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Original Research Article

Effect of Yogic Asanas on Anxiety and General Well Being of Nursing Students

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ABSTRACT

Context: Yoga has been known for its physical and mental benefits. Yoga is a combination of asana, pranayama and meditation. Yogic asanas are gaining importance now a days by the way they train and discipline the mind. The research on the effects of only yogic asanas is limited. Hence, the present study focuses on exclusive yogic asanas practice.
Aim: Present study was conducted to find out the effect of yogic asanas practice on anxiety levels and general well being of nursing students.
Methods and Material: Thirty female nursing students of 20 to 30 years of age were selected randomly. They practiced a set of six yogic asanas for 6 weeks. Subjects were made to fill in Zung self rating anxiety scale, Beck anxiety inventory and Psychological general well being schedule before and after 6 weeks of asana practice.
Results: The data was analysed statistically using paired-t test. The results showed significant decrease in anxiety scores of Zung anxiety scale and Beck anxiety inventory. There was also significant improvement in general well being scores.
Conclusion: The study shows that Yogic asanas when regularly practiced for a period of 6 weeks causes reduction in anxiety and improvement in general well being among students, may be introduced in medical and paramedical curriculum.

Key words: Asana, anxiety, general well being.

INTRODUCTION

Yoga is a timeless pragmatic science evolved over thousands of years dealing with physical, moral, mental and spiritual well-being of man as a whole. The word yoga is derived from the Sanskrit root yuj meaning to bind, join, attach and yoke, to direct and concentrate one's attention on, to use and apply. Yoga has been gaining interest since last three decades as it has been found that it has beneficial effects on the diseases of modern civilization like diabetes, hypertension and psychiatric illnesses which occurs due to faulty lifestyle. Patanjali has described eight-limbs of yoga (ashtang yog). The third limb of yoga is asana or posture. Asanas have been evolved over the centuries so as to exercise every muscle, gland and nerve in the body. By practising asanas the person frees himself from physical disabilities and mental distractions. [1]

In the modern era everybody is working hard because of high level of competition which causes a lot of stress on one's mind. Stress and anxiety have become a part of our daily life. Upto an extent anxiety is good as it helps us to cope up

with the stressful situations but excessive anxiety impairs the daily routine activities of life and has effect on individual performance. Stress and anxiety have been implicated as contributors to many chronic diseases and to decreased quality of life. Stress and anxiety affects both physical and mental health. Stress symptoms include anxiety, depression, sleep disturbances, insomnia, menstrual disturbances, eating disorders, body weight fluctuations; irritation etc. [2] Relaxation exercises aim at reducing stress and yoga is one of them. Yoga is widely practiced for its benefits to body and mind and is associated with instantly occurring physiological changes that include reduced sympathetic nervous system activity, reduced metabolism, lowered heart rate, reduced blood pressure, and decreased respiratory rate. [3] Thus it streamline the autonomic nervous system and gives a sense of well being to the individual. Research studies have shown that yoga can provide a wide range of psychological benefits, both in reducing negative affect and in fostering positive wellness. [4] However, the previous studies included asanas, pranayama and meditation in combination. Research focusing on individual yogic practices is limited. In the busy lifestyle one may not be able to perform all the practices at the same time. Also some forms of yoga can be a vigorous form of exercise and hence cannot be practised by everyone. Therefore, we should know the fitness benefits of various types of yogic practices so that they can be offered separately or in combination according to individual lifestyles and requirements. Thus, the present study was undertaken to find out the effect of exclusive yogic asanas practice on anxiety and general well being of nursing students as they experience high level of work related stress.

MATERIALS AND METHODS

The present study was conducted on thirty female nursing students of 20 to 30 years of age. Inclusion criteria for the study was that there should not be history of medical or psychiatric illness, no prior experience of yoga, not on long term medications, committed to perform yoga. Pregnancy, neuromuscular and skeletal disorders were ruled out while selection and also there should not be any history of smoking or alcohol intake. Written informed consent was obtained from the students and the study was as per the guidelines laid by our institution's ethics committee. Before beginning the study, the subjects were made to fill Zung self rating anxiety scale, Beck anxiety inventory, Psychological general well being index .The next day subjects were called at 6 am without breakfast, wearing light and loose fitting clothes. A warm up exercise for 10 min was performed by the subjects. After that subjects performed a set of six yogic asanas (vajrasana, balasana, matsyasana, bhujangasana, dhanurasana and savasana) as instructed by a certified yoga teacher. [1] Each pose was maintained for 3 mins and in savasana the subjects spent 5 mins. Total time taken for the whole set was 30 mins. After teaching the asanas, subjects performed the asanas daily in hostel and they were followed up twice a week for 6 weeks. At the end of 6 weeks, the students were subjected again to same scales as described below:

The Zung anxiety scale was designed by WWK Zung, to quantify a patient's level of anxiety. It is a 20 item self report questionnaire built to measure 4 manifestations of anxiety: cognitive, autonomic, motor and central nervous system. Each question is scored on a Likert-type scale of 1 to 4. Overall assessment is done by total score. Total raw score ranges from 20 to 80. The raw score then needs to be converted to an "Anxiety index score" to determine one's level of anxiety. [5]

BAI is a 21-item-multiple choice self report inventory that measures the severity of an anxiety in adults and adolescents. The items in the inventory determine the emotional, physiological and cognitive symptoms of anxiety scoring from 0 to 3. [6]

PGWBI was designed by Harold Dupuy, used to assess the health and quality of life of general population. It consists of 22 items measuring 6 dimensions: anxiety, depressed mood, positive well being, self control, general health and vitality. [7]

RESULTS

For interpretation of the results the data recorded was analysed statistically using paired-t test with SPSS software, version 20.0. p value <0.05 was considered significant and < 0.01 considered highly significant.

BECK ANXIETY INVENTORY (BAI) AND ZUNG ANXIETY SCORES: BAI and Zung anxiety scale which measures anxiety levels of individuals showed significant reduction in their mean scores suggesting decrease in anxiety. The decrease in BAI mean scores was linear from basal 13.7 ± 3.573 to 11.7 ± 2.588 at 6 weeks with p value < 0.01 (Fig. 1). Also a linear decrease was seen in Zung scores from basal 45.23 ± 5.25 to 41.87 ± 4.273 at 6 weeks with p value < 0.01 (Fig.2).

PGWBI SCORES: Fig.3 shows the effect of yogic asanas on Psychological General Well Being Index (PGWBI) scores in relation to time. Linear increase was seen in scores from basal 64.9 ± 6.799 to 91.3 ± 4.292 at 6 weeks and was found to be significant with p value <0.01 indicating improvement in general well being.

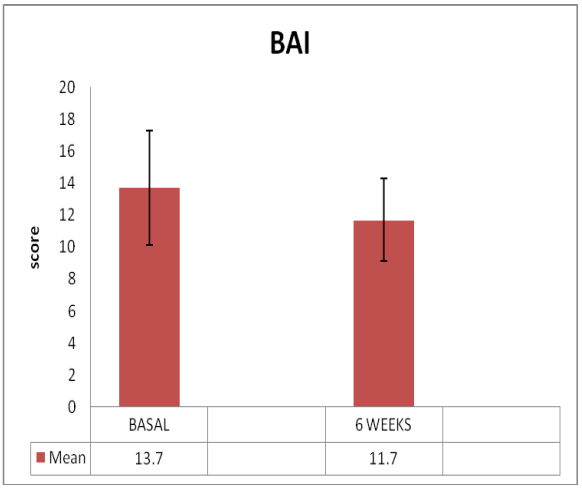

Fig 1: EFFECT OF YOGIC ASANAS ON BECK ANXIETY INVENTORY (BAI) SCORES

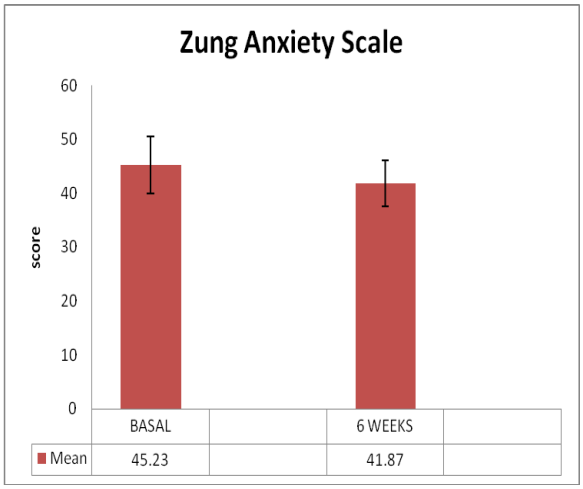

Fig 2: EFFECT OF YOGIC ASANAS ON ZUNG ANXIETY SCALE

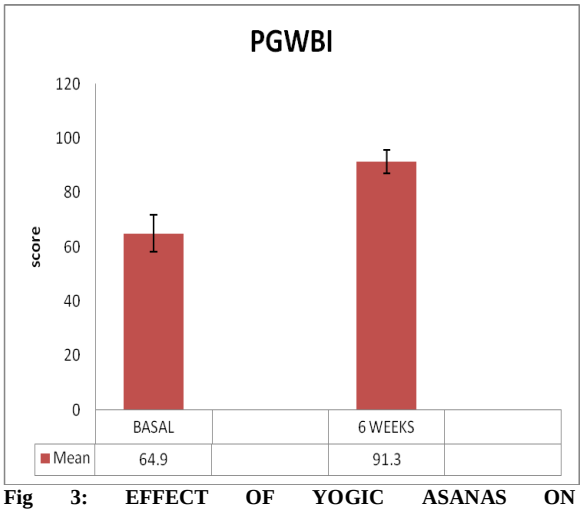

Fig 3: EFFECT OF YOGIC ASANAS ON PSYCHOLOGICAL GENERAL WELL BEING INDEX

DISCUSSION

Anxiety has a negative effect on all aspects, such as, social, personal, and academic performance. It is associated with arousal of autonomic nervous system. [8] Asanas works to open channels of energy in the body, releases blockages and tension held in physical, mental and emotional bodies. [9,10] There are numerous studies which show that yoga decreases anxiety and anxiety related symptoms by normalising the activity of ANS. Yoga has an immediate quieting effect on the HPA axis response to stress and anxiety. [10-12] The practice of yoga postures is associated with increased brain GABA levels which have been found to be reduced in anxiety and mood disorders. [13] S V Arun observed the effect of Yogasanas and Suryanamaskar on

selected psychological variables among college men Volleyball players found significant reduction in psychological variables like anxiety and negative feelings of Volley ball players after Yogasanas and Suryanamaskar practice. [14]

The improvement in PGWBI scores after asanas may be due to stimulation of central opioid system caused by increased activity in the sensory afferent fibres innervating proprioceptors in the joints and mechanoreceptors in the exercising skeletal muscles. [15] This cause release of endorphins which are known to produce a feeling of euphoria. The improvement seen in this index may also be attributed to reduction in anxiety. Our study results are consistent with another study done by S S Chandla who find out improvement in general well being scores in subjects practising yogic asanas. [16]

CONCLUSION

Thus, yogic asanas are beneficial for students and may be introduced in medical and paramedical curriculum. Limitation of this study was paucity of studies in the field of yogic asanas. More research studies to find out the effect of only yogic asanas need to be done as there are limited studies evaluating the effects of different yogic practices separately.

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