Effect of yogic therapies on fasting blood sugar of Diabetic patients

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Abstract

The objective of the study was to find out the effect of yogic therapies on fasting blood sugar of diabetic patients. The investigator collected the data of sixty male testers (N=60) selected from Patiala district and the age of subjects 50 to 70years. Subjects were divided into two equal groups Group-A: Experimental (n1=30), Group-B: Control (n2= 30). The SPSS version 21.0 was used for all analysis. Shapiro -Wilk's and Analysis of Covariance was utilized to compare the means of the pre-test and the post-test. The level of criticalness was set at 0.05. It is evident from outcomes that significant differences were noted on fasting blood sugar variables between pre-test and post-test. It is concluding that there is a significant difference between the male experimental and male control group by controlling the covariates. Moreover, the Partial Eta Squared value showed that three months of yogic training has 13.4%positive impact on the experimental group.

Keywords: yoga, Diabetic, Fasting blood sugar etc.

INTRODUCTION

Diabetes mellitus doesn't have a solitary definition. Diabetes is a complex constant disease that causes to interfere in normal metabolism (proteins, fat and carbohydrates). Diabetes has Complication on Microvascular and Macrovascular (Asadi & Dehghan, 2010). In other words, Diabetes is a metabolic illness (Amita, et al., 2009). Diabetes is the 4th foremost reason for worldwide death by the syndrome. The examination was conducted in 2009 by Aziminezhad which established that nearly 190 million people are with diabetes in the world and is predicted to be near 330 million in the year of 2025 (Azimi–Nezhad, et al., 2008). In the year of 2007, the top 7 nations with the largest total of diabetics were India (40.9 million), China (39.8 million), the United States (19.2 million), Russia (9.6 million) and Germany (7.4 million).In 2007, the five nations with the uppermost diabetes commonness in the adult population were Nauru (30.7%), United Arab Emirates (19.5%), Saudi Arabia (16.7%), Bahrain (15.2%), and Kuwait (14.4%)

(McArdle et al., 2010). In other words, diabetes mellitus cannot be cured but it can be controlled by other method such as yoga & pranayama, jogging, walking etc. (Leili et al., 2015).

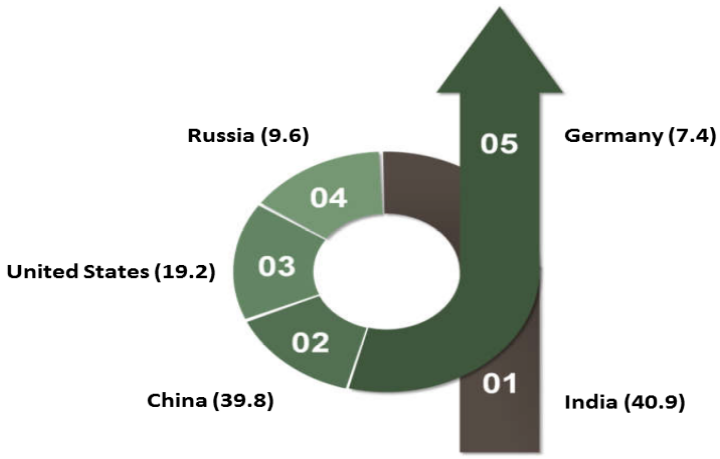

Figure. 1. Display that the top 5 nations with the largest amount of diabetics in the world.

Yoga is very beneficial for our health. In the event that we peep into the advantages of yoga, they are various. It enhances physical wellness, stretch, controls general prosperity, mental clarity and more noteworthy self-comprehension. Individuals of any age can do yoga and it can likewise be adjusted for individuals with incapacities or unique needs. The asanas upgrade muscle quality, coordination, adaptability and can keep our body fit control cholesterol level, decreases weight, controls pulse and enhances cardiovascular performance (Sonksen and Sonksen, 2000).

MATERIAL AND METHOD

Selection of testers

For achieving the purpose of investigation the investigator collected the data of sixty male testers (N=60) selected from Patiala district and the age of subjects 50 to 70years. Subjects divided into two equal groups Group-A: Experimental (n1=30), Group-B: Control (n2= 30).

Design of the investigation

Pretest-Posttest control group design was used to find out the effect of yogic therapies on fasting blood sugar of Diabetic patients in the present investigation.

Collection of data

Baseline data of each participant for the fasting blood sugar were measured in the laboratory of Department of Physical Education, Punjabi University Patiala (Punjab). Subjects were assessed two times during the study before and after the yogic training.

Training protocol

For the present investigation, the three months yogic training protocol consist of Kriyas (Kunjal Kriya, Neti, Kapalbhati & Agnisara), Suryanamaskara , Asanas (Kati chakra asana ,Supter vajar asan, Pawan mukat asana, Trikon asana, Vajar asana, Manduk asana, Gomukh asana, Ardha Matsyendr asana, Shashank asana & sava asana), Pranayamas (Nadi Shodhan , Anulom-Vilom , Bhramari , Shetli , Surya bedhi , uddyain band & Bhasrika), Om Chanting and yoga nidra.

Statistical technique

Statistical analyses were performed by using the SPSS for Windows version 21.0 software. Data is expressed as the Shapiro -Wilk's used for check the normality of the data and Analysis of Covariance was utilized to compare the means of the pre-test and the post-test. The level of criticalness was set at 0.05.

OUTCOMES

Table 1. Normal Distribution of Data on Fasting Blood Sugar of Male Experimental and Control Group

Group	Shapiro -Wilk's			Skewness	Std. Error	Kurtosis	Std. Error
	Statistic	Df	Sig.				
Male Experimental Pre-test	.962	30	.352	.248	.427	-.907	.833
Male Experimental Post-test	.937	30	.077	.561	.427	.101	.833

Male Control Pre-test	.965	30	.423	.428	.427	.448	.833
Male Control Post-test	.946	30	.135	..790	.427	.440	.833

* (p > 0.05 significant level)

Table-1. showed that the normal distribution of data on fasting blood sugar the p-value of male experimental and control groups in pretest/posttest was .352/.077 & .423/.135 >0.05 level of significance. When we are calculating the skewness and kurtosis values and their standard error both values were within the range of +/- 1.96. Therefore, it concluded that the data of experimental groups & control groups in pre-test & post-test were a little skewed and kurtotic approximately normally distributed in terms of Shapiro - Wilk's test, skewness and kurtosis in the range of +/- 1.96.

Table 2. Adjusted Post Test Means of Male Experimental and Control Group in relation to Fasting Blood Sugar Assessment

Group	Mean	Std. Error
Male Experimental Group	159.071[a]	.788
Male Control Group	162.595[a]	.788

a. Covariates appearing in the model are evaluated at the following values: Pretest = 164.1833.

Table 2. shows the results of the estimated marginal mean of the male experimental and control group was 159.071 & 162.595. The estimated marginal mean has been adjusted for the covariate. It simply means that the effect of the covariate i.e. pre-test is statistically removed.

Table 3. Analysis of Covariance of Comparison of Adjusted Post Test Means of Male Experimental and Control Group in Fasting Blood Sugar Assessment

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Pretest	305.106	1	305.106	18.962	.000	.250

Group	**141.363**	**1**	**141.363**	**8.785**	**.004**	**.134**
Error	917.160	57	16.091			

a. R Squared = .483 (Adjusted R Squared = .465) *Significant at 0.05 level

Table 3. shows the significant value in Group row. In this analysis, a pre-test is assumed to be covariate. The P-value .004 is less than ($p < 0.05$) and it is concluding that there is a significant difference between the male experimental and control group by controlling the covariates. Moreover, the Partial Eta Squared value showed that three months of yogic training has 13.4%positive impact on the experimental group.

DISCUSSION

It is directed that there is a significant difference between the male experimental and male control group by controlling the covariates. Moreover, the Partial Eta Squared value showed that three months of yogic training has 13.4% positive impact on the experimental group with respect to Fasting Blood Sugar. The P-value .000 is less than ($p < 0.05$). The outcome of the study was supported by Kudigram & Akanksha (2017) Effect of yoga therapy on fasting blood sugar and to study the distribution of anthropometric measures in type-2 diabetes.

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