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Original Research Paper

Physical Education

EFFECT OF YOGASANA ON BLOOD SUGAR MALE PATIENTS IN PASCHIM MEDINIPUR DISTRICT

SK Rasid Mahammad

Department of Physical Education, Ghatal Rabindra Satabarshiki Mahavidyalaya, Ghatal, Paschim Medinipur, W.B.

ABSTRACT

INTRODUCTION:- The word 'yoga' is derived from the roots of Sanskrit 'Yuj' which means to join, to attach, to bind, yoke and a concentrate or one attention. Practice of Yoga would directly contribute to human resource development and improvement in the quality of life by developing their fitness (Physical, mental, emotional as well as spiritual).

PURPOSE :- purpose of the study was to find out the effect of Yogasana on blood sugar male patients in paschim medinipur district.

MATERIALS & METHODS:-To achieve the purpose, total forty (40) male blood sugar patients of paschim medinipur district age ranging between 45-50 years were randomly selected for the study. The subjects were given the six (6) weeks yoga training in the paschim medinipur yoga centre. The training schedule was fixed in the morning session as well as in the afternoon session minimum time duration 45-60 minutes per session with various types of yogasanas including slow warming up, warm down and resting time between and set of the exercises. A pre-test mean score was taken on all the selected blood sugar male patients and the scores were recorded. Similarly, after six weeks of yoga training a post-test data was taken and scores were recorded. The training was given based on the prepared schedule for six (6) weeks with the direct supervision of the scholar. The Independent Paired-'t' test was conducted for evaluate the data and the level of significance is fixed at 0.05 level of confidence.

RESULTS & DISCUSSION:-The data was analyzed statistically by computing mean, standard deviation and't' test. It was observed that the pre-test mean score of the blood sugar male patients were 347.60 which are significantly changed in post-test that is 142.50. It is also evident that the calculated value of the variable is more than the table value at 0.05 level of significant. So the result is significant. The hypothesis is accepted since there was a significant improvement in blood sugar level of the male patients due to 6 weeks of yoga training.

CONCLUSION:- On the basis of the obtained result , the following conclusion may be drawn…..

The Post-test mean score of the blood sugar male patients was better than the Pre-test mean score. So, the blood sugar level came down to normal due to six weeks of yoga training and the result was significant.

KEYWORDS : Yogasana, Physical fitness variables, school going students.

INTRODUCTION:-

The word 'yoga' is derived from the roots of Sanskrit 'Yuj' which means to join, to attach, to bind, yoke, and a concentrate or one attention. It also means Union. The literal meaning of the word 'Yoga' is 'yoke'. It means for uniting the individual spirit with the Universal spirit or God. Yoga means the Experience of oneness or unity with inner being. It is a science by which the individual approaches truth. Yoga is not religion it is a method by which one obtain Control of one's latent powers. It is the means to reach complete Self-Realization. Yoga is a reduction of one's mental process, along with the physical.

Yoga has been a spiritual discipline which focuses on bringing harmony between mind and body. It is an art and science of healthy living. The holistic approach of yoga is well established as it brings harmony in all walks of life and thus, known for disease prevention, health promotion and management of many lifestyle-related disorders. This is done through the practice of Asana, Pranayama, Mudra, Bandha, Shatkarma and Meditation. According to the great sage Patanjali, the withdrawal of sense organs from their worldly objects is yoga.

The word "YOGA" at once reminds us the knowledge of the self. It emphasizes on "Know the Self". It is nothing but the improvement of the body and mind. It is the means of attaining healthy body, mental strength, tranquileness of the mind. It is the methodical effort to attain perfection through the controlling of body and mind. "A healthy mind resides in a health body". Human beings always want sound body either taking medicine or practicing yoga. The question arises which of the two is most important. Medicine is no doubt for human being as it cures any diseases in no time and relieves human beings Fran painful situation for the time being but it has its side effects. Medicine affects the organs like heart, lungs, brain and blood vessels and thereby creates another problem. In nutshell, medicine is the mother of other diseases in human body. Man is a rational being. He thinks pros and cons. He took "yoga" as alternative medicine as it has many advantages.

BLOOD SUGAR:-

Blood Sugar is the third most common chronic illness in most of the developing and developed nations and one of the leading causes of death. An estimated 11 million people in the United States were diagnosed with diabetes in the year **2000 (Boyle *et al.*, 2000)**, and approximately 90% of those individuals were diagnosed with Type 2 diabetes. It has been estimated that this figure will increase by 165% to 29 million by the year 2050, reflecting a 7.2% prevalence rate. Such an increase is hypothesized to be the result of changes in demographic composition of the population, population growth, and increasing prevalence rates **(Boyle *et al.*, 2001)**. In modern medical practice a clear depiction of etiology and cure are not given. Many method of diabetes management are elaborated. At the same time holistic therapists claim that diabetes is a curable disease. In the context of its dubious etiology and inconclusive cure method the present study aims at an elaborate investigation on the efficacy of certain cure methods.

Personal and public health consequences associated with blood sugar (type 2 diabetes) are profound. For example, individuals with diabetes experience a greater number of health complication and are at higher risk for depression than are their medically well counterparts **(Anderson, Freeland, Clouse, & Lustman, 2001)**. On a more global scale, the economic impact of diabetes is staggering; in 1997, the direct and indirect costs associated with diabetes in the United States were an estimated $98 billion **(Ray, Thamer, Gardner, & Chan, 1998).** Thus, the increasing prevalence of diabetes in the United States represents a critical public health problem

with respect to health care use and resources.

CAUSES OF BLOOD SUGAR

Blood Sugar can be caused by viral or bacterial damage to the pancreas and the insulin producing cells and may result from an autoimmune dysfunction. It also has a substantial hereditary component, but other factors which are unknown must be implicated in the onset of diabetes such as dietary factors. Stress is one of the causative factors in diabetes. It is often observed that stressful state aggravates diabetes.

THE ROLE OF INSULIN:-

Mechanism of insulin releases in normal pancreatic beta cells (i.e., glucose dependence). Insulin production does not depend on blood glucose levels; insulin is stored pending release. Since insulin is the principal hormone that regulates uptake of glucose into cells (primarily muscle and fat cells) from the blood, deficiency of insulin or its action plays a central role in all forms of diabetes.

Most of the carbohydrates in food are rapidly converted to glucose, the principal sugar in blood. Insulin is produced by beta cells in the pancreas in response to rising levels of glucose in the blood, as occurs after a meal. Insulin makes it possible for most body tissues to remove glucose from the blood for use as fuel, for conversion to other needed molecules, or for storage. Insulin is also the principal control signal for conversion of glucose (the basic sugar unit) to glycogen for storage in liver and muscle cells. Lowered insulin levels result in the reverse conversion of glycogen to glucose when glucose levels fall — though only in the liver not muscle tissue. Higher insulin levels increase many anabolic (building up) processes such as cell growth, cellular protein synthesis, and fat storage. Insulin is the principal signal in converting many of the bidirectional processes of metabolism from a catabolic to an anabolic direction.

If the amount of insulin produced is insufficient, if cells respond poorly to the effects of insulin (insulin insensitivity or resistance), or if the insulin itself is defective, glucose is not handled properly by body cells (about 2/3 require it) nor stored appropriately in the liver and muscles. The net effect is persistent high levels of blood glucose, poor protein synthesis, and other metabolic derangements.

Modern man has been suffering from neurosis. So, yoga is the only panacea for the human beings. In the present era of the industrial development, and material pursuit, man is breathing polluted air which is the cause of cough, cold, blood sugar and asthma. But a man can get solution through yogasana. It helps the man to gain resistance power and normalize blood circulation. It also helps cleaning of blood veins and pumping of purified blood.

All over the world scientists have extensively studied Yoga and claimed that it increases longevity **C Marugeson et al. 2000; Mc Calfrey etal. 2005; Nagarathan and Nagendra 2003 and patel 1975**). It has therapeutic and rehabilitative effects **(Raubetal 2003. Schindf et al. 1998 and Selvam urthyetal 1999.**

PURPOSE OF THE STUDY:-

Purpose of the study was to find out the effect of Yogasana on blood sugar male patients in paschim medinipur district.

HYPOTHESIS:-

It is hypothesized that Yogasana helps to control the Blood Sugar significantly of Male Patients in Paschim Medinipur District.

METHODOLOGY:-

Selection of subjects:

Total forty (40) subjects were selected randomly from the different areas of Paschim Medinipue district age ranging between 45 to 50 years. They were given the special yoga training for six weeks in the Midnapur yoga centre. After six weeks, forty (40) subjects will be selected on the basis of performance. The selection of the subjects was made by the two expert coaches who would give the training to the subjects. The data was collected before and after the yoga training.

Procedure:

Total forty (40) subjects were selected randomly from the different areas of Paschim Medinipue district age ranging between 45 to 50 years. A pre-test was taken on all the selected blood sugar male patients and the scores were recorded. Similarly, after six weeks of yoga training a post-test data was taken and scores were recorded. The training was given based on the prepared schedule for six (6) weeks with the direct supervision of the scholar. The training schedule was prepared with the consultation with the coaches who were engaged by the university administrators. These two coaches will be assessing the patients two times i.e before the training is imparted and after the training is over.

Experimental Design:-

Random group design was followed for this study and the subjects were randomly selected. Six (6) weeks of yoga training were applied on the subjects. The data was collected before and after the training.

Statistical Techniques:-

Pearson's product moment correlation has been used for establishing the reliability of the data collected. To find out the significant difference between pre-test and post-test of each data the Mean, SD and t-ratio will be calculated. The level of significant will be set at 0.05.

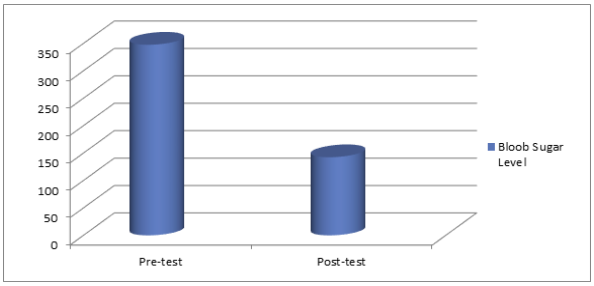
ESULTS AND DISCUSSION:-

The result of the study is discussed under the following table with the graphical presentation. Table shows that the significant difference between pre-test and post-test mean scores of blood sugar male patients in Paschim Medinipur District.

TABLE

Significant Difference between Pre-test and Post-test mean score on blood sugar level of male patients after six weeks:-

Variables	Test	Mean	SD	N	t- Ratio	Sig.
Blood sugar Level	Pre - test	347.60	51.22	40	21.07	0.05*
	Post - test	142.50	45.15	40		



Graph Showing the Significance Difference between Pre-test and Post-test mean score on blood sugar level of male patients after six weeks:-

CURE OF DISEASES THROUGH YOGIC EXERCISE/ASANA:-

Yogasana has been practiced for thousands of years for keeping the human body free from various types of diseases. Many incurable and long standing diseases can be cured through yoga. The yoga treatment is perfectly scientific. It is an auto-treatment method. The common beneficial effects of yogasana on various diseases are given below……

Sl. No.	DISEASE	YOGASANA
1	**T.B and Asthma**	*Siddhasana,Matsyasana,Sarvangasana,Ardha- Matsyasana, Supta-Vajrasana, Sheershasana.*
2	**Diabetes**	*Siddhasana,Sarvangasana,Matsyasana, Shershasana, Halasana, Chakrasana.*
3	**Pain in the Ear, Eyes and Nose**	*Siddhasana, Sarvangasana, , Matsyasana, Ardha- Matsyasana.*
4	**Painful Menstruation and disease related to the utorus overy**	*Siddhasana, Sarvangasana, , Matsyasana, Ardha- Matsyasana.*
5	**Chronic constipation**	*Halasana, Mayoorasana, Dhanurasana*
	Disorder of the digestive system	*Sarvangasana, Paschimottanasana, Vajrasana and Padmasana.*
6	**Dysentery**	*Padmasana and kukkutasana*
7	**Obesity**	*Paschimottanasana, Mayoorasana, Dhanurasana, Supta-Vajrasana and, Ardha-Matsyasana.*
8	**High blood pressure**	*Siddhasana,Vajrasana, Padmasana , Matsyasana and Shavasana*
9	**Low blood pressure**	*Siddhasana,Sarvangasana,Halasana, Mastyasana and Shalabhasana.*
11	**Disorder of the digestive system.**	*Sarvangasana, Vajrasana, Paschimottanasana and Padmasana.*
12	**Headache**	*Sarvangasana,Paschimottanasana,Halasana and Shavasana.*
13	**Hernia**	*Sarvangasana, , Matsyasana,Supta-varjasana.*
14	**Heart Disease**	*Siddhasana,Shavasana and Budda-Padmasana.*
15	**Drowsiness**	*Kukkutasana,Bakasana,Bhujangasanaand Sheersasana.*
16	**Lumber pain**	*Vakasana,Halasana and Suryanamaskara.*
17	**Paralysis**	*Padmasana, Veerasana, Siddhasana,Matsyasana and Mastyendrasana.*
18	**Excitement Hysteria**	*Padmasana,Vakarasana,Ardha-Matsyaendrasana and Vajrasana.*
19	**Leprosy**	*Padmasana, Veerasana, Siddhasana, Gomukhasana and Mastyendrasana.*
20	**Blood impurities or loss of blood**	*Bakasana, kukkutasana, Sarvangasana,Sheersana and urukshasana.*

DISCUSSIONS:-

It was observed from the above table that the pre-test mean scores of blood sugar male patients was 347.60 which is are slightly changed in post-test that is 142.50. It is also evident from the above table that the calculated value of the variable is more than the table value at 0.05 level of significant. So the result is significant. The hypothesis is accepted since there was a significant improvement in blood sugar level due to 6 weeks of yoga training. Yoga involves and includes eight paths (i.e. **Astanga yoga – yama, niyama, asana, pranayama, pratyahara, dharana, dhyana and Samadhi.**). The astanga yoga is based on the idealistic approach, a real road to attain good consciousness, self confidence and self-concept. Meditation helps the individual to overcome these emotions to facilitate a calm, peaceful mind and healthy and stress free body. It promotes relaxation, develops self-concept, self confidence, positive attitude and social ability and reduces stress as well as anxiety. Excessive stress and anxiety hamper the total fitness. So, stress is one of the causative factors in diabetes. It is often observed that stressful state aggravate diabetes.

An estimated 11 million people in the United States were diagnosed with diabetes in the year 2000 **(Boyle *et al.*, 2000),** and approximately 90% of those individuals were diagnosed with Type 2 diabetes. Yoga will help them to cope and emerge stronger and more physically, mentally and emotionally fit. Finally, it is clearly seen that the blood sugar level came down to normal level due to six weeks of yoga training. Hence, the researcher was motivated to take up the present study.

CONCLUSION:-

Many research studies have been done on the various types of training programmes. It is proved that six weeks (6) yoga training programmes have a significant role on blood sugar male patients in Paschim Medinipur District.

On the basis of the results obtained from the present empirical investigation and within the limitation, the following conclusions may be drawn.

The Post-test mean score of the blood sugar male patients were better than the Pre-test mean score. So, the blood sugar level came down to normal due to six weeks of yoga training and the result was significant.

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