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On Treatment Satisfaction and Socio Cultural Parameters –A Study conducted among Diabetics of Kerala

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ABSTRACT

Inquiries on treatment satisfaction are important to enhance the quality of care, especially when dealing with chronic diseases like Diabetes. Higher rate of treatment satisfaction leads to high rate of compliance and clinical outcome. Various factors contribute to the treatment satisfaction, among which socio economic parameters have a significant role. As the impact rate of diabetes varies according to region, and development pattern, a localised study on diabetic condition in Kerala which tries to understand the relationship between treatment satisfaction and socio cultural background of diabetic is important. The independent variables of the study are gender, type of institutions, religion, marital status, nature of occupation, nature of residence and the dependent variable is Treatment satisfaction. Result shows that diabetics from nuclear families show better treatment satisfaction than joint families. Male diabetics acknowledged high rate of treatment satisfaction in comparison with female counterparts. Supplementary medicine takers do better than supplementary medicine non-takers. Treatment satisfaction is significantly different among different educational, marital and occupational groups of the diabetics. Lastly the study shows that the treatment satisfaction of the diabetics is not significantly different within different religious groups.

1. Introduction

Diabetes is a disease embedded in everyday life. As a disease of great inconvenience, diabetic patients find difficulties for adequately controlling the disease and are always under the fear of diabetic complications. Diabetes is a complex condition, not simply because it is hard to treat clinically, but because it is rooted in behaviours that are hard to anticipate.

Diabetes is a chronic illness that impacts upon every aspect of the life of people and families affected by diabetes. The onset of diabetes in children and adolescents can interfere with normal psychological and social development and complicate their family functioning. People with diabetes are faced with the challenges of self-regulating their diabetes, adapting to the strict regimen of diabetic life to lead a full-fledged and fulfilling life.

Society does not have enough vision and sympathy to accommodate the diabetic with ease. Occurring suddenly, symptoms such as frequent urination, unusual thirst, extreme hunger, unusual weight loss, extreme fatigue and high irritability are the consequences a diabetic person has to live with. He/she has to adjust himself/herself in a way to make sure that his/her behaviour is taken for granted as that of others. How it is a matter of constant concern for the diabetic person, as well as his kith and kin, should be studied systematically by applying the tools and techniques of sociological research.

So the social dimension of unhealthy life and its correction by means of scientific interventions cannot be achieved from a singular measure, but a joint effort of all intelligentsia is needed. With this aim, the focus of enquiries needs to be shifted to diabetics rather than diabetes. The knowledge, perception, attitude, feelings and emotions of the diabetics, their relationship with peers, family and community, their academic and vocational performances, Impact of their religious practices and culture on lifestyle diseases, like diabetes, come under study..

In many parts of the world, the health complications of diabetes could be the lone reason for the increased mortality rate. In 2012 alone, diabetes was the direct cause of 1.5 million deaths across the globe (WHO, 2012). The majority of diabetes deaths happen in low and middle income countries. Many countries are currently intensifying their efforts to reduce the incidence of diabetes, typically through the development and implementation of safe healthy practices and action plans in their national health policies.

2. Diabetes In Kerala

Various behavioural risk factors like smoking, unhealthy diet, over consumption of alcohol, sedentary or idle life style, stress at home and work place etc are known to be the risk factors for various non-communicable lifestyle diseases. All these risk factors are overwhelming in Kerala and make Kerala the capital of Diabetic India. Most of these risk factors are modifiable one. Actually, this is the scope of behavioural sciences in the research of diabetes.

Studies on the prevalence of such risk factors are regularly being carried out in the developed nations. However, only a few studies on the prevalence of behavioural risk factors have been carried out in our country, most of them are purely localised studies. Kesavadev (2006) reported some preliminary results in diabetes detection. The prevalence of diabetes in Kerala is more than 17 percent; majority of diabetic patients are

above the age of 60 years; diabetes evolves as a major cause of disability in old age and newly diagnosed patients are mostly between the age group of 35 and 40 years. Studies conducted by 'Diabscreen Kerala' (a project of P. Kesavadev Trust) also revealed an astonishing prevalence of more than 21 per cent among the urban and rural parts of Kerala. The prevalence of pre-diabetes in Kerala is 2 to 3 times more than the prevalence of diabetes (Kesavadev, 2007).

The overall crude prevalence rate of Type 2 diabetes in Thiruvananthapuram district of Kerala was reported to be 5.9%. It was the highest in urban (12.4%) followed by midland (8.1%), high land (5.8%) and costal area (2.5%) (Kutty*et al.,* 2000). Similarly, another community based cross-sectional survey reported prevalence of known diabetes as 9.0% (Menon *et al*., 2006); the prevalence of self-reported diabetes mellitus in the rural population of Kerala was found to be 13.1% (Tiwari *et al.,* 2008). In a study among urban sedentary obese population, it was found that prevalence rate peaked at 20% in the Ernakulam district of Kerala (Mohan *et al.,* 2008). In another study (Mohan, Mathur, Deepa et al., 2008) the lowest prevalence of self reported diabetes was recorded in rural (3.1%), followed by semi-urban /slum (3.2%) and highest in urban areas (7.3%).

It is clear that both in urban and rural India, prevalence rates of diabetes are rising rapidly with a rough urban - rural ratio of 2:1 or 3:1, being maintained through the last 2-3 decades with the exception of Kerala, where rural prevalence rates have caught up with, or even overtaken urban prevalence rates (Mohan, Mathur, Deepa, *et al*., 2008).

3. Treatment Satisfaction

Treatment implies the application of multiple health care interventions for the cure or reduction of disease related symptoms ailments. Treatment satisfaction is defined as the patient's rating of the process and outcomes of his/her treatment experience. (Weaver, 1997) Treatment satisfaction focuses on one aspect of satisfaction with medical care (Ware, 1984) and involves the interaction of expectations, preferences, and satisfaction with medical treatment. While health status instruments measure biological/physiological, symptoms, functioning, and well being, treatment satisfaction scales assess the level of satisfaction with these health status outcomes. (Kravitz, 1996)The important domains of treatment satisfaction are effectiveness of treatment that manifested as symptom relief, speed of onset, duration of effects, and discomfort with treatment including bother, side effects, treatment regimen characteristics convenience, flexibility and preference/desire for continuing treatment Purchase/cost of treatment. (Weaver et al., 2002.)

Studies found that people with lower education levels are less satisfied with treatment and people with lower educational levels showed a lower level of treatment satisfaction (Nicolucci *et al., 2009).* Men were more satisfied than women, consistent with findings in other countries, such as in Sweden and Italy. In Narayan *et al* found that treatment satisfaction was positively associated with higher income and employment.(Narayan *et al.,2003)* Nicolucci *et al.* also found that satisfaction was lower among unemployed diabetic patients (Nicolucci *et al.,2009)* Again, another study too found a strong association between greater treatment satisfaction and higher socio-economic status. (Biederman et al., 2009). Those studies which looked into the relationships between treatment satisfaction and marital status found that the better the quality of the marital relationship, the higher the treatment satisfaction (Trief *et al., 2002).*

4. Methodology

Objectives

To find the relationship of treatment satisfaction of diabetics with their socio-cultural background.

Hypothesis

1. There is significant difference in treatment satisfaction between male and female.
2. There is significant difference in treatment satisfaction between government and Private institutions.
3. There is significant difference in treatment satisfaction among the diabetics in terms of religion, marital status, nature of occupation and nature of residence

Major independent variables of the study are gender, type of institutions, religion, marital status, nature of occupation, nature of residence. Dependent variable is treatment satisfaction. A Pilot study was conducted in one of the selected diabetic clinic. As a part of the pilot study, the researcher approached medical practitioners to find the gravity of the problem under study which revealed the feasibility of the study.

Sampling

The Universe of the study comprises all diabetic patients, both type1 and type 2 diabetes categories in Kerala. The samples are taken from government and private institutions. In the government sector, samples were collected from diabetes clinics of five government medical colleges in Kerala. Besides these, two private diabetic research centres and five private clinics were also selected with a ratio 1:1. The samples were selected using stratified sampling method. The strata include five diabetic clinics/ medicine departments of government medical colleges, private clinics and private diabetic research centres. The ratio taken for government and private institution is 1:1. The samples were taken on random basis. Thus the selection of strata was purposive and for selection of actual samples from each stratum, random method was used.

The selected subjects were diabetic patients who were diagnosed by a physician or medical practitioner and were undergoing treatment and follow up in the above selected Institutions. These patients were selected in a random manner and were willing to cooperate with the study.

5. Results and Discussions

1) Comparison of treatment satisfaction on the basis of gender

Out of 400 respondents selected for the study, male happens to be 192 (48%) and female 208 (52%). A gender wise comparison of treatment satisfaction are carried out by using group statistics and further it is confirmed by the independent sample't' test

Table 1.1 group statistics- Gender wise comparison

Variable	Sex	N	Mean	Std. Deviation	Std. Error Mean
Treatment Satisfaction	Male	192	3.05	0.80	0.06
	female	208	2.75	0.88	0.06

Table 1. 1 presents gender wise comparison of variable treatment satisfaction. Mean value above 3 can be taken as the high score; hence the variable shows a better stand for the male gender. In treatment satisfaction males show mean value of 3.05 and females show mean value of 2.75. Males show a high score whereas females show a medium score.

Table 1.2 Independent Samples Test- t test

Variables	t-test for Equality of Means		
	T	df	P-value
Treatment Satisfaction	3.580	398	.000*

* Significant at the 5% level of significance

Source: Primary Data

The independent sample 't' test shows that, there is significant difference in mean values for treatment satisfaction between male and female (p-value <.05). So the null hypothesis (H0) is rejected and alternative hypothesis (H1) accepted. There is significant difference in treatment satisfaction between male and female.

2) Comparison of treatment satisfaction on the basis of type of family

In this study, nuclear and joint family are the two types of families found among the respondents and it is found that majority of families are nuclear (68.5%) and followed by joint families (31.5%). A comparison of treatment satisfaction on the basis of types of family are carried out by using group statistics and further it is confirmed by the independent sample't' test.

Table 2.1 Group statistics
Comparison of treatment satisfaction on the basis of types of family

Variable	Nature of family	N	Mean	Std. Deviation	Std. Error Mean
Treatment Satisfaction	nuclear	274	2.99	0.86	0.05
	joint	126	2.69	0.81	0.07

Source: Primary Data

In treatment satisfaction, both families show low score (below 3), and in comparison nuclear families show better treatment satisfaction than joint families.

Table 2.2 Independent Samples Test-Nuclear and Joint family

Variable	t-test for Equality of Means		
	T	df	p-value
Treatment Satisfaction	3.275	398	.001*

* Significant at the 5% level of significance

Source: Primary Data

Table 2.2**, t**he independent sample't' test shows that, there is significant difference in mean values of treatment satisfaction between joint and nuclear families (p-value <.05).

3) The treatment satisfaction of diabetics in Government and Private Institutions.

Samples were collected through stratified random sampling and equal number of samples was collected from government and private institutions. i.e. 200 from government and 200 private.

Table 3.1 Group Statistics
Comparison of treatment satisfaction between different types of institutions

Variables	Type of institution	N	Mean	Std. Deviation	Std. Error Mean
Treatment Satisfaction	Govt.	200	2.84	0.90	0.06
	Private	200	2.94	0.81	0.06

Source: Primary Data

Table 3.1 indicates institution wise comparison of treatment satisfaction. Mean value above 3 can be taken as the high score; hence the variable shows a better stand for the private institutions. In treatment satisfaction, both institutions show moderate score (below 3), and in comparison private institutions show better treatment satisfaction than the government institutions. Private institutions offer professional management of services which in turn gives better satisfaction of the treatment.

Table 3.2 Table Independent sample - t TEST

Variables	t-test for Equality of Means		
	t	df	p-value
Treatment Satisfaction	-1.176	398	.240

* Significant difference at 5% level of significance
Source: Primary Data

Table 3.2 shows that, the independent sample 't' test shows that, the variable treatment satisfaction' is significant at.05 (p<.05). So the null hypothesis (H0) is rejected and the alternative hypothesis (H1) accepted. The treatment satisfaction of the diabetics is different between Government and Private Institutions.

4) Comparison on the basis of supplementary medicine intake

Some of the diabetics were using alternative medicines and home remedies other than modern medicine to tackle their diabetic situation. Study shows that majority of the diabetics are using modern medicine alone for their diabetic treatment, but 34.0% respondents are using alternative medicines like Ayurveda, Yoga, Unani, Sidha, Homeopathy or Home remedies. A comparison of treatment satisfaction on the basis of supplementary medicine intake are carried out by using group statistics and further it is confirmed by the independent sample't' test.

Table 4.1 Group Statistics-Comparison on the basis of supplementary medicine

Variable	Intake of supplementary medicines	Number	Mean	Std. Deviation	Std. Error Mean
Treatment Satisfaction	Yes	136	3.07	0.85	0.07
	No	264	2.80	0.85	0.05

Source: Primary Data

In treatment satisfaction, supplementary medicine takers show mean value 3.07, whereas supplementary medicine non-takers show mean value of 2.80. In treatment satisfaction, supplementary medicine takers show high score and non-takers show low score.

Table 4.2 Independent Samples Test-Supplementary medicine intake

Variable	t-test for Equality of Means		
	T	df	P-value
Treatment Satisfaction	2.913	398	.004*

* Significant at 5% level of significance
Source: Primary Data

Table 4.2 shows that The independent sample 't' test shows that,there is significant difference in mean value of treatment satisfaction among diabetics between supplementary medicine takers and non-takers (p-value <.05).

5) Comparison of treatment satisfaction on the basis of religion

Religion wise break up of 400 respondents are as follows. Hindus 55.8%, Muslims - 24.2% and Christianity 20%. These shows that majority of the respondents are Hindus followed by Muslims. One way ANOVA was applied to find whether there is any significant difference between religious groups, in the treatment satisfaction.

Table 5 Analysis of Variance among religious groups

Variables		Sum of Squares	Df	Mean Square	F	Sig.
Treatment Satisfaction	Between Groups	1.164	2	.582	.791	.454
	Within Groups	292.292	397	.736		
	Total	293.457	399			

Source: Primary Data

If the p value for the ANOVA test is less than 0.05, the result indicates that the mean differences between the variables are statistically significant. Table 5 ANOVA test showed that the treatment satisfaction is not significantly (P<0.05) different among different religious groups of diabetics.

6) Comparison of treatment satisfaction on the basis of Education

The study showed that there was high percentage (more than 70%) of secondary education among the diabetic population of the state. The percentages of different educational groups are primary education (24.5%), secondary education (48.2%), college/university education (20.5%) and Professional education (3.8%). As the most literate state, data also showed a meagre percentage (3%) of illiterate population.

Table 6 Analysis of Variance among Educational Groups

Variable		Sum of Squares	df	Mean Square	F	Sig.
Treatment Satisfaction	Between Groups	59.963	4	14.991	25.360	.000*
	Within Groups	233.493	395	.591		
	Total	293.457	399			

Source: Primary Data

One way ANOVA was applied to find whether there is any significant difference between educational groups, in the treatment satisfaction. ANOVA test showed that the treatment satisfaction is significantly (P<0.05) different among different educational groups of diabetics. So, the level of education can be considered the foremost important indicator in dealing with diabetes.

7) Comparison of treatment satisfaction on the basis of Occupation

Occupational categories indicated more than one third of the respondents (34.5%) have no occupation and while 33.5% engage in manual labour. Other percentages of occupational groups are private employment (10%), government employment (14.2%) and business or self entrepreneurship (5.8%). Professionals are the negligible populationof the area under study. One way ANOVA test which was applied to find whether there is any significant difference between the occupational groups, in the treatment satisfaction.

Table 7 Analysis of Variance among Occupational groups

Variables		Sum of Squares	df	Mean Square	F	Sig.
Treatment Satisfaction	Between Groups	33.745	5	6.749	10.239	.000*
	Within Groups	259.712	394	.659		
	Total	293.457	399			

Source: Primary Data

As the p value for the ANOVA test is less than 0.05, the result indicates that the mean differences between the variables are statistically significant. ANOVA test showed that the treatment satisfaction are significantly (P<0.05) different among different occupational groups of diabetics. These show all the variables taken for ANOVA test are significantly different among occupational groups. So the nature of work or occupation can be considered as another important determinant in dealing with diabetes.

Comparison of treatment satisfaction on the basis of Marital status

Information gathered from the respondents on marital status which shows majority (78.8%) of the respondents are married. Widow/widower constitutes the second category by 11.2% followed by unmarried person (5.2%).Only 2% respondents are separated from wedlock and 2.8% respondents are divorced. one way ANOVA was applied to find whether there is any significant difference between the marital status groups, in the treatment satisfaction.

Table 8 Analysis of Variance among marital status groups

Variables		Sum of Squares	df	Mean Square	F	Sig.
Treatment Satisfaction	Between Groups	6.844	4	1.711	2.358	.053*
	Within Groups	286.613	395	.726		
	Total	293.457	399			

Source: Primary Data

Table 8 shows that ANOVA test showed that the treatment satisfaction are significantly (P<0.05) different among different marital status groups of the diabetics. This indicates all the variables taken for ANOVA test are significantly different among marital groups. So the level of marital status can be considered as an important factor in dealing with diabetes.

8) Comparison of treatment satisfaction on the basis of Area of residence

This study shows that rural population is the major sections with 69.5 percent of total sample size in this study. Municipal area constitutes 19.5 percent and City Corporation occupies 11 percent.

Table 9 Analysis of Variance among Area of residence

Variable		Sum of Squares	df	Mean Square	F	Sig.
Treatment Satisfaction	Between Groups	5.770	2	2.885	3.982	.019*
	Within Groups	287.686	397	.725		
	Total	293.457	399			

Source: Primary Data

Table 9 indicates that one way ANOVA was applied to find whether there is any significant difference among area of residence, in the treatment satisfaction. If the p value for the ANOVA test is less than 0.05, the result indicates that the mean differences between the variables are statistically significant. ANOVA test showed that the variable treatment satisfaction is significantly (P<0.05) different among different residential groups of the diabetics. Variable treatment satisfaction of the diabetics is significantly different among different residential groups.

6. Conclusion

Treatment satisfaction shows a better stand for the male gender, males show a high score whereas females show a low score. Diabetics from nuclear families show better treatment satisfaction than joint families. Both supplementary medicine takers and supplementary medicine non-takers show high score in treatment satisfaction, and in comparison supplementary medicine takers do better than supplementary medicine non-takers. Treatment satisfaction is significantly different among different educational, marital and occupational groups of the diabetics. But, treatment satisfaction of the diabetics is not significantly different within different religious groups.

Reference

1. Biderman A, Noff E, Harris SB, Friedman N and Levy A. Treatment satisfaction of diabetic patients: what are the
2. contributing factors? *Family Practice* 2009; **26:** 102–10
3. Kesavadev, J. (2007). Beat the Diabetes. *Kerala Calling*, 10-11.
4. Kravitz RL. (1996). Patients' expectations for medical care: an expanded formulation based on review of the literature. Med Care Res Rev,53, 3–27
5. Kutty, V.R., Soman, C.R,. Joseph, A., Pisharody, R., & Vijayakumar, K. (2000). Type2 diabetes in southern Kerala: variation in prevalence among geographic divisions within a region. *Natl Med J India,* 13(6), 287-292.
6. Menon,V.U., Kumar, K.V., Gilchrist, A., Sugathan, T.N., Sundaram, K.R., Nair, V., Kumar, H. (2006). Prevalence of known and undetected diabetes and associated risk factors in central Kerala- ADEPS. *Diabetes Res Clin Pract,* 74(3), 289-294.
7. Mohan, V., Deepa, M., Anjana, R.M., Lanthorn, H., & Deepa, R. (2008). Incidence of diabetes and pre-diabetes in a selected urban south Indian population (CUPS-19). *J assoc Physicians India*, 56, 152-157.
8. Mohan, V., Mathur, P., Deepa, R., Deepa, M., Shukla, D.K., Menon, G.R., Anand, K., Desai, N.G., Joshi, P.P., Mahanta, J., Thankappan, K.R., & Shah, B. (2008). Urban rural differences in prevalence of self reported diabetes in India--the WHO-ICMR Indian NCD risk factor surveillance. *Diabetes research and clinical practice*, 80, 159-168.
9. Narayan KM, Gregg EW, Fagot-Campagna A, et al. (2003). Relationship between quality of diabetes care and patient satisfaction, *J Natl Med Assoc*,. 95, 64-70.
10. Nicolucci A, Cucinotta F, Squatrito S, et al.(2009). For the QuoLITy Study Group Clinical and socio-economic correlates of quality of life and treatment satisfaction in patients with type 2 diabetes *Nutr Metab Cardiovasc Dis*, 19, 45-53.

Tiwari, R.R., Deb, P.K., Debbarma, A., Chaudhury, R., Chakraborthy, R., Lepacha. M., & Chakrabrthy, G. (2008). Risk factor analysis in self-reported diabetes in a rural Kerala population. *Intl J Diab Dev Ctries*, 28(3), 91-94.

11. Trief PM, Wade MJ, Britton KD, Weinstock RS. (2002). A prospective analysis of marital relationship factors and quality of life in diabetes, *Diabetes Care*, 25, 1154-1158
12. Ware JE, Snyder MK, Wright WR, et al. (1984). Defining and measuring patient satisfaction with medical care. Eval Program Plann ,6,247–63.
13. Weaver M, Patrick DL, Markson LE, et al. (1997). Issues in the measurement of satisfaction with treatment. Am J Manag Care ,3, 579–94.
14. WHO.(2012).Diabetesfactsheet.http://www.who.int/mediacentre/factsheets/fs312/en/

