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Exploring the therapeutic effects of yoga and its ability to improve the well being of type- 2 diabetic mellitus

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Abstract

Now a day's diabetes becoming as a huge burden worldwide, Diabetes is a metabolic disorder where person has high blood glucose either because of insulin production is inadequate, or because the body cells do not respond properly to insulin or both. And it is a leading cause for other health complication like diabetic foot, frozen shoulder, cardiovascular disease etc, recent studies shows that therapeutic approach yoga asana prevent or reduce the impact of diabetes mellitus. Mental health refers to emotional and cognitive well-being. A person who enjoys good mental and emotional balance does not have a mental disorder. According to the experts, for human physical Health refers to 'good body health or fitness' which is due to regular exercise or physical activity good nutrition and adequate.

Keywords: Ability to improve the well being of type- 2 diabetic mellitus

Introduction

Yoga has always been an essential part of life in traditional system of treatment, as it includes physical activities like several postures in the form of Asana and breathing exercises in the form of Pranayama which can play a vital role to prevent such lifestyle related diseases. Rosenthal M *et al.* (1983) physical exercise and regular activities can enhance insulin sensitivity.

In the ensuing decades opponents to exercise therapy would change the irattitudes due to some of the first research in the area of exercise physiology. A group French researchers led by Chapeau and Kaufman (1887) measured the uptake of glucose by working muscle and found it to be higher than resting muscle. In additional reduction in blood glucose levels with muscular exercise was apparent. With this new scientific evidence, the therapeutic benefits of exercise, so long held by Bouchard at, became common practice in other clinics for diabetics.

Yogic Interventions as a part of diabetes mellitus prevention and therapy has gained in popularity over the past few decades as more research has become available. However, its use is definitely not a novel approach in the management of this disease. According to the American College of Sports Medicine (2002), indications of the effectiveness of exercise in reducing glycosuria have been evident since 600 B.C. when an East Indian text, the Shushruta noted the reduction in the sweetness of urine from diabetic patients following exercise.

Physical Health

According to the experts, for human physical Health refers to 'good body health or fitness' which is due to regular exercise or physical activity good nutrition and adequate.

Mental Health

About mental health World Health Organization says that it is a "state of well-being in which the individual realizes his or her own abilities, can cope with normal stresses of if, can work productivity and fearfully and is able to make a contribution to his or her community".

The essential dimensions of 'health' would be the achievement of optimal growth and development, reflecting the full expression of one's genetic potential, maintenance of the structural integrity and functional efficiency of body tissues necessary for an active and productive life, mental health, ability to with stand the inevitable process of ageing with functional impairment and minimal disability and ability to fight against disease (Kristal *et al.*, 2005).

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Technology has evolutionally changed the man’s life style. Because of Increased comfortable standard l living peoples becoming submerged by a world full of concentration with lots of health problems and recurrent crisis.

Well-Being

Doctor halberd L, Dunn first used the term of ‘wellness’, in the year of 1961 he published a small booklet “High Level Wellness” and this term much more widely used in north America than in UK

Mckinley, Health center university of Illinois Wellness says that is a “state of optimal well being that is oriented towards maximizing an individual’s potential, this is a life-long process of moving towards enhancing your physical intellectual, emotional, social, spiritual and environmental well-being” (Kosuri and Sridhar 2009).

Delimitations of the study

The following were taken into consideration as delimitations study is de

1. The study was confined to type-2 diabetes mellitus patients men and women only
2. The study was confined to 30 male and female citizens of different cites of Karnataka state will be randomly selected as subjects
3. The age of the subjects were ranged from 30 to 60 years only
4. The training schedule is delimited to three months.

Limitations of the study

1. The food habits, life style and climatic condition taken in to consideration of the limitation of the study.
2. The performance of the subject expected as limitation’
3. Heredity factor of the subjects is the limited.

Results and discussion

Overview

The prevalence of non-communicable diseases like obesity, diabetes mellitus, and hypertension which is also called as the lifestyle diseases; it is mainly caused by unhealthy diets, sedentary lifestyles, lack of Exercises and stress which leads to high blood pressure, high cholesterol, diabetes and obesity. All these factors leads to long term disease process and increases the mortality rates, therefore these diseases should be checked before it turned out to be chronic disease. Mostly these diseases is seen in adult women’s where abdominal and gluteal obesity is seen more, as obesity is the main cause for

all the non communicable disease.

Level of significance

The probability level below which the hypothesis is rejected is termed as the level of significance. The F ratio obtained by analysis by covariance were compared at 0.05 level of significance in analysis of covariance of F ratio 3.1 is needed for significance at the 0.05 level of confidence.

Computation of Analysis of covariance and t test

The following tables illustrated statically result of influence of yoga therapy and systolic, diastolic blood pressure, HbA1 c, heart rate, Body mass index among the people with type 2 diabetes mellitus were given in the following tables (1).

Table 1: Body mass index among the people with type 2 diabetes mellitus were given in the following tables

| S. No | Age | Gender | ID |
|-------|-----|--------|------|
| 1 | 57 | M | No |
| 2 | 49 | M | 4973 |
| 3 | 36 | M | 4974 |
| 4 | 45 | M | 4130 |
| 5 | 59 | M | 4982 |
| 6 | 53 | M | 4741 |
| 7 | 41 | M | 253 |
| 8 | 40 | M | 2372 |
| 9 | 46 | M | 2974 |
| 10 | 48 | M | 4087 |
| 11 | 51 | M | 2135 |
| 12 | 57 | M | 2670 |
| 13 | 58 | M | 3104 |
| 14 | 34 | F | 1822 |
| 15 | 52 | F | 4134 |
| 16 | 55 | F | 717 |
| 17 | 54 | F | 1900 |
| 18 | 47 | F | 4980 |
| 19 | 47 | F | 1621 |
| 20 | 35 | F | 4984 |
| 21 | 50 | F | 4986 |
| 22 | 49 | F | 4353 |
| 23 | 43 | F | 5004 |
| 24 | 48 | F | 5008 |
| 25 | 51 | F | 5007 |
| 26 | 57 | F | 1838 |
| 27 | 59 | F | 5014 |
| 28 | 40 | F | 1243 |
| 29 | 58 | F | 1822 |
| 30 | 58 | F | 224 |

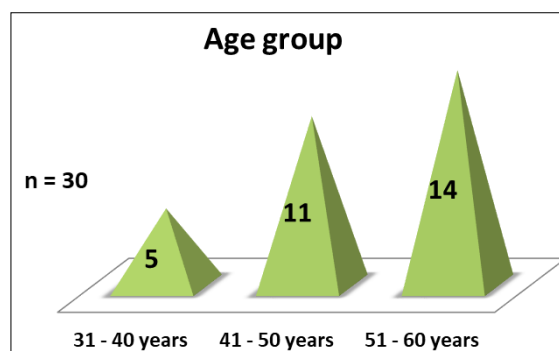


Fig 1: Age group

A total 30subjects diagnosed with type 2 diabetes were involved in the study out of which 43% were males and 57% were females. Among 30 subjects, irrespective of the gender,

17 % of the subjects were 31-40 yrs of Age, followed by 37 % were of 41- 50 yrs and 46 % were 51-60 years of age group.

Conclusion

1. The physiological measurement – Height and weight found very much important to find out the body Mass index.
2. 12 weeks of yoga therapy resulted significant decrease in HbA1c ($p=0.04$), There is 1.2 units reduction. It can be concluded that yoga therapy is plays a very important roll to reduce blood sugar level in type -2 diabetic patients
3. Those who have attended regular yoga therapy classes there is a good reduction in their blood sugar Level (ranging from 0.1 to 4.3 units) It is concluded that regular practice of yoga therapy will be helpful to find out good result.
4. Those who are irregular in yoga therapy classes there is reduction in their blood sugar level (0.6units) Ranging from 0.2 to 2.2 units, it can be concluded that irregular practice of yogasana may not get Good result
5. In age group of 50, there is a significant decrease in 1.2 units of HbA1c, it can be concluded that below 50 years of age people can get good result through yoga therapy.
6. In the age group of above 50 there is a significant decrease in 0.6 units, but when compared below 50 Years of age group, it can be concluded that above 50 years diabetic mellitus patients get slow Progress in their blood sugar level.

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