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Impact of Yogic practices with and without Yogic Diet modification on pre-diabetes Adult Men in the General Population

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Abstract

The aim of this study is to examine the 'Impact of yogic practices with and without yogic diet modification on pre-diabetic adult men in the general population'. To accomplish this purpose, two hundred eighty-five 285 subjects aged between 30 to 40 years were invited from Chennai, 285 were screened randomly and assigned to three groups, each consisting of 95 subjects. Experiential group A (yoga practices with yogic diet), Experimental group B (yoga practices only), Control group C (without any form of practice but remaining in active rest). Experimental A and B were conducted for five days of yoga practiced for 1 hour in the morning, 6 to 7 am. Experimental group A strictly followed a yogic diet. Each group was tested for Sleep quality using the Pittsburgh Sleep Quality Index (PSQI) sleep scale. The data pertaining to the variables collected from each group before and after the training period were statistically analyzed using ANOVA test and independent one-way ANOVA to determine the significant difference and tested at 0.05 level of confidence. The study discloses that the Experimental group showed a significant difference in prevention with and without diet modification on pre-diabetes than the Control group.

Keyword: Prediabetes, glucose, yogic diet, blood sugar, Sleep quality level

Introduction

Diabetes mellitus is a metabolic disorder that causes high blood glucose. The human body either doesn't make enough insulin or can't effectively use the insulin it makes. The hormone 'insulin 'moves glucose from the blood into body cells to be stored or used to produce the energy.

India has the second largest number of adults living with diabetes worldwide. as per the Indian Diabetes Risk Score (IDRS) report, 101 million Indians live with diabetes, and 136 million people with prediabetes. Researchers say that almost half of the pre-diabetics may convert to diabetes within five years. At least one complication occurred in 60.1% of the participants, and at least two complications occurred in 28.4%. Risk factors for the development of complications included minority race or ethnic group, hyperglycemia, hypertension, and dyslipidemia.

According to research, diabetes is becoming more common in younger Indians (PMCID: PMC7871157 Siddardha G. Chandrupatla), with a marked increase in cases in the 30–40 age range. Helps diabetes risk was linked to irregular sleep length, especially in those with longer sleep duration and a lower diabetes PRS.

Yogic practices can aid with abdominal issues, which are the main cause of diabetes. It significantly affects the pancreas, one of the abdominal organs, and aids in increasing insulin production. The healing process of the scarred areas is accelerated by yoga positions that forward bending, squeeze twist, and hold the belly because they promote cell reproduction in the abdomen and increase the body hormonal, including insulin. Abdominal-specific yoga poses and spine stretching increase hormones and regulate the entire musculoskeletal system, including the arms, legs, and abdominal organs. Even now, the majority of the movements are limited to contraction and relaxation.

All of these conditions—inflamed pancreas by targeting the stomach area, yoga poses for producing insulin hormonal can help lower internal inflammation. Yoga can help reduce inflammation and prevent long-term harm to the abdominal organs. Unusual autoimmune disorders may affect some individuals. A lot of people have gluten intolerance. Because immune cells perceive gluten as a threat, they begin fighting the small-intestinal cells that absorb it whenever they consume bread-related foods. Internal harm develops over time. Yoga can help with sleep and may help prevent diabetes. Yoga can help with blood sugar levels, stress, and sleep quality.

Objectives of the Study

- The study is to examine the 'Impact of yogic practices with and without yogic diet modification on pre-diabetic adult men in the general population' aged between 30 to 40.
- This study would help to find out the significant difference on the impact of yogic practices with and without yogic diet modification on pre-diabetic adult men in the general public.

Statement of the Problem

The goal of the study is to determine how yoga practices and recommended yogic diets affect adult men between the ages of 30 and 40 who are pre-diabetic. to determine whether certain yoga practices combined with a yogic diet would significantly alter physiological and psychological factors in individuals with pre-diabetes who are members of the general population

Hypothesis:

1. It is hypothesized that there would be a significant difference due to the 'Impact of yogic practices with and without yogic diet modification on pre-diabetic adult men in the general population' age group between 30 to 40.
2. It is hypothesized that there would be graphic changes in general people's yogic practices of yoga, yogic diet, and mind calmness.
3. It is hypothesized that there will be a significant difference between the selected experimental groups and the control group.

Methodology

1. The study is to analyze the result of yogic practices compared with non-yogic practices with and without Yogic diet modification on prediabetes in adult men. To examine this study, two hundred eighty-five people were chosen randomly in Chennai. The age group of the subjects ranged from 30 to 40 years. For the analysis, the researcher chose the independent variables, which are yoga practices and diet. Blood Glucose was used as the dependent variable in this investigation. Sleep is measured using the PSQI scale with a questionnaire as the psychological variable, and fasting glucose and Postprandial glucose level as the physiological variables.
2. The Enthusiastic study was conducted in Chennai with the general public from October to December 29th. 285 general public men randomly selected, consisting of 95

subjects from each group for Experimental Group A (selected yogic practice with yogic diet) , Experimental Group B (selected yogic practice only), and Control Group (no practices).

3. The pre-test and post-test random group design was used as an experimental design, in which one hundred and sixty naval personnel were in each group. Group A yogic practices with yogic diet and Group B with Yogic practices only, and a control group with no yoga practices and yogic diet. The subjects were tested on the selected criterion variables prior to and after the training. The data collected from each group before and after the training programme on the selected criterion variables were statistically analyzed with an independent ANOVA test was found to be significant. The analyzed details have been provided. The level of significance would be fixed at 0.10% to test the hypothesis.

Table 1: Descriptive Statistics for Blood Glucose Value among the Sample in Pre-test and Post-test for the Experimental and Control Groups

Blood Glucose Values	**Experimental Group 1 n=95**			**Experimental Group 2 n=95**			**Control Group n=95**			**Independent one-way Anova and p**
	Mean	Fasting	PSQI	Mean	Fasting	PSQI	Mean	Fasting	PSQI	
Pre-Test										
Fasting Glucose	120.93	106.56	6.3	105.03	114.4	6.9	131.56	122.21	5.3	t = 0.313 p = 0.231 (N.S)
Post pran dial	82.12	135.36	5.9	95.73	126.5	6.8	128.35	145.02	5.2	t = 0.851 p = 0.57 (N.S)
Post-Test										
Fasting Glucose	108.56	102.56	5.1	4.89	102.9	5.2	112.56	115.46	4.6	t = 10.332 p = 0.001 *
Post pran dial	136.35	118.56	4.4	4.35	118.2	5.3	113.63	123.78	4.9	t =2.453 p = 0.057 (N.S)

Note: * - P'0.001 Level of Significant, N.S. – Not Significant

Conclusion:

The outcome of the examination stated that experimental groups and control groups namely yogic practice with yogic diet and yogic practice only, had a significant influence by the

select variables such as sleep disorder and yogic diet, as experimental group had undergone systematic training over twelve-week duration. At the meanwhile control group was compared, yogic practices group showed significant difference prediabetes adult men and sleep than control group with yogic diet. The control group did not show significant difference in the selected variable as they did not undergo yogic practices similar to the experiments group. So yogic practices impact of twelve-week yogic training was much greater than that control group with a yogic diet among pre diabetes on adult men. The selected yogic practices with the yogic diet to improve the physiological and physical variables

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