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Original Research Article

Quality of life and diabetes mellitus among diabetic adult patients in an urban slum area

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ABSTRACT

Background: Quality of life studies help us to develop models that tend to improve the overall health status of the patients. The objective was to study effect of diabetes mellitus on quality of life of diabetic adult patients in an urban slum area.
Methods: A hospital based cross sectional study was carried out among 64 eligible known cases of diabetes for a period of three months. For recording questions related to quality of life, questionnaire which was validated was used. The data was expressed as mean and standard deviation.
Results: The overall quality of life (role limitation due to physical health) was not much affected as the average scores are above 3.5 which indicates "better quality of life". The quality of life for heavy activities was slightly affected due to diabetes. But the patients were able to do the mild activities compared to heavy physical activities. Diabetes has affected their quality of life. But in terms of fatigue it has not been much affected. Overall the mean of this symptom related quality of life, was better. This may be due to good glycemic control. Comparatively frequent urination bothered the diabetic patients.
Conclusions: Diabetes has some impact on the quality of life of patients as seen from the study.

Keywords: Diabetes, Quality of life, Patients

INTRODUCTION

Prevalence of diabetes is increasing day by day globally as well as in India. Diabetes mellitus negatively impacts the quality of life of the diabetic patients in all terms. It has been estimated that there were 37.7 million cases of diabetes in India in the year 2004. Of these, maximum were present in urban areas. In the same year it was estimated that more than one lakh people died due to diabetes of which 60% from urban areas and remaining 40% from rural areas of India.[1]

"World Health Organization defined quality of life". This definition accounts the individual perception in relation to their own culture and values they have in their life. The definition also takes into account the individual standards, expectations, goals and concerns relation to their cultural and social values. Quality of life tool helps us to measure the impact of disease on the individual life and when combined for representative group, give the average impact of the disease on day to day life. Psychosocial factors play important role in the life of the patients of diabetes. Quality of life studies help us to

develop models that tend to improve the overall health status of the patients.[2]

Poor quality of life is associated with lack of self-care or a decrease in self-care. This decreased self-care leads to poor control of blood sugar. It also increased the risk of complications. The diabetic status gets worst affect. Good quality of life indicates the patient ability to tackle the disease as well as how he can maintain his health with presence of chronic disease.[3,4]

Diabetes is associated with complications like retinopathy which can lead to blindness, nephropathy which may become terminal, diabetic foot which could result in amputation of lower limb, and also the diabetic patient is at increased risk of death due to other complications like coronary heart disease, or cerebrovascular episodes.[5]

Present study was carried out to study effect of diabetes on quality of life of diabetic patients.

METHODS

A hospital based cross sectional study was carried out among 64 eligible known cases of diabetes at Department of Community Medicine, Malla Reddy Institute of Medical Sciences, Suraram, Hyderabad for a period of three months. "Standardized questionnaire" was used for recording quality of life of patients.

"Institutional Ethics Committee permission" was obtained from the committee prior to the study following the standard guidelines. After approval, informed consent was taken from eligible diabetic patients.

Known cases of diabetes above 25 years of age, willing to participate in the study and not seriously ill were included in the present study. Patients other than diabetes or newly diagnosed cases of diabetes, aged less than 25 years of age, not willing to participate in the present study and seriously ill known cases of diabetes were excluded from the present study.

The standardized questionnaire for quality of life as described below was used to collect information related to various aspects of quality of life.

This questionnaire was developed and validated in India. It measures quality of life in relation to psychosocial aspects. This questionnaire was developed after reviewing some standard internationally available and well known questionnaires. Specific questions were prepared based on interview of the patients, opinion of the experts and the literature review. Likert scale 1-5 was used. 5 indicated best quality of life and 1 indicated worst quality of life.

The data was expressed as mean and standard deviation after statistical analysis.

RESULTS

Table 1 shows quality of life of diabetic patients with relation to "role limitation due to physical health". It has been seen that for questions related to "role limitation due to physical health" like "how often do you miss your work because of your diabetes?" "How often does the schedule affect your work?" "How often DM affect your efficiency at work?" etc. the overall quality of life was not much affected as the average scores are above 3.5 which indicates better quality of life.

Table 2 shows quality of life of diabetic patients in relation to physical endurance. It has been seen that for questions related to physical endurance like "How often in last 3 months has your overall health problems limited the kind of vigorous activities you can do like lifting heavy bags/objects, running, skipping, jumping?" etc the quality of life slightly affected due to diabetes. But the patients were able to do the mild activities compared to heavy physical activities.

Table 3 shows quality of life of diabetic patients in relation to general health. For questions like general health and concentration in the work, the quality of life was 2.5 on an average. This means that diabetes has affected their quality of life. But in terms of fatigue it has not been much affected.

Table 4 shows quality of life of diabetic patients in relation to symptom botherness. Overall the mean of this symptom related quality of life, was better. This may be due to good glycemic control. Comparatively frequent urination bothered the diabetic patients.

Table 1: Quality of life of diabetic patients (n=64) (Role limitation due to physical health).

Role limitation due to physical health	Mean±SD
How often do you miss your work because of your diabetes?	3.59±1.354
How often does the schedule affect your work?	3.91±1.342
How often DM affect your efficiency at work?	3.61±1.317
How often do you find DM limiting your social life?	3.95±1.302
To what extent do you avoid travelling because of your DM?	3.70±1.411
Compared to others of your age are your social activities limited because of your DM?	3.95±1.265

Table 2: Quality of life of diabetic patients (n=64) (Physical endurance).

Physical endurance	Mean±SD
How often in last 3 months has your overall health problems limited the kind of vigorous activities you can do like lifting heavy bags/objects, running, skipping, jumping?	2.77±1.571
How often in last 3 months has your overall health problems limited the kind of moderate activities you can do like moving a table, carrying groceries or utensils?	3.23±1.621
How often in last 3 months has your overall health problems limited you from walking uphill or climbing 1-2 floors	3.08±1.546
How often in last 3 months has your overall health problems limited you from walking 1-2 km at a stretch	3.39±1.6
How often in last 3 months has your overall health problems limited you from bending, squatting or turning?	3.77±1.52
How often in last 3 months has your overall health problems limited you from eating, dressing or using the toilet?	4.39±1.107

Table 3: Quality of life of diabetic patients (n=64) (General health).

General health	Mean±SD
In general would you say your health is	2.53±0.861
How well are you able to concentrate in everything like working, driving, reading etc?	2.56±1.037
How many times in the past three months have you had fatigue/felt very tired?	3.56±1.367

Table 4: Quality of life of diabetic patients (n=64) (Symptom botherness).

Symptom botherness	Mean±SD
How many times in the past three months have you had thirst/dry mouth?	3.5±1.392
How many times in the past three months have you felt excessive hunger?	3.25±1.574
How many times in the past three months have you had frequent urination related to diabetes management?	3.11±1.404

DISCUSSION

It has been seen that for questions related to "role limitation due to physical health" like "how often do you miss your work because of your diabetes?" "How often does the schedule affect your work?" "How often DM affect your efficiency at work?" etc. the overall quality of life was not much affected as the average scores are above 3.5 which indicates better quality of life.

It has been seen that for questions related to physical endurance like "How often in last 3 months has your overall health problems limited the kind of vigorous activities you can do like lifting heavy bags/objects, running, skipping, jumping?" etc the quality of life slightly affected due to diabetes. But the patients were able to do the mild activities compared to heavy physical activities.

For questions like general health and concentration in the work, the quality of life was 2.5 on an average. This means that diabetes has affected their quality of life. But in terms of fatigue it has not been much affected.

Overall the mean of this symptom related quality of life, was better. This may be due to good glycemic control. Comparatively frequent urination bothered the diabetic patients.

de Grauw et al in their study found that functional impairment was 2.46 times more among patients of diabetes compared to control group.[6] Functional impairment was significantly associated with cardiovascular morbidity.

Gurkovaa et al studied 104 known cases of diabetes that were on insulin treatment.[7] Maximum were females. Maximum study subjects took daily insulin injections. 68% of the study subjects had complications of diabetes. Authors found that the study subjects had low adherence rates.

Nagpal et al found that the questionnaire showed good concordance (product moment correlation 0.724; p=0.001; subscale correlation – 0.457 to 0.779) with the DQL-CTQ.[2] The overall standardized questionnaire score showed good responsiveness to metabolic control and co-morbidities establishing discriminant validity. They concluded that the questionnaire was valid and reliable.

Jahanlou et al used standard questionnaires for study of quality of life.[8] They wanted to validate the questionnaire of the Persian version. They selected 387 Iranian known

cases of diabetes. They also measured the HbA1c in all these patients. They observed that the overall quality of life was related with social domain as well as environmental domain. They found that spiritual domain was not related with quality of life in IRDQOL with physical domain. They noted that in IRDQOL, the spiritual domain was totally unrelated. The authors recommended adding more questions in spiritual domain in IRDQOL.

Chew et al in their study had mean age of 56.9 years. Maximum were female patients of known cases of diabetes.[9] Maximum cases were married. 60% of the cases were found to have good quality of life. 19.6% of the study subjects were found to have mild distress. Patients with complications had poor quality of life.

Sreedevi et al stressed the importance of studies on quality of life among diabetic patients.[10] They noted that as the culture varies from one society to another, the quality of life results also we get are different. Hence the authors signified the importance of using local language for the studies on quality of life. The authors tried to study the reliability of the "quality of life questionnaire" (WHOQOL-BREF) which was translated into Malayalam language. They carried out a study among 200 known cases of diabetes in a primary health centre in Kerala. They found that the translated questionnaire on quality of life in Malayalam was reliable. The authors also noted that as the education level improved, the quality of life was also better among such subjects.

CONCLUSION

Thus we conclude that the diabetes mellitus affects the quality of life. It depends on the treatment compliance of the patients. Good treatment compliance leads to good glycemic control and results in good quality of life.

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REFERENCES

1. Park K. Diabetes. In: Park's Textbook of Preventive and Social Medicine, 22nd ed. Banarasidas Bhanot Publishers, Jabalpur; 2013: 362-366.
2. Natarajan N, Putnam W, Van Aarsen K, Lawson BK, Burge F. Adherence to antihypertensive medications among family practice patients with diabetes mellitus and hypertension. Can Fam Physician. 2013;59:e93-100.
3. Vigneshwaran E, Padmanabhareddy Y, Devanna N Alvarez-Uria G. Gender Differences in Health Related Quality of Life of People Living with HIV/AIDS in the Era of Highly Active Antiretroviral Therapy. N Am J Med Sci. 2013;5(2):102-7.
4. Garratt AM, Schmidt L, Fitzpatrick R. Patient-assessed health outcome measures for diabetes: a structured review. Diabet Med. 2002;19(1):1-11.
5. Rema M, Premkumar S, Anitha B, Deepa R, Pradeepa R, Mohan V. Prevalence of diabetic retinopathy in urban India: the Chennai Urban Rural Epidemiology Study (CURES) eye study, I. Invest Ophthalmol Vis Sci. 2005;46(7):2328-33.
6. de Grauw WJ, van de Lisdonk EH, Behr RR, van Gerwen WHEM, van den Hoogen HJM, van Weel C. The impact of type 2 diabetes mellitus on daily functioning. FAM Pract. 1999;16(2):133-9.
7. Gurkova E, Ziakova K. Self-care behavior, treatment satisfaction and quality of life in people on intensive insulin treatment. Biomed Pap Med Fac Univ Palacky Olomouc Czech Repub. 2014;158(2):303-8.
8. Jahanlou AS, Karami NA. WHO quality of life-BREF 26 questionnaire: reliability and validity of the Persian version and compare it with Iranian diabetics quality of life questionnaire in diabetic patients. Prim Care Diabetes. 2011;5(2):103-7.
9. Chew BH, Mohd-Sidik S, Shariff-Ghazali S. Negative effects of diabetes-related distress on health-related quality of life: an evaluation among the adult patients with type 2 diabetes mellitus in three primary healthcare clinics in Malaysia. Health Qual Life Outcomes. 2015;13:187.
10. Sreedevi A, Cherkil S, Kuttikattu DS, Kamalamma L, Oldenburg B. Validation of WHOQOL-BREF in Malayalam and Determinants of Quality of Life among People with Type 2 Diabetes in Kerala, India. Asia Pac J Public Health. 2016;28(1 Suppl):62S-9S.

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