ten out of twelve participants completed the course. Two of them dropped the course due to medical reasons. One student did not answer the second half of the POMS questionnaire. For nine participants, the data were complete and statistical tests were conducted on those data.

Effects of Maharishi Yoga Asanas on mood

There was a strong trend for lower total mood disturbance from pre- to post-test ($t(8) = 1.77, P = 0.06$). The effect size was $d = 0.7$. This is a medium effect size [Table 1].

Effects of Maharishi Yoga Asanas on resilience

There were no significant differences on the six resilience measures. The effect size for the total resilience was small ($d = 0.2$). According to Cohen's power tables, 84 subjects would be needed to reach statistical significance with this level of effect size.

The results of the pilot test suggest that yoga practice effects mood states more than behaviors such as resilience. The next study expanded these findings by testing a control group and using additional measures of emotional states as well as meditation experience.

Experiment II

In the next study, we again administered the POMS. In addition, we administered a standardized measure of depth of meditation experience and a question about the degree of happiness. A measure of depth of meditation was used because subjects in the pilot study reported better experiences during their TM practice when they began to practice Maharishi Yoga Asanas more regularly. The RSA was not used in the second study because the effect sizes were very small in the pilot test.

Methods

Subjects

Thirteen college students taking part in a 4-week course on Maharishi Yoga Asanas were matched with 13 students taking other courses at the university. All the subjects were healthy and did not report significant mental or physical complaints. The subjects were matched on age, gender, and years of practicing the TM technique. The subjects in the experimental group were an average

age of 31.2 ± 15.0 years and the subjects in the control group were an average age of 27.8 ± 11.0 years. They had been practicing TM for in average of 7.9 ± 11.9 years and 9.5 ± 12.5 , respectively. There was no significant differences in age or length of time TM practice at pretest (both $F(1,25) < 1.0$, ns).

Procedure

All students were given the two psychological tests before and after their course: POMS and Meditation Depth Questionnaire (MEDEQ). They were also asked to rate their level of happiness. The experimental group participated in a 1-month course on Maharishi Yoga Asanas after the baseline test. The control group participated in other academic classes at the university.

The structure of the 4-week Maharishi Yoga Asanas course was similar to the structure of the 2-week course tested during the pilot study. There were two classes a day, one in the morning 10–12 am and one after lunch 1–3:15 pm. In every class, there was a lesson about the theory behind Maharishi Yoga Asanas followed by Maharishi Yoga Asanas (45–50 min each time). We contacted the students before the class and gave them the baseline tests.

The control subjects were students at other 4-week classes at the university. They were contacted before their class and agreed to take part in the study. They were given the three baseline measures. After the course was finished, the students were contacted within 3–7 days and given the same three measures at posttest.

Test instruments

The profile of mood states

The POMS is widely used to assess mood states.^[35] The total mood disturbance score is calculated by adding the five negative subscale scores (tension, depression, anger, vigor, fatigue, and confusion) and subtracting the vigor score. Higher scores for the total mood disturbance score indicate a greater degree of mood disturbance.^[36]

Degree of happiness question

The subjects were asked to rate how happy they see themselves, using a 7-point Likert scale (from 1 = not a very happy person to 7 = a very happy person).

Meditation Depth Questionnaire

The MEDEQ is a self-report questionnaire measuring the depth of meditative experiences. Through cluster analysis, Piron^[37] classified meditative experiences into five stages along a dimension of increasing depth: Hindrances, relaxation, personal self, transpersonal qualities, and transpersonal Self. Hindrances cover difficulties in meditation such as restlessness, busy mind, laziness, or feeling bored. Relaxation comprises smooth breathing, feeling well, patience, and calmness. Personal self covers experiences such as being aware of one's own center,

Table 1: Total mood disturbance scores in pre- and post-test in the two groups

	Mean (SD)	Effect size
Total mood disturbance (pretest)	33.7 (16.0)	0.7
Total mood disturbance (posttest)	23.9 (11.9)	

SD=Standard deviation

feeling light, observing one's own thoughts, and intuitive insights. Transpersonal qualities describe the experiences such as time disappearing, alert and clear mind, and feelings such as love, devotion, humility, acceptance, and joy. Transpersonal Self describes the experience of the unity of everything, expansion of the mind, and disappearance of cognitive processes.

Statistical analysis

SPSS was used to analyze the data. A repeated measures ANOVA tested group differences in total mood disturbance and the response on the happiness question. A repeated measures MANOVAs tested the five components of the depth of meditation questionnaire. Statistical significance and effect sizes are reported for all measures.

Results

Group differences in emotional state

A repeated measure ANOVA yielded no significant group differences for changes in total mood disturbance from pre- to post-test ($F(1,24) = 1.5, P = 0.23$). The effect sizes were smaller than in the pilot: $d = 0.42$. Table 2 presents the means, standard deviation, and effect sizes for the two groups.

A repeated measure ANOVA of the happiness question yielded a significant pre-post x group interaction ($F(1,24) = 4.53, P = 0.04$). Table 3 presents the means, standard deviation, effect sizes, and P value for the two groups.

Group differences in depth of meditation

A repeated measures MANOVA including five categories of the depth of meditation questionnaire yielded a significant pre-post x question interaction ($F(4,21) = 4.00, P = 0.014$) and significant pre-post x group interaction ($F(1,24) = 5.37, P = 0.029$). Therefore, we conducted individual repeated measure ANOVA for each category. In this analysis, there were significantly higher values for the yoga group in the last three categories but not in the first two. Table 4 presents the means, standard deviation, effect sizes, and P value for the two groups.

Following Maharishi Yoga Asanas practice, the subjects in the yoga group reported deeper experiences during their subsequent TM session. This was indicated by increased experiences of transpersonal qualities and transpersonal Self during the TM session.

Discussion

This controlled study found that a 4-week Maharishi Yoga Asanas course resulted in significant increases in degree of happiness during the day, and significant improvements in sense of personal self, transpersonal qualities, and transpersonal self during TM practice.

Table 2: Total mood disturbance scores in pre- and post-test in the two groups

	Pretest	Posttest	Effect size (d)
Yoga	63.4 (17.7)	51.4 (24.4)	0.42
Control	40.7 (19.7)	36.9 (15.7)	

Table 3: Happiness scores in pre- and post-test in the two groups

	Pretest	Posttest	Effect size (d)	P
Yoga				
In general happy	5.08 (1.89)	5.69 (1.03)	0.97	0.04
Control				
In general happy	6.00 (0.82)	5.38 (1.33)		

Table 4: Depth of meditation scores in pre- and post-test in the two groups

	Pretest	Posttest	Effect size (d)	P
Yoga				
Hindrances	7.62 (3.93)	7.00 (2.94)	-0.23	0.65
Relaxation	8.38 (3.78)	9.54 (2.26)	0.57	0.11
Personal self	15.00 (8.81)	20.23 (7.47)	0.90	0.02
Transpersonal qualities	14.85 (9.27)	21.85 (8.36)	0.84	0.01
Transpersonal Self	10.00 (7.59)	15.46 (6.40)	0.71	0.04
Control				
Hindrances	6.69 (4.15)	6.92 (3.57)		
Relaxation	9.46 (1.98)	9.08 (2.78)		
Personal self	20.00 (6.14)	18.46 (7.64)		
Transpersonal qualities	20.23 (7.67)	20.38 (7.43)		
Transpersonal Self	14.08 (6.24)	14.69 (6.95)		

How Maharishi Yoga Asanas and Transcendental Meditation practice might improve mood

Both practices of Maharishi Yoga asanas and TM probably contributed to greater happiness during the day. Practice of yoga asanas stretches and strengthens the body in an easy and nonstressful way, improving one's strength, flexibility, and general well-being. Every asana creates a unique style of mind-body integration, or "steady pleasantness," which together result in greater balance in mind and body. Asana practice also cultures good posture as well as greater integration of the functioning of the left and right hemispheres of the brain. This greater sense of balance could provide a platform for greater balance of mind and body during day.

While asana practice optimizes balance and functioning of mind and body, TM practice changes how we evaluate our daily life. The process of transcending during TM practice gives the experience of a deeper, richer, more silent sense of self, that is, not as touched by the ups and downs of daily life.^[38,39] This deeper inner experience allows the meditator to place ongoing experience into a larger context – they are

able to deal with stress and challenges better. Regular TM practice is associated with significant decreases in anxiety in normal subjects,^[40] decreased total mood disturbance, and increased emotional and behavioral coping in college students^[41] as well as decreases in posttraumatic stress symptoms in military^[42,43] and civilian subjects.^[44] The expansion of self-awareness during TM practice is also reflected in greater growth in self-development^[45] and self-esteem.^[46]

The current study was not designed to separate independent effects of Maharishi Yoga Asana practice and TM practice on happiness during the day. However, it is important to recognize that the control group was also part of a college curriculum that includes daily TM practice. Yet, the experimental group who added daily asana practice to their routine exhibited greater happiness. Thus, asanas seem to work synergistically with meditation practice to affect degree of happiness.

How Maharishi Yoga Asanas might improve the depth of meditation experience

Maharishi Yoga Asanas are performed at a slow pace, suitable to the individual, with eyes closed during most poses. Having the awareness inside creates a condition for the mind to transcend bodily sensations and expand to the state of yoga – union of body, mind, and spirit. That happens, especially while resting in a flat lying position, a pose performed after all other asanas, which restores homeostasis in the body and integrates the effects of each individual asana. Subjects often report during these resting poses (momentary) experiences of the state of yoga – the state of union of body, mind, and spirit.

Practice of Maharishi Yoga Asanas is an optimal preparation for body and mind to transcend thoughts and mental processes during subsequent TM practice. Stresses in the mind or body (mental or physical pain, for example) keep the mind on the surface and disallow transcending.^[47] Maharishi Yoga Asanas help process and release stresses from the body and mind. Thus, the process of transcending could occur faster and the meditation session could be experienced as deeper, as was reported by the subjects in this study.

Conclusion

This research highlights the synergy and practice of Maharishi Yoga Asanas and TM practice. Optimally, practice of yoga should include experiences of the state of union of body, mind, and spirit, even if momentary, during asana practice as well as during the meditation that follows, leading to greater happiness during the day.^[48] With regular yoga practice, these momentary experiences could become more frequent and for longer periods, leading to greater balance, well-being, and success in life. Further research could look at long-term effects of Maharishi Yoga Asana.

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Conflicts of interest

There are no conflicts of interest.

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