



ISSN Print: 2394-7500
ISSN Online: 2394-5869
Impact Factor: 5.2
IJAR 2016; 2(6): 330-331
www.allresearchjournal.com
Received: 13-04-2016
Accepted: 16-05-2016

Dr. R Kanthanathan
Assistant Professor,
Department of Physical
Education, College of Dairy
Science and Technology,
KVASU, Mannuthy, Thrissur,
India.

Dr. Vinaya C Damu
Assistant Professor,
Department of Physical
Education, College of
Veterinary and Animal
Sciences, KVASU, Pookode,
Wayanad, India.

Correspondence
Dr. R. Kanthanathan
Assistant Professor,
Department of Physical
Education, College of Dairy
Science and Technology,
KVASU, Mannuthy, Thrissur,
India.

Effect of asanas on anxiety in non-insulin dependent diabetes mellitus (NIDDM) patients

Dr. R Kanthanathan, Dr. Vinaya C Damu

Abstract

Effect of asanas on anxiety in non-insulin dependent diabetic patients was examined. Forty male diabetic patients from Coimbatore aged between 45 to 55 years were selected as subjects randomly. The subjects were equally divided into control group and experimental group. Asanas was assigned for twelve weeks to the experimental group. The control group was not allowed to participate in the programme. To all the subjects a pre-test and a post-test data were collected through the administration of four point scale by Beck Anxiety Inventory. The data collected from the subjects through inventory were statistically analyzed with 't' ratio to find out the significant difference among experimental and control group on anxiety. The analysis reveals that the asanas practice significantly reduced the anxiety level of non-insulin dependent diabetic patients (NIDDM).

Keywords: Anxiety, Non-Insulin, Dependent Diabetes Mellitus.

Introduction

According to a survey, India will be the world's diabetes capital. In Indian diabetic account the type 1 diabetes accounts for 5-10% and most common Type II accounts for 90-95%. The ratio between NIDDM and IDDM is 3:1. During pregnancy, 2-5% of women develop gestational diabetes, which disappears after their babies are born. In our country 50% of NIDDM patients remain undetected and they are presented with most complications. The number of diabetics which was 19 million in 1995 would go up to 57 million by 2025, a rise of nearly 300%. (McCarty and Zimmet, 1995) [4]

The World Health Organization estimates that mortality from diabetes and heart disease cost India about \$210 billion every year and is expected to increase to \$335 billion in the next ten years. Various studies have shown that the high incidence of diabetes in India is mainly because of sedentary lifestyle, lack of physical activity, obesity, stress and consumption of diets rich in fat, sugar and calories.

Anxiety is one of the greatest problems of modern society. Cultural conflicts, economics and industrialization add to the problem of man, thus increasing the anxiety level. Anxiety refers to that emotional state of mind where a fear of danger or loss of suffering is a prominent feature. It generally arises as a result of fear for something unknown which creates tension and disturbance (Morgen, 1985) [3]

The aim of asanas is to produce physiological balance in the different systems working in the human body. So that it can possess the best organic vigour. The other aim is training the spinal cord and the digestive system can work elastic. Asanas are simple actions for keeping the internal and external body in good health. Asanas give sufficient exercise to the internal organs of the body. Consequently, an individual can maintain good health and longevity of life. (Kuvalayananda, 1933) [1].

Yogasanās are not only to develop muscles and the body but mainly to regulate the proper activities of all the internal organs and glands to affect the nervous system which in turn controls the over well being of muscles to a greater degree than we actually suppose. (Devi, 1969) [2]

Kosuri and Sridhar (2009) [5] reported that participation of subjects with type 2 diabetes mellitus in yoga practice for 40 days resulted in reduced BMI, improved well-being and reduced anxiety.

Hence it was proposed to find out the effect of 12 weeks asanas on anxiety in non insulin dependent diabetes mellitus patients.

It was hypothesized that 12 weeks of asanas practice significantly reduce anxiety in non insulin dependent diabetes mellitus (NIDDM) patients.

Methodology

This study is designed to determine the effects of 12 weeks of asanas on anxiety in non insulin dependent diabetes mellitus patients. The subjects of the study were 40 diabetic patients. These subjects were randomly assigned to two groups that is an experimental group and a control group. Each group consists of 20 subjects. The experimental group had undergone asanas practice in alternate days for a period of 12 weeks. Ardha Chakrasana, Padhahastasana, Paschimottanasana, Ustrasana, Gomukhasana, Bhujangasana, Salabhasana, Navasana, Sarvangasana and savasana were

presented in the training schedule. Intensity of the asanas was escalating after every two weeks by increasing the duration of asanas. The control group did not involve in any activity. Before and after the training anxiety level was assessed through the administration of Beck Anxiety Inventory which has consists of 21 common symptoms of anxiety. This inventory consists of 4 point scale such as not at all, mildly, moderately and severely. The points for the above responses are 0, 1, 2 and 3 respectively. The collected data were statistically analyzed by ‘t’ ratio. 0.05 level of confidence was fixed to test the level of significance.

Analysis of Data and Interpretation of Results

The data was collected before and after the training period for both control and experimental groups on anxiety. The data was statistically analyzed by ‘t’ ratio. The level of significance was fixed at 0.05 level of confidence.

Table 1: Computation of ‘t’ ratio on Anxiety of Experimental Group and Control Group

Groups	Pre – test mean	Post – test mean	Mean Difference	Standard Error	‘t’ ratio
Experimental Group	31.65	29.40	2.25	0.289	7.78*
Control Group	32.60	32.25	0.35	0.449	0.78

* Significant at 0.05 level for the degrees of freedom 1 and 19, 2.09

Table shows that the ‘t’ ratio on anxiety of experimental group was 7.78. Since the value was higher than the required table value of 2.09, it was found to be statistically significant at 0.05 level of confidence for degrees of freedom 1 and 19. And the obtained ‘t’ ratio between pre and post test of control group 0.78 was lesser than the required table value of 2.09, found to be not statistically significant.

This significant improvement may be due to the effect of 12 weeks of training on experimental group. The results of this study indicate that there was a significant reduction in anxiety of the non insulin dependent diabetes mellitus patients (experimental group) after 12 weeks of asanas practice. So the hypothesis is accepted.

The results of this study indicate that there was a significant reduction of anxiety in NIDDM patients (experimental group) after twelve weeks of asanas practice.

The above finding of the present study is in agreement with the studies conducted by Lavey, *et al.* (2005) [9], Gupta, *et al.* (2006) [6], Rahimi and Bavaqar (2010) [7] and Javnbakht *et al.* (2009) [8].

Results of the study indicate that asanas practice significantly reduce the anxiety of non-insulin dependent diabetes mellitus (NIDDM) patients.

Reference

1. Kuvalayananda Swami. Scientific Survey of Cultural Poses, Yoga Mimamsa. 1933; IV(3):232-246.
2. Devi Indira. Yoga the Technique of Health and Happiness” (Bombay: Jaico publishing house, 1969, 20.
3. Morgan William P. Limits of Human Performance, New York: Human Kinetic Publishers Inc, 1985.
4. McCarty, Zimmet. (WHO Study group) “Diabetes in America National”, 2nd Edition compiled and published by National Institute of Diabetes and Digestive and Kidney diseases NIH publication, USA, 1995, 95-1468.
5. Kosuri Madhu, Sridhar Gumpeny R. Yoga Practice in Diabetes Improves Physical and Psychological Outcomes, Published in Metabolic Syndrome and Related Disorders, 2009, 7(6).
6. Gupta Nidhi *et al.* Effect of Yoga Based Lifestyle Intervention on State and Trait Anxiety, Indian J Physiol Pharmacol. 2006; 50(1):41-47.
7. Rahimi Eskandar, Bavaqar Sosan. Effect of Yoga Based Lifestyle Intervention on State and Trait Anxiety, British Journal of Sports Medicine. 2010; 44:i68-i69.
8. Javnbakht M *et al.* Effects of yoga on depression and anxiety of women”, Complementary Therapies in Clinical Practice 2009; 15(2):102-104.
9. Lavey Roberta *et al.* The effects of yoga on mood in psychiatric inpatients, Psychiatric Rehabilitation Journal. 2005; 28(4):399-402

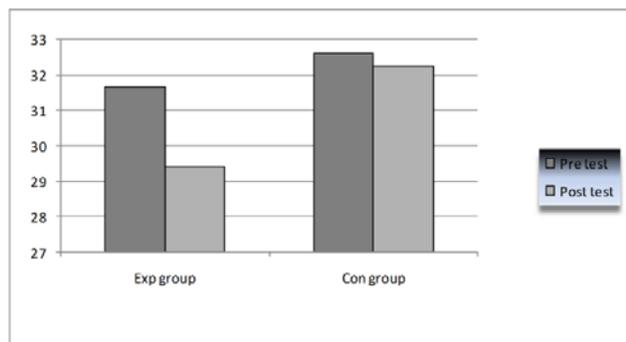


Fig 1: Bar diagram showing the mean values of anxiety for Experimental and control group

Conclusion

With the limitation of the study, the following conclusion is drawn.