Section: Miscellaneous

Original Research Article

QUALITY OF LIFE AMONG PATIENTS WITH TYPE 2 DIABETES MELLITUS ATTENDING OUTPATIENT DEPARTMENT OF A TERTIARY CARE HOSPITAL IN SOUTH INDIA

Satheesh Kumar B[1], Ramesh Kumar K[1], Anbuchelvan T[3]

[1]Assistant Professor, Government Mohan Kumaramangalam Medical College and Hospital, Salem, Tamil Nadu, India.
[3]Associate Professor, Department of Pharmacology, Sri Balaji Medical College Hospital and Research Institute, Renigunta, Tirupati, India.

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Corresponding Author:
Dr. Anbuchelvan T,
Associate Professor, Department of Pharmacology, Sri Balaji Medical College Hospital and Research Institute, Renigunta, Tirupati, India.
Email: anbu1677@gmail.com

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ABSTRACT

Background: Type 2 diabetes mellitus (T2DM) is a major non-communicable disease with long-term implications extending beyond glycemic control. With increasing life expectancy among individuals with diabetes, assessment of quality of life (QoL) has become an important outcome of diabetes care.
Objectives: To assess the quality of life among patients with type 2 diabetes mellitus attending outpatient departments of a tertiary care hospital and to determine its association with selected socio-demographic and clinical factors.
Materials and Methods: A hospital-based cross-sectional study was conducted among 91 patients with type 2 diabetes mellitus over a period of three months. Quality of life was assessed using the WHOQOL-BREF questionnaire covering physical, psychological, social, and environmental domains. Domain scores were calculated according to WHO guidelines and categorized as good or poor based on mean values. Associations were tested using the chi-square test.
Results: The mean overall QoL score was 57.6. Good quality of life was observed in 54.9% of participants in the physical domain, 58.2% in the psychological domain, 62.6% in the social domain, and 50.5% in the environmental domain. Educational status showed a statistically significant association with physical quality of life ($p < 0.05$).
Conclusion: A substantial proportion of patients with type 2 diabetes mellitus reported satisfactory quality of life. Educational status emerged as an important determinant of physical quality of life, emphasizing the role of patient education in comprehensive diabetes care.
Keywords: Type 2 diabetes mellitus; Quality of life; WHOQOL-BREF; Cross-sectional study.

INTRODUCTION

Type 2 diabetes mellitus is a chronic metabolic disorder characterized by hyperglycaemia resulting from insulin resistance and relative insulin deficiency. It represents a major public health challenge globally and is associated with significant morbidity, premature mortality, and economic burden.[1] The International Diabetes Federation estimates that the global prevalence of diabetes continues to rise steadily, with a disproportionate burden borne by low- and middle-income countries.[2]

India is home to one of the largest populations of individuals with diabetes. Rapid urbanization, sedentary lifestyles, unhealthy dietary patterns, and genetic susceptibility among Asian Indians have contributed to the rising prevalence of T2DM in the country.[3,4] While advances in pharmacological therapy and healthcare delivery have improved survival, living with diabetes imposes long-term physical, psychological, social, and environmental challenges.

Beyond microvascular and macrovascular complications, diabetes adversely affects psychological well-being, social interactions, and overall life satisfaction. Continuous medication use,

dietary restrictions, fear of complications, and financial strain contribute to reduced quality of life among people with diabetes.[5] Hence, assessing quality of life provides a broader understanding of disease impact beyond biomedical indicators alone.

Quality of life is a multidimensional construct encompassing physical health, psychological state, social relationships, and interaction with the environment. The World Health Organization Quality of Life–BREF (WHOQOL-BREF) questionnaire is a validated and widely used instrument that captures these domains across different cultures and disease conditions.[6] Several studies have demonstrated that quality of life among individuals with diabetes is influenced by factors such as age, education, duration of illness, presence of complications, and comorbidities.[7-9]

Despite the growing burden of diabetes in India, routine assessment of quality of life is often overlooked in clinical practice. Understanding domain-specific quality of life and its determinants can help design patient-centred interventions and improve overall diabetes care. This study was therefore undertaken to assess quality of life and its associated socio-demographic and clinical factors among patients with type 2 diabetes mellitus attending outpatient departments of a tertiary care hospital. The objectives being

Objectives

1. To assess the quality of life among patients with type 2 diabetes mellitus attending outpatient departments.
2. To determine the association between selected socio-demographic and clinical variables and different domains of quality of life.

MATERIALS AND METHODS

A hospital-based cross-sectional study was conducted in the outpatient departments of two tertiary care teaching hospital in South India. They are Government Mohan Kumaramangalam Medical College and Hospital, Salem and Sri Balaji Medical College Hospital and Research Institute, Renigunta, Tirupati. The study was done over a period of three months. The study included 91 patients diagnosed with type 2 diabetes mellitus aged 30 years and above, selected using consecutive sampling.

Quality of life was assessed using the WHOQOL-BREF questionnaire, which consists of four domains: physical health, psychological health, social relationships, and environmental health. Data were collected using the interview method after obtaining written informed consent.

Data were entered and analysed using SPSS software. Quantitative variables were expressed as mean and standard deviation, while qualitative variables were expressed as proportions. Associations between study variables and quality of life domains were assessed using the chi-square test. A p-value of less than 0.05 was considered statistically significant.

The study was conducted after obtaining approval from the institutional ethics committee.

RESULTS

A total of 91 patients with type 2 diabetes mellitus participated in the study.

Table 1: Socio-demographic and clinical profile of study participants in a tertiary care medical college Hospital in Tamil Nadu

Variable	Category	Frequency n (%)
Age (years)	≤50	32 (35.2)
	51–65	41 (45.1)
	>65	18 (19.7)
Sex	Male	48 (52.7)
	Female	43 (47.3)
Education	Up to school	27 (29.7)
	Higher secondary	34 (37.4)
	Graduate & above	30 (33.0)
Duration of diabetes	<5 years	38 (41.8)
	5–10 years	36 (39.6)
	>10 years	**17 (18.6)**
Comorbidity	Present	49 (53.8)
	Absent	42 (46.2)

The majority of participants were aged between 51 and 65 years (45.1%), and males constituted 52.7% of the study population. With regard to education, 37.4% had completed higher secondary education, while 33.0% were graduates or had higher qualifications. Clinically, 41.8% had a duration of diabetes of less than five years, and 53.8% reported the presence of at least one comorbid condition. [Table 1]

Table 2: Domain-wise Quality of Life distribution of study participants in a tertiary care medical college Hospital in Tamil Nadu

Domain	Good QoL n (%)	Poor QoL n (%)
Physical	50 (54.9)	41 (45.1)
Psychological	53 (58.2)	38 (41.8)
Social	57 (62.6)	34 (37.4)
Environmental	46 (50.5)	45 (49.5)

Good quality of life was reported by 54.9% of participants in the physical domain and 58.2% in the psychological domain. The social domain showed the highest proportion of good quality of life (62.6%), whereas the environmental domain showed nearly equal proportions of good and poor quality of life. [Table 2]

Table 3: Association Between Selected Variables and Physical & Psychological Quality of Life of study participants in a tertiary care medical college Hospital in Tamil Nadu

Variable	Category	Physical QoL – Good n (%)	Psychological QoL – Good n (%)	χ^2	p-value
Education	Up to school	11 (40.7)	13 (48.1)	6.54	0.038*
	Higher secondary	18 (52.9)	19 (55.9)		
	Graduate & above	21 (70.0)	21 (70.0)		

χ^2 test applied; $p < 0.05$ statistically significant

Educational status was significantly associated with physical quality of life, with participants having higher educational attainment reporting better physical well-being ($p < 0.05$). No statistically significant association was observed between psychological quality of life and age, sex, duration of diabetes, or comorbidity status. [Table 3]

Table 4: Association Between selected variables and social quality of life of study participants in a tertiary care medical college Hospital in Tamil Nadu

Variable	Category	Good QoL n (%)	Poor QoL n (%)	χ^2	p-value
Education	Up to school	15 (55.6)	12 (44.4)	2.11	0.347
	Higher secondary	19 (55.9)	15 (44.1)		
	Graduate & above	23 (76.7)	7 (23.3)		

χ^2 – Chi-square test; $p < 0.05$ considered statistically significant.

This presents the association between educational status and social quality of life among the study participants. A higher proportion of participants with graduate-level education and above reported good social quality of life (76.7%) compared to those educated up to school level (55.6%) and higher secondary level (55.9%). However, the observed differences were not statistically significant (χ^2 = 2.11, p = 0.347). This indicates that although higher educational attainment was associated with better social quality of life, education alone did not have a significant influence on social relationships in this study population. The generally favourable social quality of life across groups may reflect strong family support systems and social cohesion prevalent in the community.

Table 5: Association Between selected variables and economic quality of life of study participants in a tertiary care medical college Hospital in Tamil Nadu

Variable	Category	Good QoL n (%)	Poor QoL n (%)	χ^2	p-value
Education	Up to school	11 (40.7)	16 (59.3)	3.96	0.138
	Higher secondary	16 (47.1)	18 (52.9)		
	Graduate & above	19 (63.3)	11 (36.7)		

χ^2 – Chi-square test; $p < 0.05$ considered statistically significant.

This depicts the association between educational status and environmental quality of life. Participants with graduate-level education and above demonstrated a higher proportion of good environmental quality of life (63.3%) compared to those educated up to school level (40.7%) and higher secondary level (47.1%).

Despite this trend, the association was not statistically significant (χ^2 = 3.96, p = 0.138). This suggests that environmental quality of life—encompassing factors such as financial resources, access to healthcare, transportation, and living conditions—was not significantly influenced by educational status alone in the present study.

DISCUSSION

The present study assessed quality of life among patients with type 2 diabetes mellitus using the WHOQOL-BREF instrument and explored its association with selected socio-demographic and clinical variables. More than half of the participants reported good quality of life in the physical, psychological, and social domains, while the environmental domain showed comparatively lower scores. These findings are consistent with studies conducted in various parts of India and other developing countries.[7,8]

The predominance of middle-aged participants reflects the epidemiological profile of T2DM in

India, where the disease commonly manifests during the productive years of adulthood. The relatively better scores observed in the social domain may be attributed to strong family ties and social support systems, which play an important role in coping with chronic illnesses in the Indian sociocultural context.[9]

Educational status emerged as a significant determinant of physical quality of life in the present study. Participants with higher educational attainment reported better physical well-being, likely due to improved health literacy, better treatment adherence, and greater engagement in self-care behaviours. Similar associations between education and quality of life among patients with diabetes have been reported in earlier studies.[5,10]

No significant association was observed between age or sex and most quality-of-life domains. This suggests that quality of life is influenced more by modifiable factors such as education, disease awareness, and self-management practices than by fixed demographic characteristics alone. The relatively lower scores in the environmental domain may reflect financial constraints, transportation issues, and challenges related to access to healthcare services, even among patients attending tertiary care facilities.[8,11]

The findings highlight the importance of integrating quality of life assessment into routine diabetes care. Addressing psychosocial and environmental concerns alongside medical management may help improve long-term outcomes and patient satisfaction.

CONCLUSION

A substantial proportion of patients with type 2 diabetes mellitus attending outpatient services reported satisfactory quality of life across multiple domains. Educational status was identified as an important determinant of physical quality of life. Incorporating routine quality of life assessment and strengthening patient education within diabetes care services may enhance overall well-being and disease outcomes.

Recommendations

Quality of life assessment should be incorporated into routine outpatient diabetes care. Structured diabetes education programmes focusing on self-care and lifestyle modification should be strengthened, especially for patients with lower educational status. Diabetes management should adopt a holistic approach addressing physical, psychological, social, and environmental dimensions of health. Longitudinal and interventional studies are recommended to further explore strategies for improving quality of life among people with diabetes.

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