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Efficacy Of Selected Asana And Walking On Diabetic Patients

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ABSTRACT

Concurring to the World Health Organization (WHO), "About 422 million people worldwide have diabetes, the majority living in low-and middle-income countries, and 1.5 million deaths are directly attributed to diabetes each year. Over the past few decades, there has been a steady increase in both the prevalence and the number of cases of diabetes." Accordingly, the researcher's goal is to determine how yoga and walking effect patients with diabetes. The researcher expressed a hypothesis that, "The efficacy of asnas and walking on diabetic patients." The purpose was to check the impact of yoga and walking on diabetic patients. For the study 75 diabetic patients was chosen with the offer assistance of purposive sampling due to consent. The study was delimited to type-2 diabetic patients only. The age of the subject ranges from 25-65 Yr. The patients with maximum 05 years of diabetic history were chosen. The 75 patients were distributed similarly in 3 equal groups, The Yoga Group, the walking group and the control group. The blood glucose test was utilized to get the data. The pre-data were taken before the training. Each group trained for 6 weeks as per their group. Post-data were taken just after the training. The level of significance was set at 0.05. The dependent t-test was employed to check the difference within the group. Having significant difference in dependent t-test, the Analysis of Variance test was used which advance appears the significant difference between the groups. The post-hoc test was employed between the yoga and walking (0.0229), Walking and Control (0.4370) and yoga and control group (0.0033) in which yoga a control group shows the significant difference.

Key Words: Yoga, Walking, diabetic patients

Introduction: -

Diabetes Mellitus is a chronic illness that happens either when the pancreas does not deliver sufficient Insulin or when the body cannot viably utilize the Insulin it produces. Insulin is a hormone that controls blood glucose. Hyperglycemia, too called raised blood glucose or raised blood sugar, is a common impact of uncontrolled diabetes and over time leads to genuine harm to numerous of the body's frameworks, particularly the nerves and blood vessels.

In 2014, 8.5% of adults aged 18 years and older had diabetes. In 2019, diabetes was the coordinate cause of 1.5 million deaths and 48% of all deaths due to diabetes happened some time recently the age of 70 a long time. Another 4,60,000 kidney illness deaths were caused by diabetes, and raised blood glucose causes around 20% of cardiovascular deaths (1). Between 2000 and 2019, there was a 3% increment in age-standardized mortality rates from diabetes. In lower-middle-income nations, the mortality rate due to diabetes expanded 13%. By differentiate, the likelihood of biting the dust from any one of the four primary non-communicable illnesses (cardiovascular infections, cancer, chronic respiratory infections or diabetes) between the ages of 30 and 70 diminished by 22% universally between 2000 and 2019.

Type-2 Diabetes Mellitus

Type-2 diabetes (once in the past called non-insulin-dependent, or adult-onset) comes about from the body's ineffectual utilize of Insulin. More than 95% of individuals with diabetes have Type-2 diabetes. This sort of diabetes is to a great extent the result of abundance body weight and physical inactivity. Side effects may be comparative to those of Type-1 diabetes but are regularly less stamped. As a result, the disease may be analysed a few a long time after onset, after complications have as of now emerged. Until as of late, this sort of diabetes was seen as it were in grown-ups but it is presently moreover happening progressively habitually in children.

Asana

According to convention, there are eighty-four lakh asanas, but nowadays no one knows all eighty-four lakh asanas. Of these, eighty-four are the primary asanas, whose instruction is given in the society nowadays. After refinement, asanas are practiced for physical stability and immovability. Here immovability too implies the stillness of the body. In the hone of asanas, it ought to be recollected that asana is a position of the body. When we can remain comfortably in one position of the body for a long period of time without any pressure without any physical torment, at that point that position is called Asana.

The definition of asanas has too been given in the Yoga Sutras '**Sthira Sukhmasanam**', the physical position in which you can stay steady and encounter bliss that is asana. From the point of see of educating, asanas are separated into two parts- Dynamic asanas and stationary asanas. At first, to bring your body beneath control, Dynamic asanas are practiced to make the body adaptable. When we attempt to keep our body in a steady pose for a long period of time, torment and pressure in the muscles of the body emerge, due to which there is a position of diversion; there are inconvenience and distress, which is not the objective of the asanas. Similarly, we begin practicing static asanas as our body's capacity increases after performing dynamic asanas. Asana practice affects the body in a few subtle ways. The way that breathing occurs has changed. Breathing deeply and slowly becomes second nature with practice, which promotes emotional and mental equilibrium.

The first reason to do asanas is to free us from physical and mental sufferings. Asanas too make the joints of the body flexible. They make the muscles solid by making pressure from the muscles of the body and toss out the harmful components from the body. Asanas make harmony in the working of the nervous system and increment the effectiveness of the inside organs of the body by light massage. In this way continuously the body gets to be healthy.

Walking

Walk is a verb that implies to move at a direct pace with the feet. A walk is a period of time went through walking. Walk can too cruel to offer assistance somebody walk or to cause something to walk. Walk has numerous other faculties as a thing and verb. Walk is too utilized in a few figures of speech. When you walk, you stand upright and put one foot in front of the other at a ordinary pace. Regularly, when most individuals need to move from put to put, they walk. We too utilize walk to portray the development of creatures with more than two legs that substitute feet as they move.

The purpose of the study was to find out the efficacy of selected asanas and walking in management of diabetic patients and to assess the blood glucose level of patients under medical experts via laboratory Blood Glucose Test. Significance of the study were Walking help to develop cardiovascular endurance and also helps to decrease BloodGlucose Level that is helps to control hyperglycemia. The study will significant to reduce or maintain body mass index. The study will help to control and if practices for long duration it may reverse the Type-2 Diabetes which may lead to stop taking oral tablets. The study will also helpful to Medical Experts in prescription to person who is under training schedule also helpful to Yoga Teacher, Trainers to prepare the trainingschedule for Diabetic Patients. Nowadays 10.5% of the globe grown-up populace endures from diabetes in another 3 a long time this number is anticipated to rise to over 12% due to less physical exercises unfortunate eating propensities and investing as well much time in front of computer etc. The scope of the think about was delimited to, Type-2 Diabetic Patients as it were. The age was extending from 25 to 65 a long time from Amravati Locale as it were. The length of the day-by-day schedule was 45 minutes for 5 times in a week.

Methodology

For the think about information, type-2 diabetic patients were the source of information. 75 Male and female diabetic patients were chosen from Amravati locale for this consider the age of the subject was extended from 25-65 year. Purposive sampling strategy was received for the determination of subjects for the show think about due to consent. Random Blood Glucose Test was utilized to get information. The Glucometer [Make-Accu-chek Dynamic (Validity-0.99 Reliability-0.98)] was utilized. Purpose of the study was to determine the Blood Glucose Level. The 75 patients were similarly disseminated in 3 groups each with 25 Patients. The 3 groups were Yoga Group, Walking Group and Control Group. The walking group and yoga group prepared with particular plan for 6 weeks. In yoga practises, Uttanapadasan, Naukasana, Vajrasana-Yogmudra, Vakrasana,Ardhramachhindrasana, Dhanurasana, shalbhasana, Bhujangasana, Pawanmuktasana, Trikonasna, Ardhakatichakrasana, Mandukasana, Padhastasana, Uttanapadasan, Naukasana, Vajrasana-Yogmudra, Vakrasana, Ardhramachhindrasana, Dhanurasana, shalbhasana, Bhujangasana, Pawanmuktasana, Trikonasna, Ardhakatichakrasana, Mandukasana, Padhastasana, Utrashana, Mattyasana, Triyak Tadasana, Triyak Bujangasana, Simhasana, Shavasana, Om-chanting was included. Sometime recently and after the preparing Random blood glucose test was utilized to take the pre and post information separately. The crude score of blood glucose test is specifically utilized as information which assist utilized in examination.

Analysis and Interpretation of Data: -

For testing hypothesis, the level of significance was just set at 0.05 level of confidence which was considered adequate for the purpose of present study. For the analysis Dependent T-test was primarily employed. T-test is employed within the group. The t-test applied for 3 times.

The first t-test is within the walking group which shows result in below table no. 1: -

t-Test: Paired Two Sample for Mean		
	Pre data	**Post data**
Mean	254.12	249.2
Variance	435.36	423.41
Df	24	
t - Stat	**14.63**	
P(T<=t) two-tail	0.001	
t Critical two-tail	**2.06**	

Table No. 1

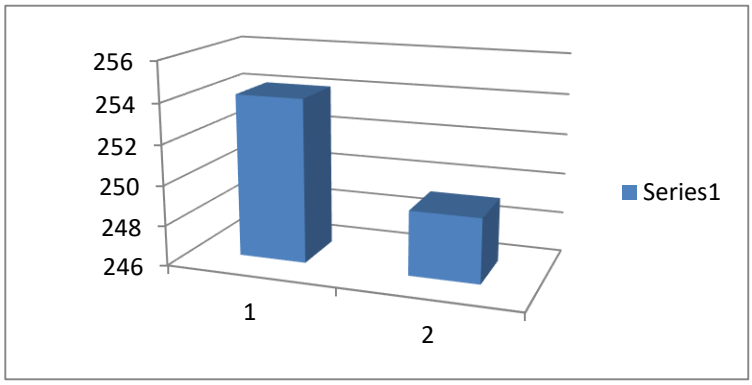
At 0.05 level of confidence the employed t-test shows the significant difference between the groups.

The tabulated value was 2.06 for 24 degree of freedom $T_{0.05(24).} = 2.06$

From the observation the pre-post data shows, there is significant difference within the group of walking Group. As the tabulated t-value (2.06) is smaller than calculated t-value (14.63).

Calculated t-value (14.63) > tabulated t-value (2.06)

Graph of Mean difference of pre and post data of Walking Group: -



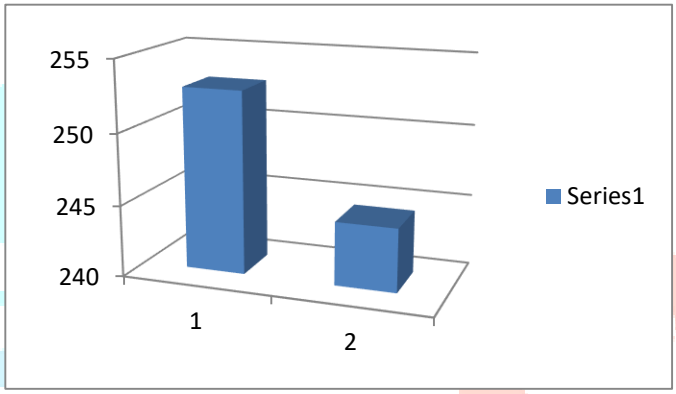
Graph No. 1

The second t-test is within the Yoga group which shows result in below table No. 2: -

t-Test: Paired Two Sample for Mean		
	Pre data	Post data
Mean	252.8	244.44
Variance	341.83	498.67
df	24	
t Stat	**3.30**	
P(T<=t) two-tail	0.00299	
t Critical two-tail	**2.06**	

Table No. 2

At 0.05 level of confidence the employed t-test shows the significant difference between the groups.
The tabulated value was 2.06 for 24 degree of freedom $T_{0.05(24).} = 2.06$
From the observation the pre-post data shows, there is significant difference within the group of Yoga Group.
As the tabulated t-value (2.06) is smaller than calculated t-value (3.30).
Calculated t-value (3.30) > tabulated t-value (2.06)
Graph of Mean difference of pre and post data of Yoga Group:-



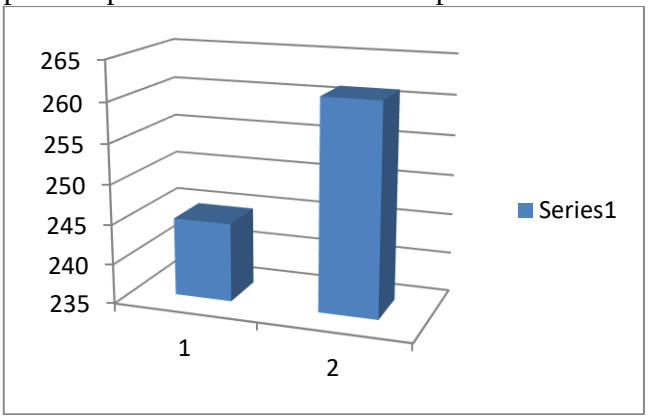
Graph No. 2

The third t-test is within the Control group which shows result in below table No. 3:-

Pre data	**Post data**	**Pre data**
Mean	244.88	261.24
Variance	436.61	229.35
df	24	
t Stat	4.17	
P(T<=t) two-tail	0.00034	
t Critical two-tail	2.06	

Table No. 3

At 0.05 level of confidence the employed t-test shows the significant difference between the groups.
The tabulated value was 2.06 for 24 degree of freedom $T_{0.05(24).} = 2.06$
From the observation the pre-post data shows, there is significant difference within the group of control Group.
As the tabulated t-value (2.06) is smaller than calculated t-value (4.17).
Calculated t-value (4.17) > tabulated t-value (2.06)
Graph of Mean difference of pre and post data of Control Group: -



Graph No. 3

As the t-test found significant researcher further applied the Analysis of variance test in post data walking group, yoga group and control group it shows

Anova: Single Factor				
SUMMARY				
Groups	Count	Sum	Average	Variance
Walking	25	6230	249.2	423.41
Yoga	25	6531	261.24	229.35
Control	25	6111	244.44	498.67

Table No. 3

ANOVA						
Source of Variation	SS	df	MS	F	P-value	F-crit
Between Groups	3748.83	2	1874.41	4.88	0.01	3.12
Within Groups	27634.7	72	383.81			
Total	31383.5	74				

Table No. 4

From the above table it is observed that, there is significant difference between the post data of walking group, yoga group and control group as p-value (0.01026) is smaller than the level of significance.

As Analysis of variance test found significant the post- hoc test is applied by the researcher to identify exactly which groups differ from each other.

t-Test: Two-Sample Assuming Unequal Variances		
Walking-Yoga	Post data	post
Mean	249.2	261.24
Variance	423.41	229.35
df	44	
t Stat	-2.35	
P(T<=t) two-tail	0.0229	
t Critical two-tail	2.01	

Table No. 5

t-Test: Two-Sample Assuming Unequal Variances		
Walking-Control	Post data	Post
Mean	249.2	244.44
Variance	423.41	498.67
df	48	
t Stat	0.78	
P(T<=t) two-tail	0.4370	
t Critical two-tail	2.01	

Table No. 6

t-Test: Two-Sample Assuming Unequal Variances		
Yoga-Control	**Post**	**post**
Mean	261.24	244.44
Variance	229.35	498.67
df	42	
t Stat	3.11	
P(T<=t) two-tail	**0.0033**	
t Critical two-tail	2.01	

Table No. 7

Discussion of finding: -

It is observed that, there is significant difference within the group of walking group (**14.63)**, yoga group (**3.30**) and control group (**4.17**). Which further studied by employing the Analysis of variance shows the significance difference between the post data of walking group, yoga group and control group. The post-hoc test was employed to identify exactly which groups differ from each other. The post- hoc test shows that between the Walking-Yoga (0.0229), Walking-Control (0.4370) and Yoga-Control (**0.0033**) group; the Yoga-Control group show the significant difference.

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