



# ASSESSMENT OF KNOWLEDGE ON IMPORTANCE OF YOGA THERAPY AMONG SOUTH INDIAN DIABETIC PATIENTS

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## Introduction

Yoga is a mind and body practice with historical origin in Asian Indian philosophy similar to other meditative practices used for fitness purposes, various sorts of yoga with specially combined bodily postures, breathing techniques, and meditation or relaxation (1).

Diabetes is a chronic disorder where the body can't regulate the amount of sugar inside the blood. Diabetes is a life time disease and there is no complete cure. Strict maintenance of blood glucose level can save you by delaying or preventing complications associated with diabetes. But several other health issues can occur, even in people with good diabetes control.

After many years, diabetes can result in critical health issues in eyes, consisting of hassle seeing in particular at night time and light sensitivity, even blindness. Diabetes might also make it tougher to control blood pressure and lipids, which leads to cardiac arrest, stroke and different problems. Diabetes mellitus complicates nerves in your body, and can get damaged causing pain, tingling and numbness (2).

Diabetes mellitus is one of the primary health issue globally as well as in India, significantly have an effect on the health care system and in economic sector. Use of medication has its own drawbacks and in current days the usage of non-scientific measures was reported no longer best to manage diabetes mellitus, however additionally to save from complications. Various review articles showed on handling the effect of yoga on risk profiles, management along with the mechanism of action of yoga in diabetes mellitus which indicates yoga's benefit on diabetes mellitus. Based on the literature available, it could be summarised that yoga plays an essential role as an adjuvant in the management of risk factors, ailment progression and on the complications of the diabetes mellitus (3).

## Significance and need for the study

The global prevalence rate of diabetes mellitus has risen dramatically in the developing country over the last two decades. 10% of 311 adults were screened had hyperglycaemia. Most of the surveyed population (60%) and diabetic sufferers (59.8%) are within the age group of 30 – 45 years, which suggests diabetes is common among young adults (4).

According to the international diabetes federation (IDF) 2015, one in eleven adults has diabetes in the world, and in 2040 one in 10 adults may be affected with diabetes mellitus. Diabetes is a sickness of sedentary human beings with unhealthy food regimen practice and it is not a disease of rich people (5). It has been mentioned that incidence of diabetes in a late age is linked with over weight problems, life-style issues, eating behaviour and many others. It is found that in elderly population, sedentary life-style is the top issue of diabetes rather than high BMI. Type 2 diabetes is primarily associated with the life-style and as age advances in

comparison to females, male leads more sedentary way of life and percent of diabetes is higher in them (6). Various treatment options are available for diabetes mellitus in which yoga is one of the excellent cost effective remedy. The practice of yoga is about enhancing harmony in the body by enhancing strength and flexibility. Thus yoga is very great in reducing fasting blood sugar, frequency and intensity of depression (5).

## Objectives

To assess the level of knowledge towards yoga practice and to identify the socio demographic factors associated with knowledge towards yoga among diabetes patients.

## Methods

The research design adopted for the present study is cross sectional research design, and sampling technique used was convenient sampling. The independent variables included in the study are age, gender, education, family history of diabetes mellitus, nature of the job, food habits and dependent variable is knowledge on yoga practices. Ethical committee approval was obtained before starting the study. Patients more than 18years from both gender who are diagnosed with diabetes and willing to participate and can read and understand Tamil were included in the study after informed consent. Patients with any cognitive or sensory impairment and patients already practicing yoga were excluded from the study. A validated structured questionnaire was prepared with the following characteristics as Socio-demographic Performa, Clinical characteristics Performa and knowledge questions. Scoring was done as one mark is awarded for each correct response and there is no negative marking. Scoring was interpreted as Good knowledge (9-11 marks), Average knowledge (5-8 marks) and Poor knowledge (0-4 marks).

Statistical analysis was done as the distribution of categorical variables such as gender, socio –demographic and clinical characteristics are expressed in terms of frequency and percentage. The distribution of continuous variables such as age, level of knowledge and attitude towards yoga are expressed in terms of mean with standard deviation or median with range based on the distribution of data. The comparison of knowledge towards yoga in relation to categorical variables mentioned above are carried out by using independent student ‘t’ test/Mann Whitney U test or One-way analysis of variance/Kruskal wallis test based on the distribution of data and number of groups. The association of socio-demographic characteristics with the knowledge status will be carried out by using Chi-square test/Fisher’s exact test. All statistical analysis will be carried out at 5% level of significance with P value <0.05 is considered as statistically significant.

## Results

It deals with the analysis and interpretation of the data collected with regard to the variables and level of knowledge towards yoga among diabetic patients. The distribution of socio-demographic variables was presented in table: 1

Table: 1 Frequency distribution of the subjects according to the demographic variables (N=180)

Demographic variables	Frequency	Percentage
Age		
1. 18 -35 years	11	6.1%
2. 36-50 years	72	40%
3.51-65 years	79	43.9%
4. 66 years and above	18	10%
Gender		
1. Male	75	41.7%
2. Female	105	58.3%

<b>Education</b>		
1. Primary education	101	56.1%
2. Secondary education	7	3.9%
3. Graduation	40	22.2%
4. Post-graduation	32	17.8%
<b>Family history of diabetes</b>		
1. Present	126	70%
2. Absent	54	30%
<b>Nature of job</b>		
1. Stressful	93	51.7%
2. Peaceful	87	48.3%
<b>Food habits</b>		
1. Non vegetarian	156	86.7%
2. Vegetarian	24	13.3%

Table: 2 Association of knowledge level with the selected demographic variables.

Demographic variables	Association of knowledge				
	N	Mean	SD	X <sup>2</sup>	P-Value
<b>Age</b>					
18-35 years	11	4.54	2.62	5.117	0.528
36-50 years	72	5.34	2.64		
51-65 years	79	6.06	2.56		
66 years and above	18	5.6	2.9		
<b>Gender</b>				0.095	0.953
Male	75	5.8	2.52		
Female	105	5.5	2.7		
<b>Education</b>				6.861	0.339
Primary	101	5.3	2.1		
Secondary	7	7.5	1.9		
Graduation	40	5.6	2.4		
Post-graduation	32	6.1	2.6		
<b>Family history of diabetes</b>				0.8138	0.6657
Present	126	5.7	2.7		
Absent	54	5.3	2.3		
<b>Nature of job</b>					
Stressful	93	5.08	2.7		0.043

Peaceful	87	6.2	2.49	6.286	
<b>Food habits</b>					
Non vegetarian	156	5.68	2.66	0.348	0.8401
Vegetarian	24	5.33	2.64		

The table showed that there was a significant relation between level of knowledge and nature of job ( $p < 0.05$ ) and no relation between any other socio-demographic variables.

Table:3 level of knowledge among diabetic patients (N=180)

Knowledge level	Frequency	Percentage
Adequate	65	36.1%
Moderately adequate	30	16.7%
Inadequate	85	47.2%

Result showed in table 3 that majority of diabetic patients (47.2%) have inadequate knowledge regarding yoga practices and its benefits.

## Discussion

The first objective of the study is to assess the level of knowledge on yoga practices among diabetic patients; the study the result revealed that 36.1% (65) of the diabetic patients are having adequate knowledge, 47.2% (85) are having inadequate knowledge, 16.7% (30) are having moderate knowledge. The second objective of the study is to identify the socio demographic factors associated with knowledge on yoga among diabetic patients. Results showed that there was a significant relation between level of knowledge and nature of job ( $p < 0.05$ ) and no relation between any other socio-demographic variables.

A study done by Khanna S (2016) on knowledge, attitude and practices regarding yoga in general population pointed out that out of 100 rural participants, 52% had knowledge about yoga, 30% defined yoga in various ways and 18% had no knowledge at all about yoga in comparison with urban population. They had good knowledge of yoga about 73% and 7% had no knowledge. I recommend to conduct study on yoga practices among diabetics with a structured teaching programme in a very large sample size and health awareness about the benefits of yoga therapy can be provided to the general population.

**Conflict of interest:- Nil**

## References

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