

Effect of Yoga Intervention on Anxiety and Subjective Well-being

Jadhav, S. G. and Havalappanavar, N. B.

Karnatak University, Dharwad, India.

The present study is an attempt to find out whether Yoga Intervention has any effect on State and Trait Anxiety and also on the Subjective well-being. Fifty, first year students were selected from Naturopathy and Yogic Sciences Course; on whom; Spielberger's State Trait Anxiety Inventory and Nagpal and Sell's Subjective well-being Inventory were administered in the beginning of the academic year and second time after a gap of one year. The data were analyzed by employing mean, SD and 't' ratio. Results reveal a significant decrease in both State and Trait Anxiety levels and positive change in the Subjective Well-being of the students.

Keywords: Naturopathy, Yoga, State and Trait Anxiety, Subjective Well-being.

Yoga is considered to be one of the most important, effective and valuable tools available for man to overcome various physical and psychological problems. According to Kuvalayananda and Vinekar (1968) yoga includes cultivation of correct attitudes and reconditioning of the neuromuscular systems. Yoga helps the whole body to enable it to withstand greater stress and strain. Yoga proposes healthy diet and encourages the natural process of elimination, whenever it is necessary. Yoga aims at an integrated and harmonious development of all the potentialities of man.

Anxiety and stress are the major problems of the modern world particularly of the youth and college going students who are losing their health and well-being. Good health is one of the greatest resources for vitality, creativity and wealth, in contrast to poor health and negative feelings, which lead to various physical and psychological problems.

Anxiety is an emotional state of mind where an apprehension of danger or loss or suffering is a prominent feature. It generally arises as a result of apprehension of something unknown, which seems to create

conflicts, tension and disturbances in the primitive urges. Spielberger (1966) has placed anxiety into two categories, i.e. State anxiety and Trait anxiety. State anxiety is a situational, which develops on account of severe demanding situation and this does not last long; whereas Trait anxiety has deeper roots and it refers to inherent anxiety proneness developed due to defective socialization.

Subjective well-being is a function of the degree of congruence between individual's wishes, needs and his environmental demands and opportunities. Subjective well-being defined by Diener, Eunkook, and Shigehiro (1997) as "how people evaluate their lives". From this perspective of the internal experience of the person, subjective well-being is considered to be a function of three variables: life satisfaction, lack of negative mental states and the presence of positive mood and emotion. Its components are both cognitive and affective.

Studies conducted by Vicente Pedro (1987) and Bhushan (1998) found significant reduction in the State Trait Anxiety of the subjects due to regular practice of yoga. In another study Malathi et al. (1998) conducted

a yoga intervention study on MBBS students and tested them before and after the examination, and found Anxiety reduction in the students at the time of examination. Srivastava et al. (2004) also found significant reduction in MBBS students Anxiety level as a result of yoga practice.

Setterlind (1983) found that regular practice of meditation brings a positive change in the well-being of the subjects. Delmonte (1987) suggests that meditation helps in increase of psychological well-being. Malathi et al. (2000) observed a significant improvement in 9 of the 11 factors of subjective well-being in healthy volunteers at the end of 4 months of yoga practice. Further Gopukumar and Hussain Ali (2002) reported that of 40 days meditation practice brought a significant positive change in the subjective well-being of students. Kamakhy Kumar (2004) noticed remarkable positive change in P. G. yoga student's anxiety and subjective well-being after practice of a Yoga Nidra daily, half an hour for six months.

The present investigation is a further attempt to find out whether yoga has any effect on State, Trait Anxiety and Subjective well-being.

Hypotheses:

1. There will be a difference in the levels of State and Trait Anxiety before and after the practice of yoga.
2. Subjective well-being will be higher after the practice of yoga in comparison to the one after practice of the yoga.

Method

Sample:

Fifty, first year Naturopathy and Yogic Sciences Course students were selected from two colleges of Naturopathy and Yogic Sciences i.e. Ujire and Moodbidre of Dakshina Kannada district of Karnataka. Among them were 25 boys and 25 girls who belonged to the age group of 19-20 years.

Tools:

State-Trait Anxiety Inventory: developed by Spielberger, Gorsuch, and Luschene (1970). This scale is divided into two sub scales that is, I. State Anxiety - it consists 20 statements, both positive and negative, which were intended to measure "How a person feels at that particular moment". This is a 4 point scale. The options on the four point scale were- Almost Never, Sometimes, Often, and Almost Always. Positive items scored as- Almost Never-1, Sometimes-2, Often-3 and Almost Always-4. Negative items scored in the reverse ordered as- 4, 3, 2, and 1. The sum of the 20 items gives the State Anxiety score. A minimum score of 20 and maximum score of 80 is possible. The Higher score indicated higher level of State Anxiety and vice versa.

II. Trait Anxiety- This sub-inventory also consists of 20 items, both positive and negative. It measures how a person generally feels? The same scoring procedure used for the Trait Anxiety is adopted in this inventory. The sum of the 20 items gives the Trait Anxiety score. A minimum score of 20 and maximum score of 80 is possible. Higher the score indicated higher the Trait Anxiety and vice versa.

Subjective Well-being Inventory: (prepared by Nagpal, & Sell, 1985). It is a self-report questionnaire consisting of 40 items designed to measure feelings of well-being or the lack of it as experienced in various day-to-day concerns on a three point scale. The items represent 11 sub-dimensions in the structure of well-being namely- Positive affect, Expectation-achievement congruence, Confidence in coping, Transcendence, Family group support, Social support, Primary group concern, Inadequate mental mastery, Perceived ill-health, Deficiency in social contacts and General well-being negative affect. The options on the three points are – Very much, To some extent, Not so much.

For positive statements score is -3, 2, and 1 respectively, and negative it is reverse. The sum of the 40 items gives overall Subjective well-being score. A minimum score of 40 and maximum of 120 is possible. Higher the score shows better the Subjective well-being and vice versa.

Procedure:

Permission to carry out the present research was obtained. The first author contacted all the students personally in their respective colleges during class hours and administered the tools. on the next day and completed the data collection in two sittings.

Results and Discussion

Table 1: Mean Difference Between Pre-test and Post-test of State and Trait Anxiety (N=50)

Variable	Mean Diff	SD Diff	't' value
State Anxiety	-7.489	2.526	-29.65***
Trait Anxiety	-7.070	3.877	-18.24***

*** P < 0.001

The perusal of Table 1 reveals that the mean difference between before and after practice of yoga on State anxiety -7.489, SD=2.526 and 't' value -29.65 is highly significant at P<0.001 level. This clearly

shows that yoga practice leads to a significant alleviation of State Anxiety level of the practitioner. The results are in agreement with those reported in Shashi, Chawla, Dhar, and Katiyar. (1991), Gupta & Gupta (2006), Gupta, Khera, Vempati, Sharma, and Bijalani (2006) and Jadhav and Havalappanavar (2007) who also reported decrease in state anxiety level significant at P<0.001 level as result of yoga practice. Kaliappan and Shanmugam (1982) and Venkatesh et al. (1994) found significant reduction in state anxiety level at P<0.05 level. From Table 1 it is also evident that there is a significant difference in Trait anxiety level of subjects before and after the practice of yoga. The mean difference -7.07, SD= 3.87, and 't' value -18.24 is highly significant at P<0.001 level. This shows that yoga practice is useful in decreasing the Trait Anxiety level of the practitioner. Therefore, the first hypothesis is accepted. The results of present study are in agreement with the findings of Shashi, Chawla, Dhar, and Katiyar (1991) Gupta & Gupta (2006), Gupta et al. (2006) and Jadhav and Havalappanavar (2007). Kaliappan and Shanmugam (1982) and Venkatesh et al.(1994) observed Trait Anxiety level reduction at P<0.05 level due to practice of yoga.

Table 2: Mean Difference Between Pre-test and Post-test of Overall Subjective Well -being and its Sub-dimensions (N=50).

Sl.No.Dimension	Mean Diff.	SD Diff.	't' value
1 General well-beingPositive affect	7.352	1.284	5.73***
2 Expectation achievement congruence	11.080	1.248	8.88***
3 Confidence in coping	7.662	1.270	6.03***
4 Transcendence	7.908	1.296	6.10***
5 Family group support	2.859	1.287	2.22***
6 Social support	5.578	1.347	4.14***
7 Primary group concern	5.859	1.202	4.88***
8 Inadequate mental mastery	8.446	1.543	5.47***
9 Perceived Ill health	4.071	1.501	2.71***
10 Deficiency in social contacts	6.906	1.282	5.39***
11 General well-being negative affect	6.117	1.394	4.39***
Overall Subjective well-being	9.955	0.953	10.44***

*** P < 0.001

Table 2 reveals that there is a significant difference between before and after the practice of yoga. The mean difference 9.955, SD = 0.953 and the 't' value 10.44 is highly significant at $P < 0.001$ level. This shows that practice of yoga is helpful in the improvement of subjective well-being of practitioners. Hence the second hypothesis is also accepted. The results of the present study support findings of Seaward (1999) who reported that habitual yogic meditation increases mental homeostasis characterized by increased concentration and awareness which helps in achieving a greater sense of well-being. Mahendran (2001) found that Yogic relaxation is effective in control and increases the subjective well-being ($t=10.78$, $P<0.05$ level). Desai and Vyas (2001) observed 10% improvement in hyper-tensive patients by following Yogic relaxation for four weeks. Kamakhya (2004) reported a significant improvement in well-being of the students after following Yoga Nidra daily 30 minutes for six months regularly. Gupta et al. (2006) noted that Naturopathy and yoga practices promote quality of life.

Further dimension-wise scores are as follows- on General well-being positive affect ($M=7.352$, $SD=1.284$, and $t=5.73$), Expectation achievement congruence ($M=11.080$, $SD=1.248$ and $t=8.88$), Confidence in coping ($M=7.662$, $SD=1.270$ and $t=6.03$), Transcendence ($M=7.908$, $SD=1.296$ and $t'= 6.10$), Family group support ($M=2.859$, $SD=1.287$ and $t'=2.22$), Social support ($M=5.578$, $SD=1.347$ and $t'=4.14$), Primary group concern ($M=5.859$, $SD=1.202$, and $t'=4.88$), Inadequate mental health ($M=8.446$, $SD=1.543$ and $t'=5.47$), Perceived ill health (4.071 , $SD=1.501$, and $t'=2.71$), Deficiency in social contact ($M=6.906$, $SD=1.282$ and $t'= 5.39$) and on general well-being positive affect ($M=6.117$, $SD= 1.394$ and $t'=4.39$). All these scores are significant at $P<0.001$ level. This indicates that there is a significant difference between

before and after the practice of yoga. It implies that yoga practice is useful in the enhancement of Subjective well-being of the practitioner. Malathi et al. (2000) found a significant improvement in 9 out of 11 (except family group support and social support) factors of Subjective well-being of the practitioners after following four months yoga practice regularly. Gopukumar and Hussain (2002) observed that meditation practice for forty days brought a significant improvement in confidence, coping, transcendence, inadequate mental mastery, family group support, and deficiency in social contacts aspects of the subjective well-being of the students.

References

- Bhushan, L. I. (1998). Yogic Lifestyle and Psychological Well-being. Paper presented as S. P. East West Psychology National Award lecture on 4 Jan. at Hyderabad.
- Desai, F., & Vyas, O. (2001). A study to determine the effectiveness of yoga, biofeedback and music therapy in management of hypertension. *The Indian Journal of Occupational Therapy*, 33, 3-7.
- Diener, Ed., Eunkook, S., & Shigehiro, O. (1997) Recent Findings on Subjective Well-being. *Indian Journal of Clinical Psychology*, 24, 25-41.
- Gupta, K., Hinger, A., Mittal, U., & Pareek, S. (2007). Impact of yoga and naturopathy on the relationship of stress and life satisfaction; A study of patients with depression. *Nisargopachar Varta* March, 11-24.
- Gupta, U., & Gupta, B.S. (2006). Effects of yoga-based meditation on psychophysiological health of coronary patients. *Indian Journal of Clinical Psychology*, 33, 21-27.
- Gupta, N., Khera, S., Vempati, R.P., Sharma, R., & Bijalani, R.L. (2006). Effect of yoga based life style intervention on state and trait anxiety. *Indian Journal of Physiology and Pharmacology*. 50, 41-47.
- Gopukumar, K., & Hussain Ali, M. (2002). Meditation – A harbinger of subjective well-being. *Journal of Personality and Clinical Studies*. 19, 93-102.

- Jadhav, S.G., & Havalappanavar, N.B. (2007). Effect of yoga on state trait anxiety. *Psycho-Lingua*, 37, 53-57.
- Kaliappan, K.V., & Shanmugam, T.E.(1982). Somatic defence and anxiety reduction – A preliminary report. *Indian Journal of Applied Psychology*. 19, 34-36.
- Kamakhyia, K. (2004). Yoga nidra and its impact on students well-being. *Yoga Mimamsa*, 36, 71-76.
- Kuvalyananda, S., & Vinekar, S. L. (1968). Yogic Therapy, *Yoga Mimamsa*, Press.In Vishal, Singh, and Madhu (1987) *A Study of The Effect of Yogic Practices On Certain Psychological Parameters*. *Indian Journal of Clinical Psychology*, 14, 80-83.
- Mahendran, P. (2001). Relaxation training subjective well-being anxiety and memory on students.(2001) *20th International Conference on Frontiers in Yoga Research and Applications*. November 17 to 21.
- Malathi, A., Damodaran, A., Shah, N., Patil, N., & Maratha, S.(2000). Effect of yogic practices on subjective well-being. *Indian Journal of Physiology and Pharmacology*, 44, 202-206.
- Malathi A. Damodaran N., Shah G., Krishnamurthy, Nama-Joshi P. & Ghodake S. (1998). Psychological Changes at the time of Examination in Medical Students Before and After the Practice of Yoga and Relaxation. *Indian Journal of Psychiatry*, 40, 35-40.
- Nagpal. R. & Sell. H. (1985). Subjective Well-being. *Regional health paper*. SEARO, No.7, New Delhi, World Health Organization.
- Ray, U.S., Mukhopadhyaya, S., Purkayastha, S.S., Asnani, V., Tomes, O.S., Prashad, R., Thakur, L., & Selvamurthy, W. (2001). Effect of yogic exercises on physical and mental health of young fellowship course trainees. *Indian Journal of Physiology and Pharmacology*. 45, 37-53.
- Setterlind, S. (1983). Relaxation training in School : Review of research and empirical studies.Goteborg, Sweden : Acta Universities Gothoburgensis.
- Seward, B.L. (1999). Managing Stress : Principles and Strategies for Health and Well-being, Sadbury, MA : Jones and Barlet.
- Shashi, G., Chawla, H.M., Dhar, N.K., & Katiyar, M. (1991). comparative Study of Progressive Relaxation and Yogic Techniques of Relaxation in the Management of Anxiety Neurosis. *Indian Journal of Psychiatry*. 33, 27-32.
- Spillberger, C. D. (1966) Theory and Research on Anxiety. In C. D. Spillberger (Ed). *Anxiety and Behaviour*, N. Y. Academic Press. 3-20.
- Spielberger C.D., Gorsuch R. & Luchene R. (1970). *State – Trait Anxiety Inventory Manual*. Palo Alto, CA : Consulting Psychologists Press
- Venkatesh, S., Pal, M., Negi, B.S., Varma, V.K., Sapru, R.P., & Verma, S.K. (1994). A Comparative Study of Yoga Practitioners and Controls on certain Psychological Variables. *Indian Journal of Clinical Psychology*, 21, 22-27.
- Vicente Pedro. (1987). Role of Yoga Therapy in Anxiety, Neurosis and Depression. *Yoga Mimamsa*, XXVI, 1-14.

Received: February 28, 2008

Revision Received: March 20, 2008

Accepted: September 24, 2008

Jadhav, S.G., Sr. Lecturer, Dept. of Psychology, Karnatak Arts College, Dharwad – 580 001.

Havalappanavar, N.B., PhD, Professor, Dept. of Psychology, Karnatak University, Dharwad – 580 003.

This Research paper is presented in the 12th International and 43rd National Conference of the Indian Academy of Applied Psychology, 2008, held In the Department of Applied Psychology, University of Calcutta, Kolkata, from 7-9 February 2008.