

Effect of 8 Weeks of Yoga Training on the Somatization, and Various Psychological Symptoms on Men of Above 48 Years

Mr. Shivaiah R

Physical Education Director

Sri Honnadevi Government First Grade College, Dandinashivara, Turuvekere Taluk, Tumkur, Karnataka, India

Abstract: *Yoga is an ancient Physio-Cultural practice of India and was used for improving physical and mental health through asanas, meditation and breathing exercises, various studies have shown that the practice of yoga reduces perceived stress and negative feelings and it improves psychological symptoms by lowering the levels of anxiety and anger. Researcher had made an attempt to show, that long-term yoga training improves stress-related psychological symptoms, such as somatization, tension-anxiety, depression, anger-hostility, vigor, fatigue, and confusion.*

Keywords: Yoga

I. INTRODUCTION

In addition to these stress-related psychological symptoms, somatization, the most common stress-related physical symptom, is frequently seen in clinical care settings. Somatization is defined as "a tendency to experience and communicate somatic distress in response to psychosocial stress and to seek medical help for it". Clinically significant somatization leads to excessive health care use. These medically unexplained physical symptoms include headache, dizziness, chest pain, lower back pain, nausea, muscle soreness, breathing problems, hot or cold spells, numbness or tingling in parts of the body, lumps in the throat, a weak feeling in parts of the body, and a heavy feeling in the arms or legs. There are numerous treatments for somatization, and they have varying degrees of effectiveness. A few studies have demonstrated that somatization symptoms after mindfulness training, which includes meditation, were significantly decreased in comparison with before mindfulness training.

In this study, researcher has performed a prospective study to examine the beneficial effects for individuals of 8-weeks of yoga program on indicators of somatization and psychological symptoms using the Profile of Mood States (POMS) and SCL-90-R questionnaires.

It was hypothesized that there is a dose-response effect of yoga for several weeks and a longer threshold effect.

II. METHODS

2.1 Participants and Data Collection

Yoga is far more study researcher, had recruited 39 healthy, adult men popular in India and, with that for the who had no experience with yoga. The participants were recruited from yoga-training centers. The following exclusion criteria were applied:

- (i) age < 30 years and > 60 years;
- (ii) Taking medication including supplements in the month prior to the experiment;
- (iii) Having an illness; and
- (iv) Having a past history of significant physical or mental illness.

All participants received detailed information on the purpose of the study and provided written informed consent. The participants who agreed were then handed over the questionnaires, before and after the 8 weeks of yoga training. Each participant answered the POMS and SCL-90-R questionnaires at the same time.

III. YOGA INTERVENTION

Yoga classes were conducted one day a week for about one hour each session for 8 weeks. The participants were requested to attend at least 6 of the 8 weekly yoga sessions and to practice on their own at home at least twice a week for over 30 minutes during this 8-week period. If they could not attend 6 of the 8 classes or the requested home practice, they were dropped from the study. The self-reported home practice activity time was confirmed at a classroom session. Yoga classes were closed classes, only for the participants of study, the researcher emphasized practicing slowly with awareness and relaxation. The yoga practice consisted of the following asanas;

1. Standing at ease (Tadasana) and balancing the weight on both feet (Centering).
2. From the standing position (Tadasana), bending to the right and left (Ardhakati Chakrasana).
3. Forward bending (Pada Hastasana).
4. Backward bending (Ardha Chakrasana).
5. Bending the knees, holding them together while sitting down and adjusting the hips between the heels. While inhaling raise both arms above the head. While exhaling keep the back straight and bend the upper body and arms forward until the arms and forehead touch the floor, without raising the buttocks (Shashankasana).
6. Vajrasana
7. Suptavajrasana
8. From a kneeling position, coming up onto both knees and placing them hip width apart. Placing the palms of the hands on the sacrum with the fingers pointed down. Inhaling and pressing the knees down while extending the crown of the head up to lengthen the spine. Exhaling and pressing the hips forward, squeezing the buttocks and thighs, and supporting the body weight with the arms while bending backwards (Ardha Ushtrasana).
9. Slowly coming down to a supine posture for rest (Shavasana) with instructions to relax the body in sequence.

3.1 Questionnaires

The POMS questionnaire (Educational and Industrial Testing Service, San Diego, CA), and the SCL-90-R questionnaire were given to each of the participants. The questionnaire was about demographic characteristics included questions about age, and education background. The POMS questionnaire assesses six mood subscales: tension-anxiety, depression, anger-hostility, vigor, fatigue, and confusion. High vigor scores reflect a good mood or emotion, and low scores on the other subscales reflect a good mood or emotion. The English version of the POMS was used for the present study. The test taker rates his/her mood over the past seven days on a 5-point scale ranging from "not at all" to "extremely".

The SCL-90-R is a validated and reliable questionnaire that is sensitive to changes in psychological distress. It is a 90-item self-report symptom inventory and consists of nine symptom dimensions, somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, and psychoticism. The test taker rates how much each of 9 symptom dimensions had distressed or bothered them in the past seven days on a 5-point scale ranging from "not at all" to "extremely". Somatization, anxiety, depression, and hostility were chosen for study because it has been demonstrated that the practice of yoga improves the mental state by lowering the levels of anxiety, depression and anger-hostility [4,5,21,22] and because we wanted to ensure that the practice of yoga improves somatic symptoms. These questionnaires were chosen because of their sensitivity to change through therapeutic intervention in about 8 weeks [10,22].

3.2 Statistical Analysis and Sample Size

Statistical analyses were performed using a statistical software package (PASW Statistics 18, version 18.0.0 for Windows; SPSS Inc., Chicago, IL, USA). The Kruskal-Wallis test was used to compare the scores of questionnaires before and after 8 weeks of yoga training.

IV. RESULTS

4.1 Follow-up and Demographics

The data of 39 participants, those who completed at least 6 of the 8 weekly yoga sessions and practiced on their own at home at least twice a week for over 30 minutes during the 8 weeks, were considered for analysis. There were no significant differences in the subscale scores of POMS and SCL-90-R.

4.2 Psychological Distress from the POMS

All negative subscale scores, tension-anxiety ($p=0.022$) depression ($p=0.010$), anger-hostility ($p=0.020$) fatigue ($p=0.001$), and confusion ($p=0.004$) of the POMS after the 8 weeks of yoga training were significantly decreased compared with those before starting yoga training. There was a trend toward increase of the vigor score after the 8 weeks of yoga training ($p=0.083$). There were significant differences in some of the negative subscale scores of the POMS questionnaire before yoga training and after yoga training.

4.3 Psychosomatic symptoms from the SCL-90-R and the relationship between the change of somatization and the change of mood state

Scores for somatization ($p=0.006$), depressive ($p=0.002$), anxiety ($p=0.002$), and hostility ($p=0.007$) from SCL-90-R were significantly decreased after 8 weeks of yoga training compared with those before starting yoga training.

The Researcher investigated if changes in mood were related to changes in somatization. However, he did not find any significant correlation between the changes in mood (tension-anxiety, depression, anger-hostility, vigor, fatigue, and confusion in POMS) and the changes in somatization (data not shown). These results suggest that the change of somatization does not have a direct relation with the change of mood.

V. DISCUSSION

After 8 weeks of yoga training, all negative subscale scores (tension-anxiety, depression, anger-hostility, fatigue, and confusion) from the POMS and somatization, anxiety, depression, and hostility from the SCL-90-R were significantly decreased compared with those before starting yoga training. The researcher made an attempt to demonstrate the effect of yoga training on the somatization symptoms of men who had almost normal somatization scores on the SCL-90-R (Before yoga: 6.866.69, After yoga: 3.64 ± 4.04). Our findings suggest that regular yoga training reduces not only the level of psychological symptoms, but also somatization symptoms.

Somatization symptoms include medically unexplained physical symptoms such as headache, dizziness, chest pain, lower back pain, and nausea. Some of these physical symptoms have been shown to improve with yoga training. For example, it has been reported that the practice of yoga improved the symptoms of patients with clinically diagnosed migraine, induced nausea. However, these symptoms are not classified as somatization symptoms because they can be explained medically. Additionally, there is evidence of lower back pain improvement with yoga training. However, low back pain was only one of the 12 somatization score items on the SCL-90-R. A few studies have demonstrated that mindfulness training improves somatization symptoms. Meditation was a major component of mindfulness. However, the participants of our study practiced a combination of classical postures, breathing exercises, and meditation. Therefore, the findings show that this combination of yoga practices also has the potential to improve somatization symptoms.

VI. CONCLUSION

Yoga training has the potential to reduce the somatization score and scores related to mental health indicators, such as anxiety, depression, anger, and fatigue. The present findings suggest that yoga can improve somatization and mental health status and has implications for the prevention of psychosomatic symptoms in men.

REFERENCES

- [1]. Granath J, Ingvarsson S, von Thiele U, Lundberg U. Stress management: a randomized study of cognitive behavioural therapy and yoga. *Cogn Behav Ther.* 2006;8:3-10. doi: 10.1080/16506070500401292. [PubMed] [Cross Ref]
- [2]. Kazufumi Yoshihara, Tetsuya Hiramoto, Takakazu Oka, Chiharu Kubo, and Nobuyuki Sudo. Effect of 12 weeks of yoga training on the somatization, psychological symptoms, and stress-related biomarkers of healthy women. *Biopsychosoc Med.* 2014; 8: 1. Published online 2014 Jan 3. doi: 10.1186/1751-0759-8-1 PMID: PMC3892034

- [3]. Kirkwood G, Rampes H, Tuffrey V, Richardson J, Pilkington K. Yoga for anxiety: a systematic review of the research evidence. Br J Sports Med. 2005;8:884-891. 10.1136/bjsm.2005.018069. [PMC free article] [PubMed] [Cross Ref]
- [4]. Smith C, Hancock H, Blake-Mortimer J, Eckert K. A randomized comparative trial of yoga and relaxation to reduce stress and anxiety. Complement Ther Med. 2007;8:77-6. doi:10.1016/j.ctim.2006.05.001. [PubMed] [Cross Ref]