Quality of life of diabetic patients attending OPD of medical college hospital

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Abstract **Background**- Diabetes mellitus is one of the important causes of morbidity and mortality. It negatively affects quality of life of patients and further results in poor management of the disease. **Methods**- The present cross-sectional study was conducted upon 134 diabetic patients visiting OPD of urban center of Medical College Hospital to assess the quality of life of these patients using WHOQ oL-BREF scale. **Results**- Mean age was 51.3 ± 5.6 years. Males were more (61.9%) as compared to females, about one-third (31.3%) were illiterate, 79.1% were married, 29.1% belonged to lower socioeconomic class, 32.8% smoked and 55.2% were overweight or obese. Mean HbA1C of the diabetics was 7.9 ± 2.4%. Mean QoL for physical domain was 62.3 ± 16.7, for the psychological domain was 57.6 ± 19.3, for the social domain was 51.9 ± 17.6 and for the environmental domain was 61.5 ± 13.9. Mean for the overall QoL score was 58.3 ± 17.4. **Conclusion**- The scores across various domains of quality of life were low resulting from psychological stress and limited social activity.
Key Word: Cross sectional study, Diabetes, Quality of Life.

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Access this article online	
Quick Response Code:	**Website:** www.medpulse.in
	Accessed Date: 12 January 2019

INTRODUCTION

Diabetes mellitus is one of the leading causes of morbidity and mortality worldwide. It has been estimated that there will be about 438 million diabetics globally [1] by the year 2030 and 70 million in India by the year 2025.[2] Hence, India has been termed as the diabetic capital of the world. Associated with diabetes, there are increase in number of cases with short term and long-term complications. These include involvement of cardiovascular, renal, neurological and peripheral vascular systems. Diabetes being a chronic lifestyle related disease needs modifications in diet, physical activity, sleep and stress management. These all result in decreased quality of life (QoL). [3] Quality of life has been defined as individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns.[4] It is one of the important indicators of management and outcome of chronic illness. It also determines individual's capacity for coping with his illness and managing the disease properly.[5] It also varies from person to person and in different areas. Studies have shown that quality of life is negatively affected in diabetes, especially in presence of complications. [6] Assessment of quality of life among diabetics has not been done in this area. Hence, this study was proposed. *Aims and objectives*- The present study was conducted to assess the quality of life of patients suffering from type 2 diabetes mellitus.

MATERIAL AND METHODS

The present cross-sectional study was conducted at the Urban Center of Department of Community Medicine of a Medical College Hospital. Diagnosed cases of Type 2 Diabetes mellitus visiting OPD of urban center were included in this study. Patients with severe complications including cardiovascular, renal, neurological disease or diabetic foot ulcers were excluded. A total of 134 diabetic patients were included in this study. Informed consent was

taken from all the patients and they were told about the importance of this study. Pretested semi-structured proforma was used for data collection from the patients. Details regarding socio-demographic profile, history of diabetes, its complications and management were noted. For assessing quality of life of the patients, WHOQoL-BREF scale (World Health Organization Quality of Life – Brief) [7] was used. Original tool was translated in Hindi and back translated in English to check the consistency. Content validity was also done by subject expert. The pretesting of translated tool was done before data collection. WHOQoL-BREF is internationally validated tool to measure quality of life in various conditions including diabetes and is reliable across different populations. It measures four domains namely, physical, psychological, social and environmental. A total of 26 questions are there to assess these domains. It can also be self-administered. The responses are noted on five-point Likert scale. The scores were converted to the value of 0 – 100. Data was entered in Microsoft Excel and analyzed using SPSS v 16.0. Quantitative variables were summarized as Mean ± SD and qualitative variables as frequency and percentage. Appropriate statistical test was done and p-value < 0.05 was considered to be statistically significant.

RESULTS AND DISCUSSION

The present study included 134 diabetic patients. Table-1 shows the background profile of study subjects. Mean age was 51.3 ± 5.6 years. Males were more (61.9%) as compared to females, about one-third (31.3%) were illiterate, 79.1% were married, 29.1% belonged to lower socioeconomic class, 32.8% smoked and 55.2% were overweight or obese. Mean HbA1C of the diabetics was 7.9±2.4 %.

Table 1: showing the background profile of diabetic patients

Background profile	Frequency (%)	95% CI
Age in years (Mean ± SD)	51.3 ± 5.6	50.4-52.2
Sex		
- Male	83 (61.9%)	47.4-76.4%
- Female	51 (38.1%)	23.6-52.6%
Education		
- Illiterate	42 (31.3%)	17.4-45.2%
-Literate	17 (12.7%)	2.7-22.7%
- Primary	32 (23.9%)	11.2-36.6%
- Secondary and above	43 (32.1%)	18.1-46.1%
Marital Status		
- Married	106 (79.1%)	66.9-91.3%
- Unmarried/ Widowed/ Divorced	28 (20.9%)	8.7-33.1%
Socio-economic status		
- I	3 (2.2%)	-2.2-6.6%
- II	15 (11.2%)	1.8-20.6%
- III	31 (23.1%)	10.5-35.7%

- IV	46 (34.3%)	20.1-48.5%
- V	39 (29.1%)	15.5-42.7%
Smoking		
- Yes	44 (32.8%)	18.8-46.8%
- No	90 (67.2%)	53.2-81.2%
BMI		
- Underweight	15 (11.2%)	1.8-20.6%
- Normal	46 (34.3%)	20.1-48.5%
- Overweight and obese	74 (55.2%)	40.3-70.1%
HbA1C (Mean ± SD)	7.9±2.4	7.5-8.3

Table-2 shows the quality of life scores of these patients. Mean QoL for physical domain was 62.3±16.7, for the psychological domain was 57.6±19.3, for the social domain was 51.9±17.6 and for the environmental domain was 61.5±13.9. Mean for the overall QoL score was 58.3±17.4.

Table 2: showing quality of life scores

QoL Domain	Mean ± SD	95% CI
Physical	62.3±16.7	59.5-65.1
Psychological	57.6±19.3	54.3-60.9
Social	51.9±17.6	48.9-54.9
Environmental	61.5±13.9	59.1-63.9
Total	58.3±17.4	55.4-61.3

Quality of life has been assessed by different researchers. Kumar et al [6] studied quality of life of diabetics in Karnataka using Quality of Life Instrument for Indian Diabetes Patients questionnaire. They found that quality of life was found to decrease with increasing age, years lived with diabetes and lower income class. Another study in Karnataka by Kumar et al [8] using MOS SF36 v2 revealed that females had lower score than males. Treatment for diabetes, compliance for treatment, physical activity and follow up with doctor was found to be significantly associated with various domains and total SF-36 scores. Somappa et al in [9] Karnataka using WHOQOL-BREF found that mean Quality of life scores were significantly higher among females compared to males for physical, psychological, social and environmental domains (p<0.01). Significant positive correlation was seen between age and physical, psychological, social and environmental domains. Increase in age and HbA1c independently affected the Quality of life of diabetics. Jain et al [10] in Maharashtra assessed health related quality of life using WHOQOL-BREF. They commented that HRQOL was similar in diabetics and non-diabetic controls living under the same conditions in the rural area. But overall, the HRQOL was quite low. Gautam et al [11] studied QoL of diabetics in Delhi using SF-36. They found that diabetes had an adverse effect on the QOL and female diabetics had a significantly lower QOL than males. General Health and Vitality were the most affected domains. Lower socioeconomic status, lesser education, and lesser physical activity were significantly associated with poor QOL.

Manjunath *et al* [12] conducted study in Tamil Nadu using WHOQOL-BREF. They observed that mean total score of the QoL scale was 58.05. 63% had good physical, 69% had good psychological, 27% had good social and 85% had good environmental QoL scores. Males, currently married and those with BMI >25 had a statistically significantly better QoL compared to their counterparts. A study conducted by Kumar *et al* in [13] Bihar using WHOQOL-BREF found that the physical domain of QoL was significantly affected in diabetic persons. Overall QoL score was 57.80. 55% of the patients had good physical QoL, 47% good psychological QoL, 55% good social QoL, and 45% good environmental QoL. It is evident from the above discussion that different tools have been used in different studies e.g. WHOQOLBREF, SF 36, Quality of Life Instrument for Indian Diabetes Patients questionnaire etc. It has been seen that the quality of life scores of diabetic patients especially in physical domain is lower than that of non-diabetic counterparts. However, Jain *et al* have observed it to be similar in rural areas. The findings of the present study are similar in nature and confirm the fact that the quality of life scores of diabetic patients in this place is similar to that in other areas.

CONCLUSION

It can be concluded from the present study that the scores across various domains were low. Score of social domain was lowest indicating limited activity and social interaction of these patients. Psychological domain score was also less and may be the result of depression associated with this chronic disease.

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