

# A STUDY ON AWARENESS REGARDING DIABETES AND ITS MANAGEMENT

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**ABSTRACT:** *Diabetes has emerged as one of the world's biggest health problem. It is a major and growing health problem affecting more than 171 million people worldwide. India is one of the top three countries with a high number of diabetic populations. The number of diabetes patients is likely to rise to 101 million in India by 2030, estimates the World Health Organisation (WHO). The study on awareness regarding diabetes and its management is restricted to diabetes patients. It evaluates the awareness among the diabetes. It also identifies the psychological factors and remedies to overcome diabetes. Purposive sampling method has been used to collect the data from the respondents. Simple Percentage analysis, Multiple responses, Descriptive statistics, ANOVA and t-test. The findings of the study reveal that 50.7 per cent of the respondents take Allopathic medicine to reduce their sugar level. The study suggests that Yoga and proper physical exercise can reduce the risk of diabetes.*

**Key Words:** *Diabetes, psychological factors, awareness, and problems.*

## INTRODUCTION

Diabetes mellitus is characterized by abnormally high levels of sugar (glucose) in the blood. When the amount of glucose in the blood increases, it triggers the release of the hormone insulin from the pancreas. Insulin stimulates muscle and fat cells to remove glucose from the blood and stimulates the liver to metabolize glucose, causing the blood sugar level to decrease to normal levels. Diabetes is traditionally known as a "silent disease". Two-third of the global diabetes populations lives in the developing world. The WHO also estimates that 80 per cent of diabetes deaths occur in low and middle-income countries and projects that such deaths will double between 2016 and 2030.

Diabetes has emerged as one of the world's biggest health problem. It is a major and growing health problem affecting more than 171 million people worldwide and the number is expected to rise to 366 million by 2030. A government health survey conducted across 26 states and Union Territories has found that more than a fifth of India's 125-crore population suffers from diabetes and hypertension. Prevalence of diabetes has more than doubled for men in India and China. It has also increased by 50 per cent among women in China and 80 per cent among women in India. The number of diabetes patients is likely to rise to 101 million in India by 2030, estimates the World Health Organisation (WHO). The number doubled to 63 million in 2013 from 32 million in 2000 in the country. Diabetes currently affects more than 62 million Indians, which is more than 7.1% of the adult population. Nearly 1 million Indians die due to diabetes every year.

## STATEMENT OF THE PROBLEM

Diabetes has emerged as one of the world's biggest health problem. It is a major and growing health problem affecting more than 171 million people worldwide and the number is expected to rise to 366 million. But the people are not that much aware regarding diabetes. Diabetes affects both physical and psychological aspects. The study attempts to find out the psychological factors and remedies to overcome diabetes. Under this background the study focused on awareness towards diabetes and how to manage it in the present scenario.

## SCOPE OF THE STUDY

The study on awareness regarding diabetes and its management is restricted to diabetes patients. It evaluates the awareness among the diabetes. It also identifies the psychological factors and remedies to overcome diabetes. The study is very important that diabetes has become most common problem among the public.

**OBJECTIVES OF THE STUDY**

- To evaluate the source of awareness about diabetes.
- To identify the psychological factors affect the diabetes.
- To identify the remedies to overcome the diabetes disorder.

**RESEARCH METHODOLOGY:**

The period of the study is from September 2017 to March 2018. The study has been conducted in and around the Coimbatore city. Purposive sampling method has been used to collect the data from the respondents. Primary data has been collected through survey method using questionnaire as the tool. Secondary data has been collected from journals and research articles. Simple Percentage analysis, Descriptive statistics, ANOVA and t-test have been applied for analysis of the study.

**LIMITATION:**

The respondents are restricted in Coimbatore city. Due to time constraints the sample size is limited to 150 respondents. Since the survey has done only in Coimbatore the result obtained may not be taken as universal suggestion.

**REVIEW OF LITERATURE**

- **MirzaAzizulHoque et al (2009)** in their article titled “Knowledge of diabetic complications in a diabetic population”, is to evaluate the individual knowledge of diabetic complications in the diabetic patients. Data have been collected using cross-sectional survey. Some of the statistical tools have been used to analyse the data. It is concluded that urban people are knowledgeable than the people residing in rural area and to overcome this and the study suggests that mass diabetic education program is urgently needed.
- **Mumtaz Ali Chhutto et al (2009)** in their study “Awareness of diabetes mellitus and its complication in diabetic patients” is to assess awareness and its complications. Data have been collected using cross-sectional observation. Percentage analysis has been used to analyse the data. It concluded that awareness about the diabetes is lacking and it also suggests that education is needed to improve the awareness about diabetes and complication of diabetes.

**TABLE 1: DEMOGRAPHIC PROFILE**

Demographic Profile	Particulars	Frequency	Percentage
Age	21 years - 40 years	38	25.3
	41 years - 60 years	71	47.3
	61 years and above	41	27.3
Gender	Male	61	40.7
	Female	89	59.3
Marital status	Married	127	84.7
	Unmarried	23	15.3
Educational qualification	No formal education	34	22.7
	School level	36	24.0
	Under graduate	30	20.0
	Post graduate	27	18.0
	Professionals	23	15.3
Occupation	Home maker	43	28.7
	Business	35	23.3
	Professionals	23	15.3
	Farmer	26	17.3
	Others	23	15.4
Family income	Below Rs 20000	42	28.0
	Rs 20001 - Rs 40000	54	36.0
	Rs 40001 - Rs 60000	28	18.7
	Above Rs 60001	26	17.3
Sugar monitor level	Monthly	36	24.0
	Quarterly	46	30.7
	Half yearly	37	24.7
	Yearly	31	20.6

Type of medicine	Allopathy	76	50.7
	Ayurveda	40	26.7
	Unani	3	2.0
	Sidha	15	10.0
	Homeopathy	12	8.0
	Others	4	2.6
<b>Total</b>		<b>150</b>	<b>100</b>

Source : Primary Data

The study reveals that 47.3 per cent of the respondents are in the age group of 41 years to 60 years, 59.3 per cent of the respondents are belonging to female categories, Majority 84.7 per cent of the respondents are married, 24 per cent of the respondents has school level education, 28.7 per cent of the respondents are home makers.36 per cent of the respondents are earning ranging between Rs. 20001 –Rs. 40000 per month as their family income, 30.7 per cent of the respondents are monitoring their sugar level once in six months and50.7 per cent of the respondents take Allopathy medicine to reduce their sugar level.

**TABLE 2: SOURCE OF AWARENESS ABOUT DIABETES- DESCRIPTIVE STATISTICS**

Statement	N	Min	Max	Mean	Std. Deviation
Diabetes educators	150	1	3	2.14	.769
Friends/Neighbours who have diabetes	150	1	3	2.43	.708
Family member	150	1	3	2.46	.701
Medical websites/ Internet	150	1	3	1.87	.711
Radio/ TV	150	1	3	2.07	.739
Pharmacist/Local hospital	150	1	3	2.30	.712
<b>TOTAL</b>	150	6	18	13.27	4.34

Source:Primary data

The total means rating of source of awareness about diabetes is 13.27. The highest mean score (2.46) with standard classification of 0.701 is for the variable “family member”. It shows that respondents feel comfort on sharing about diabetes and gather information about it from their family members when compared to other sources. The least mean score (1.87) is for the variable “medical websites/internet” because there is lack of knowledge about the medical websites among the respondents.

**TABLE :3REASONS FOR DIABETES DISORDER- MULTIPLE RESPONSES**

Statement	Responses	
	Frequency	Percentage (%)
Heredity	85	19
Consuming more sweets	71	15.8
Lack of physical work	51	11.4
Generalized weakness	37	8.3
Stress	91	20.3
Obesity	43	9.6
Old age	64	14.3
Pregnancy	6	1.3

Source:Primary data

The table determines the reason for diabetes disorder by the respondents, 19 per cent is due to heredity, 15.8 per cent is due to consuming more sweets, 11.4 per cent is due to lack of physical work, 8.3 per cent is due to generalized weakness, 20.3 per cent is due to stress, 9.6 per cent is due to obesity, 14.3 per cent is due to old age, 1.3 per cent is due to pregnancy. The majority reason among the respondents is (20.3 per cent) stress.

**TABLE : 4PSYCHOLOGICAL EFFECTS OF DIABETES - DESCRIPTIVE STATISTICS**

Statement	N	Min	Max	Mean	Std. Deviation
Deny to say about diabetes to others	150	1	5	3.54	1.202
Feeling irritated to take tablets and insulin	150	1	5	3.65	1.141
Tempted to eat sweets	150	1	5	3.99	1.059
Fear on regular check-ups	150	1	5	3.37	1.132

Unconscious feeling	150	1	5	3.21	1.090
Afraid of stroke	150	1	5	3.09	1.152
Reduce the intake of outside food	150	1	5	3.63	1.090
Feeling depressive	150	1	5	3.39	1.074
Take tea/coffee without sugar	150	1	5	3.90	1.157
Fear of complication to organs	150	1	5	3.59	1.112
Fear of underweight/overweight	150	1	5	3.70	.939
Increase stress level at work place	150	1	5	3.42	1.082
I feel insecure	150	1	5	3.19	1.161
Hesitate to attend function	150	1	5	2.92	1.334
Fear of complimentary to other disease	150	1	5	3.28	1.148
Fear of going alone	150	1	5	3.09	1.292
Feel very weak	150	1	5	3.25	1.291
<b>TOTAL</b>	<b>150</b>	<b>17</b>	<b>85</b>	<b>59.02</b>	<b>19.456</b>

Source: Primary data

The total means rating of psychological effects of diabetes is 59.02. The highest mean score (3.99) is for the variable “tempted to eat sweets”. It implies that they can’t control intake of sweets because they are used to it. The least mean score (3.09) is for the variables “afraid of stroke, fear of going alone”. It implies that lack of knowledge about the problem.

**DEMOGRAPHIC FACTORS Vs PSYCHOLOGICAL EFFECT OF DIABETES – ANOVA, t-TEST:**

H<sub>0</sub>: “The average score of psychological effect of diabetes does not differ significantly for the demographic factors”.

**TABLE :5DEMOGRAPHIC FACTORS Vs PSYCHOLOGICAL EFFECTS OF DIABETES- ANOVA, t-TEST**

Personal factors		Mean	S.D	No.	t-test	f-test	Sig.	S/NS
Age	21 years - 40 years	3.3282	.71557	38		0.869	0.422	NS
	41 years - 60 years	3.4457	.46897	71				
	60 years and above	3.4792	.46272	41				
Gender	Male	3.4542	.54319	61	.545		0.983	NS
	Female	3.4052	.53960	89				
Marital status	Married	3.4238	.53889	127	.069		0.734	NS
	Unmarried	3.4322	.55681	23				
Educational qualification	No formal education	3.4394	.44851	34		1.430	0.227	NS
	School level	3.4788	.44581	36				
	Under graduate	3.5098	.43565	30				
	Post graduate	3.2070	.66077	27				
	Professionals	3.4655	.71714	23				
Occupational status	Home maker	3.4692	.48328	43		2.728	0.032	NS
	Business	3.6403	.48607	35				
	Professionals	3.3376	.57148	23				
	Farmer	3.2986	.45865	26				
	Others	3.2455	.67715	23				
Family income	Below Rs 20000	3.4846	.51818	42		2.369	0.073	S
	Rs 20001 - Rs 40000	3.4651	.53405	54				
	Rs 40001 - Rs 60000	3.1849	.56415	28				
	Above Rs60001	3.5045	.51689	26				

Source: Primary data

The average means score for the psychological effect of diabetes and demographical factors. The senior respondents are found to have the highest mean score of 3.4792. The male respondents are found to have the highest mean score of 3.4542. The respondents whose marital status is unmarried are found to have the highest mean score of 3.4322. The graduate respondents are found to have the highest mean score of 3.5098. The respondents whose occupational status is business are found to have the highest mean score of 3.6403. The respondents whose family income is above Rs. 60001 are found to have the highest mean score of 3.5045.

ANOVA result indicates that there is no significant difference in the mean score for the psychological effect of diabetes in respect of age, educational qualification and family income. Hence null

hypothesis is accepted. It shows that there is significant difference in the mean score of psychological effect of diabetes in respect of occupational status. Hence null hypothesis is rejected.

The paired t-test result shows that there is a no significant difference in the mean score of psychological effect of diabetes in respect of gender and marital status. Hence the null hypothesis is accepted. Hence, it is inferred that senior respondents and graduate respondents have greater effects towards psychological factors.

**TABLE : 6 REMEDIES TO OVER COME DIABETES - DESCRIPTIVE STATISTICS**

Statement	N	Min	Max	Mean	Std. Deviation
Regular medications	150	1	5	4.11	0.886
Regular exercise	150	1	5	3.97	0.979
Avoiding sweets	150	1	5	3.96	1.003
Consulting doctor regularly	150	1	5	3.55	1.150
Avoiding fasting	150	1	5	3.93	1.147
Substitute of rice	150	1	5	3.53	1.417
Avoiding smoking	150	1	5	3.73	1.162
Regular footwear	150	1	5	3.83	1.071
Avoiding fatty foods	150	1	5	3.73	1.139
Regular medicines	150	1	5	4.11	1.102
Blood glucose monitoring	150	1	5	3.74	1.120
Efforts to reduce weight	150	1	5	3.67	1.168
Taking natural medicines	150	1	5	3.69	1.170
Food control	150	1	5	3.89	1.138
Consuming fruits and vegetables	150	1	5	4.02	1.114
Walking	150	1	5	4.11	1.142
<b>TOTAL</b>	<b>150</b>	<b>16</b>	<b>80</b>	<b>61.84</b>	<b>16.491</b>

Source: Primary data

The total means rating of remedies to overcome diabetes is 61.84. The highest mean score (4.11) is for the variable “regular medications, regular medicines, walking”. It shows that respondents feel physical activities and proper intake of medicine can be the best remedy to control the diabetes. The least mean score (3.53) is for the “substitute of rice”. It shows that change in food habit is not the better remedy to control diabetes.

**DEMOGRAPHIC FACTORS Vs REMEDIES TO OVERCOME DIABETES – ANOVA, t-TEST:**

H<sub>0</sub>: “The average score of remedies to overcome diabetes does not differ significantly for the demographic factors”.

**TABLE :7 DEMOGRAPHIC FACTORS Vs REMEDIES TO OVERCOME DIABETES – ANOVA, t-TEST**

Personal factors	Mean	S.D	No.	t-test	f-test	Sig.	S/NS	
Age	21 years - 40 years	3.7648	.66469	38	1.728	0.522	0.594	NS
	41 years - 60 years	3.8600	.61068	71				
	60 years and above	3.9055	.61351	41				
Gender	Male	3.9539	.60638	61	.004	0.206	0.935	NS
	Female	3.7760	.62803	89				
Marital status	Married	3.8484	.61844	127	1.706	0.152	0.577	NS
	Unmarried	3.8478	.66487	23				
Educational qualification	No formal education	3.7923	.66602	34	0.662	0.577	NS	
	School level	3.8403	.49898	36				
	Under graduate	3.8896	.69261	30				
	Post graduate	3.8171	.66074	27				
	Professionals	3.9266	.63867	23				
Occupational status	Home maker	3.7456	.58175	43	0.662	0.577	NS	
	Business	4.0750	.63878	35				
	Professionals	3.8315	.59515	23				
	Farmer	3.7332	.67905	26				
Family income	Others	3.8424	.59944	23	0.662	0.577	NS	
	Below Rs 20000	3.8348	.64802	42				
	Rs 20001 - Rs 40000	3.9248	.61578	54				
	Rs 40001 - Rs 60000	3.7210	.67625	28				
	Above Rs 60001	3.8486	.54692	26				

Source: Primary data

The average means score for remedies to overcome diabetes and demographical factors. The respondents whose age is above 60 years are found to have the highest mean score of 3.9055. The male respondents are found to have the highest mean score of 3.9539. The respondents whose marital status is married are found to have the highest mean score of 3.8484. The respondents whose educational qualification is professionals are found to have the highest mean score of 3.9266. The respondents whose occupational status is business are found to have the highest mean score of 4.0750. The respondents whose family income ranging between Rs 20001- Rs 40000 are found to have the highest mean score of 3.9248.

ANOVA result indicates that there is no significant difference in the mean score for remedies to overcome diabetes in respect of age, educational qualification, occupational status and family income. Hence the null hypothesis is accepted.

The paired t-test result shows that there is a no significant difference in the mean score of remedies to overcome diabetes in respect of gender and marital status. Hence the null hypothesis is accepted. Hence, it is inferred that age, gender, marital status, educational qualification, occupational status and family income of the respondents does not influence them to make remedies to overcome diabetes disorder.

## SUGGESTIONS

- Yoga and proper physical exercise can reduce the risk of diabetes.
- Government should create awareness campaigns and orientation regarding diabetes disorder.
- Regular check-up of sugar level among the patients will help them to maintaining the sugar level.
- Stress should be reduced to overcome diabetes.
- Proper guidelines should be given by the doctors to overcome diabetes.

## CONCLUSION

Diabetes is fast gaining the status of a potential epidemic in India with more than 62 million diabetic individuals currently diagnosed with the disease. Many influences affect the prevalence of disease throughout a country and identification of those factors is necessary to facilitate change when facing health challenges. The main cause of diabetes among the respondents is stress level due to pressure in work place and family. The study evaluated the psychological effects of the respondents feels like unconscious feeling, afraid of stroke, feeling unsecure, weak etc., In order to overcome from diabetes, remedies like walking, yoga, regular medicines, physical exercise, food control etc., followed by most of the respondents. Thus the study concludes that diabetes seems to be most growing and recoverable disorder in this generation.

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