

Original Research Article

HEALTH-RELATED QUALITY OF LIFE AND ITS SOCIODEMOGRAPHIC CORRELATES AMONG PATIENTS WITH DIABETES ATTENDING A DIABETIC CLINIC IN KOLKATA, WEST BENGAL

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ABSTRACT

Background: Diabetes mellitus is a chronic metabolic disorder that significantly affects patients' physical, psychological, and social well-being. Health-related quality of life (HRQoL, QOLID) has emerged as an important outcome measure in diabetes management. Understanding the influence of sociodemographic factors on HRQoL among diabetic patients can help design targeted interventions to improve treatment outcomes and overall quality of life.

Aims: The aim of this study is to assess the health-related quality of life (QOLID) among patients with diabetes attending a diabetic clinic in Kolkata, West Bengal, and to evaluate its association with sociodemographic characteristics, including age, gender, education, occupation, income, marital status, and place of residence.

Materials and Methods: A cross-sectional study was conducted among 450 diabetes mellitus patients attending the diabetic clinic of selected hospitals in Kolkata, West Bengal. The study was carried out during the specified study period. Sociodemographic characteristics and health-related quality of life were assessed using validated questionnaires. Data were collected, analyzed, and statistically evaluated to determine associated factors.

Result: Among 450 diabetic patients, QOLID was not significantly associated with age, sex, residence, religion, marital status, education, family size, lifestyle factors, diabetes type, treatment modality, family history, or diabetes information. Significant associations were observed with family income ($p=0.045$) and comorbid illnesses ($p=0.044$). Most participants were middle-aged, with slight male predominance.

Conclusion: Diabetes mellitus significantly affects patients' health-related quality of life (QOLID), with sociodemographic factors influencing overall well-being. Identifying these correlates can help healthcare providers develop targeted interventions, improve diabetes management strategies, and enhance the quality of life among diabetic patients.

Keywords: Diabetes mellitus; Quality of life; Sociodemographic factors; Diabetic clinic; Kolkata; Health assessment; Patient outcomes; Well-being; Cross-sectional study.

INTRODUCTION

Diabetes mellitus is a chronic metabolic disorder characterized by persistent hyperglycaemia resulting from defects in insulin secretion, insulin action, or both. It has emerged as one of the most significant

global public health challenges,^[1] with a rapidly increasing prevalence across low- and middle-income countries. India, often referred to as the "diabetes capital of the world," has witnessed a substantial rise in the burden of diabetes due to urbanization, sedentary lifestyles, dietary changes,

population ageing, and genetic susceptibility. The long-term nature of diabetes, along with the risk of developing microvascular and macrovascular complications, imposes a considerable impact on patients' physical, psychological, and social well-being.^[2]

Health-related quality of life (HRQoL) is an important patient-centred outcome that reflects an individual's perceived physical health, emotional status, functional ability, and social interactions. [3] Unlike conventional clinical parameters such as blood glucose levels and glycated haemoglobin (HbA1c), HRQoL provides a broader understanding of how diabetes affects daily living and overall satisfaction. Poor glycaemic control, duration of diabetes, presence of complications, medication burden, and lifestyle restrictions may negatively influence HRQoL among individuals with diabetes.^[4] Sociodemographic factors such as age, gender, educational status, socioeconomic status, occupation, marital status, and residence may significantly influence the perception and management of diabetes. Older age,^[5] lower educational attainment, financial constraints, and limited social support have been associated with reduced quality of life in diabetic populations. Understanding these determinants is essential for developing comprehensive diabetes care strategies that address not only metabolic control but also the psychosocial needs of patients.^[6]

In West Bengal, particularly in urban settings such as Kolkata, the increasing prevalence of diabetes highlights the need for evaluating patient-reported outcomes in routine diabetic care.^[7] Identifying sociodemographic correlates associated with impaired HRQoL can help healthcare providers recognize vulnerable groups and implement targeted interventions, including patient education, lifestyle modification programs, psychological support, and improved disease management approaches.^[8]

Therefore, the present study aims to assess health-related quality of life and evaluate its association with sociodemographic characteristics among patients with diabetes attending a diabetic clinic in Kolkata, West Bengal. The findings may contribute to improving patient-centred diabetes management and enhancing long-term health outcomes.^[9]

MATERIALS AND METHODS

Study design: cross sectional study

Place of study: Diabetic clinic of selected Hospitals Kolkata, West Bengal.

Period of study: 24 months

Sample size: 450 Patients

Inclusion Criteria

- Adult patients (≥ 18 years) diagnosed with diabetes mellitus attending the diabetic clinic during the study period.
- Patients willing to participate in the study and providing written informed consent.

Exclusion Criteria

- Patients with severe acute illness, cognitive impairment, or psychiatric disorders preventing reliable interview or questionnaire completion.
- Patients unwilling to participate or who did not provide written informed consent.

Study Variable

- **Sociodemographic variables:** Age, sex, education, occupation, marital status, residence, socioeconomic status.
- **Clinical variables:** Type and duration of diabetes, treatment modality, comorbidities, BMI, HbA1c.
- **Health-related quality of life (QOLID):** Tool – 2 (Standardized tool)
- QoL Instrument for Indian Diabetes Patients (QOLID)
- **Lifestyle variables:** Smoking, alcohol consumption, physical activity, dietary habits.
- **Outcome variable:** Health-related quality of life and its association with sociodemographic factors.

Statistical Analysis: For statistical analysis, data were initially entered into a Microsoft Excel spreadsheet and then analysed using SPSS (version 27.0; SPSS Inc., Chicago, IL, USA) and GraphPad Prism (version 5). Numerical variables were summarized using means and standard deviations, while Data were entered into Excel and analyzed using SPSS and GraphPad Prism. Numerical variables were summarized using means and standard deviations, while categorical variables were described with counts and percentages. Two-sample t-tests were used to compare independent groups, while paired t-tests accounted for correlations in paired data. Chi-square tests (including Fisher's exact test for small sample sizes) were used for categorical data comparisons. P-values ≤ 0.05 were considered statistically significant.

RESULTS

Table 1: Association between Sociodemographic Characteristics and Total Quality of Life (QoL) Group (n=450)

	Variables	Poor QoL n (%)	Moderate QoL n (%)	Good QoL n (%)	p-value
Age group	≤ 20	0 (0.0)	1 (0.6)	2 (1.0)	0.439
	21–40	8 (7.8)	11 (7.1)	10 (5.2)	
	41–60	54 (52.9)	73 (47.4)	96 (49.5)	
	61–80	39 (38.2)	59 (38.3)	78 (40.2)	

	81–90	1 (1.0)	10 (6.5)	8 (4.1)	
Sex	Female	46 (45.1)	80 (51.9)	87 (44.8)	0.368
	Male	56 (54.9)	74 (48.1)	107 (55.2)	
Residence	Rural	21 (20.6)	36 (23.4)	49 (25.3)	0.666
	Urban	81 (79.4)	118 (76.6)	145 (74.7)	
Religion	Hindu	84 (82.4)	128 (83.1)	153 (78.9)	0.564
	Muslim	18 (17.6)	26 (16.9)	41 (21.1)	

Table 2: Association between Social and Economic Factors with Total Quality of Life (QoL) Group (n=450)

	Variables	Poor QoL n (%)	Moderate QoL n (%)	Good QoL n (%)	p-value
Marital Status	Divorced	4 (3.9)	2 (1.3)	5 (2.6)	0.822
	Married	87 (85.3)	130 (84.4)	165 (85.1)	
	Unmarried	4 (3.9)	8 (5.2)	11 (5.7)	
	Widow	7 (6.9)	14 (9.1)	13 (6.7)	
Education	Primary	6 (5.9)	13 (8.4)	5 (2.6)	0.429
	Middle school	4 (3.9)	7 (4.5)	7 (3.6)	
	Madhyamik	18 (17.6)	25 (16.2)	37 (19.1)	
	Higher secondary	16 (15.7)	26 (16.9)	42 (21.6)	
	Graduate	58 (56.9)	83 (53.9)	103 (53.1)	
Family Income	□10,000–20,000	2 (2.0)	7 (4.5)	18 (9.3)	0.045
	□21,000–30,000	28 (27.5)	26 (16.9)	29 (14.9)	
	□31,000–40,000	22 (21.6)	34 (22.1)	32 (16.5)	
	□41,000–50,000	17 (16.7)	30 (19.5)	37 (19.1)	
	>□50,000	33 (32.4)	57 (37.0)	78 (40.2)	
No. of Family Members	≤4 members	56 (54.9)	94 (61.0)	122 (62.9)	0.403
	>4 members	46 (45.1)	60 (39.0)	72 (37.1)	

Table 3: Association between Lifestyle and Diabetes-related Factors with Total Quality of Life (QoL) Group (n=450)

	Variables	Poor QoL n (%)	Moderate QoL n (%)	Good QoL n (%)	p-value
Alcohol Intake	No	91 (89.2)	140 (90.9)	174 (89.7)	0.891
	Yes	11 (10.8)	14 (9.1)	20 (10.3)	
Smoking	No	86 (84.3)	122 (79.2)	157 (80.9)	0.593
	Yes	16 (15.7)	32 (20.8)	37 (19.1)	
Type of Diabetes	Type I	7 (6.9)	15 (9.7)	10 (5.2)	0.253
	Type II	95 (93.1)	139 (90.3)	184 (94.8)	
Treatment	Oral antidiabetic agent	55 (53.9)	72 (46.8)	98 (50.5)	0.887
	Insulin	10 (9.8)	20 (13.0)	25 (12.9)	
	Combination therapy	36 (35.3)	59 (38.3)	68 (35.1)	
	Others	1 (1.0)	3 (1.9)	3 (1.5)	

Table 4: Association between Clinical Characteristics and Total Quality of Life (QoL) Group(n=450)

	Variables	Poor QoL n (%)	Moderate QoL n (%)	Good QoL n (%)	p-value
Other Chronic Illnesses	Bronchial Asthma	6 (5.9)	14 (9.1)	16 (8.2)	0.044
	Cancer	1 (1.0)	1 (0.6)	2 (1.0)	
	Cardiovascular disease	38 (37.3)	65 (42.2)	80 (41.2)	
	Cardiovascular disease + Bronchial Asthma	1 (1.0)	4 (2.6)	1 (0.5)	
	Cardiovascular disease + Renal disease	7 (6.9)	9 (5.8)	8 (4.1)	
	Cardiovascular disease + Thyroid disorder	8 (7.8)	6 (3.9)	4 (2.1)	
	Cardiovascular disease + Thyroid disorder + Cervical cancer	0 (0.0)	2 (1.3)	0 (0.0)	
	No illness	18 (17.6)	34 (22.1)	58 (29.9)	
	Renal disease	4 (3.9)	6 (3.9)	11 (5.7)	
Family History of Diabetes	Thyroid disorder	19 (18.6)	13 (8.4)	14 (7.2)	0.916
	Both parents	8 (7.8)	14 (9.1)	22 (11.3)	
	Father	20 (19.6)	25 (16.2)	29 (14.9)	
	Mother	8 (7.8)	13 (8.4)	14 (7.2)	
Received Diabetes Information	None	66 (64.7)	102 (66.2)	129 (66.5)	0.736
	No	32 (31.4)	54 (35.1)	61 (31.4)	
	Yes	70 (68.6)	100 (64.9)	133 (68.6)	

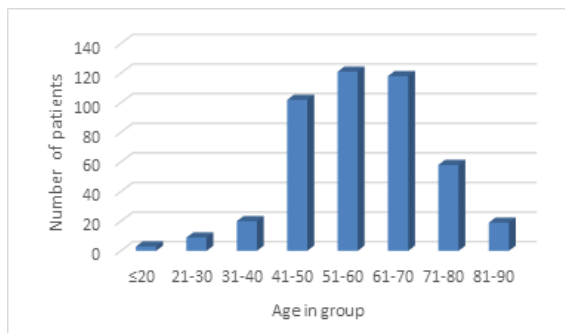


Figure 1: Distribution of Age in group

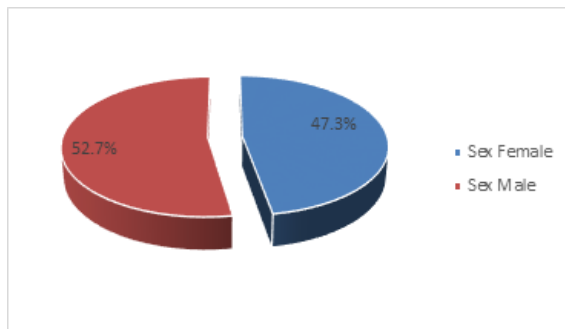


Figure 2: Distribution of Sex

Age group distribution showed that in the ≤20 years group, 0 patients (0.0%) had poor QoL, 1 patient (0.6%) had moderate QoL, and 2 patients (1.0%) had good QoL. Among the 21–40 years age group, 8 patients (7.8%) had poor QoL, 11 patients (7.1%) had moderate QoL, and 10 patients (5.2%) had good QoL. In the 41–60 years age group, 54 patients (52.9%) had poor QoL, 73 patients (47.4%) had moderate QoL, and 96 patients (49.5%) had good QoL. Among the 61–80 years age group, 39 patients (38.2%) had poor QoL, 59 patients (38.3%) had moderate QoL, and 78 patients (40.2%) had good QoL. In the 81–90 years age group, 1 patient (1.0%) had poor QoL, 10 patients (6.5%) had moderate QoL, and 8 patients (4.1%) had good QoL. The association between age group and QoL was not statistically significant ($p = 0.439$).

Regarding sex distribution, among female participants, 46 patients (45.1%) had poor QoL, 80 patients (51.9%) had moderate QoL, and 87 patients (44.8%) had good QoL. Among male participants, 56 patients (54.9%) had poor QoL, 74 patients (48.1%) had moderate QoL, and 107 patients (55.2%) had good QoL. The association between sex and QoL was not statistically significant ($p = 0.368$).

According to residence, among rural participants, 21 patients (20.6%) had poor QoL, 36 patients (23.4%) had moderate QoL, and 49 patients (25.3%) had good QoL. Among urban participants, 81 patients (79.4%) had poor QoL, 118 patients (76.6%) had moderate QoL, and 145 patients (74.7%) had good QoL. The association between residence and QoL was not statistically significant ($p = 0.666$).

Regarding religion, among Hindu participants, 84 patients (82.4%) had poor QoL, 128 patients (83.1%) had moderate QoL, and 153 patients (78.9%) had good QoL. Among Muslim participants, 18 patients

(17.6%) had poor QoL, 26 patients (16.9%) had moderate QoL, and 41 patients (21.1%) had good QoL. The association between religion and QoL was not statistically significant ($p = 0.564$). [Table 1]

Marital Status:

Among participants with poor QoL, 4 patients (3.9%) were divorced, 87 patients (85.3%) were married, 4 patients (3.9%) were unmarried, and 7 patients (6.9%) were widowed. The association between marital status and overall QoL was not statistically significant ($p = 0.822$). Among participants with moderate QoL, 2 patients (1.3%) were divorced, 130 patients (84.4%) were married, 8 patients (5.2%) were unmarried, and 14 patients (9.1%) were widowed. Among participants with good QoL, 5 patients (2.6%) were divorced, 165 patients (85.1%) were married, 11 patients (5.7%) were unmarried, and 13 patients (6.7%) were widowed.

Education:

Among participants with poor QoL, 6 patients (5.9%) had primary education, 4 patients (3.9%) had middle school education, 18 patients (17.6%) had Madhyamik education, 16 patients (15.7%) had higher secondary education, and 58 patients (56.9%) were graduates. The association between education and overall QoL was not statistically significant ($p = 0.429$). Among participants with moderate QoL, 13 patients (8.4%) had primary education, 7 patients (4.5%) had middle school education, 25 patients (16.2%) had Madhyamik education, 26 patients (16.9%) had higher secondary education, and 83 patients (53.9%) were graduates. Among participants with good QoL, 5 patients (2.6%) had primary education, 7 patients (3.6%) had middle school education, 37 patients (19.1%) had Madhyamik education, 42 patients (21.6%) had higher secondary education, and 103 patients (53.1%) were graduates.

Family Income:

Among participants with poor QoL, 2 patients (2.0%) belonged to the ₹10,000–20,000 income group, 28 patients (27.5%) belonged to the ₹21,000–30,000 income group, 22 patients (21.6%) belonged to the ₹31,000–40,000 income group, 17 patients (16.7%) belonged to the ₹41,000–50,000 income group, and 33 patients (32.4%) belonged to the >₹50,000 income group. The association between family income and overall QoL was statistically significant ($p = 0.045$). Among participants with moderate QoL, 7 patients (4.5%) belonged to the ₹10,000–20,000 income group, 26 patients (16.9%) belonged to the ₹21,000–30,000 income group, 34 patients (22.1%) belonged to the ₹31,000–40,000 income group, 30 patients (19.5%) belonged to the ₹41,000–50,000 income group, and 57 patients (37.0%) belonged to the >₹50,000 income group. Among participants with good QoL, 18 patients (9.3%) belonged to the ₹10,000–20,000 income group, 29 patients (14.9%) belonged to the ₹21,000–30,000 income group, 32 patients (16.5%) belonged to the ₹31,000–40,000 income group, 37 patients (19.1%) belonged to the ₹41,000–50,000 income group, and 78 patients (40.2%) belonged to the >₹50,000 income group.

Number of Family Members:

Among participants with poor QoL, 56 patients (54.9%) belonged to families with ≤ 4 members and 46 patients (45.1%) belonged to families with >4 members. The association between number of family members and overall QoL was not statistically significant ($p = 0.403$). In moderate QoL, 94 patients (61.0%) belonged to families with ≤ 4 members and 60 patients (39.0%) belonged to families with >4 members. In good QoL, 122 patients (62.9%) belonged to families with ≤ 4 members and 72 patients (37.1%) belonged to families with >4 members. [Table 2]

Alcohol Intake:

Among participants with poor QoL, 91 patients (89.2%) reported no alcohol intake and 11 patients (10.8%) reported alcohol intake. The association between alcohol intake and overall QoL was not statistically significant ($p = 0.891$). In moderate QoL, 140 patients (90.9%) reported no alcohol intake and 14 patients (9.1%) reported alcohol intake. In good QoL, 174 patients (89.7%) reported no alcohol intake and 20 patients (10.3%) reported alcohol intake.

Smoking:

Among participants with poor QoL, 86 patients (84.3%) were non-smokers and 16 patients (15.7%) were smokers. The association between smoking and overall QoL was not statistically significant ($p = 0.593$). In moderate QoL, 122 patients (79.2%) were non-smokers and 32 patients (20.8%) were smokers. In good QoL, 157 patients (80.9%) were non-smokers and 37 patients (19.1%) were smokers.

Type of Diabetes:

Among participants with poor QoL, 7 patients (6.9%) had Type I diabetes and 95 patients (93.1%) had Type II diabetes. The association between type of diabetes and overall QoL was not statistically significant ($p = 0.253$). In moderate QoL, 15 patients (9.7%) had Type I diabetes and 139 patients (90.3%) had Type II diabetes. In good QoL, 10 patients (5.2%) had Type I diabetes and 184 patients (94.8%) had Type II diabetes.

Treatment:

Among participants with poor QoL, 55 patients (53.9%) were on oral antidiabetic agents, 36 patients (35.3%) received combination therapy, 10 patients (9.8%) received insulin therapy, and 1 patient (1.0%) received other treatment modalities. The association between treatment type and overall QoL was not statistically significant ($p = 0.887$). In moderate QoL, 72 patients (46.8%) were on oral antidiabetic agents, 59 patients (38.3%) received combination therapy, 20 patients (13.0%) received insulin therapy, and 3 patients (1.9%) received other treatment modalities. In good QoL, 98 patients (50.5%) were on oral antidiabetic agents, 68 patients (35.1%) received combination therapy, 25 patients (12.9%) received insulin therapy, and 3 patients (1.5%) received other treatment modalities. [Table 3]

Other Chronic Illnesses:

Among participants with poor QoL, 6 patients (5.9%) had bronchial asthma, 1 patient (1.0%) had cancer, 38

patients (37.3%) had cardiovascular disease, 1 patient (1.0%) had cardiovascular disease with bronchial asthma, 7 patients (6.9%) had cardiovascular disease with renal disease, 8 patients (7.8%) had cardiovascular disease with thyroid disorder, 18 patients (17.6%) had no illness, 4 patients (3.9%) had renal disease, and 19 patients (18.6%) had thyroid disorder. In moderate QoL, 14 patients (9.1%) had bronchial asthma, 1 patient (0.6%) had cancer, 65 patients (42.2%) had cardiovascular disease, 4 patients (2.6%) had cardiovascular disease with bronchial asthma, 9 patients (5.8%) had cardiovascular disease with renal disease, 6 patients (3.9%) had cardiovascular disease with thyroid disorder, 2 patients (1.3%) had cardiovascular disease with thyroid disorder and cervical cancer, 34 patients (22.1%) had no illness, 6 patients (3.9%) had renal disease, and 13 patients (8.4%) had thyroid disorder. In good QoL, 16 patients (8.2%) had bronchial asthma, 2 patients (1.0%) had cancer, 80 patients (41.2%) had cardiovascular disease, 1 patient (0.5%) had cardiovascular disease with bronchial asthma, 8 patients (4.1%) had cardiovascular disease with renal disease, 4 patients (2.1%) had cardiovascular disease with thyroid disorder, 58 patients (29.9%) had no illness, 11 patients (5.7%) had renal disease, and 14 patients (7.2%) had thyroid disorder. The association between other chronic illnesses and overall QoL was statistically significant ($p = 0.044$).

Family History of Diabetes:

Among participants with poor QoL, 8 patients (7.8%) had both parents with diabetes, 20 patients (19.6%) had a father with diabetes, 8 patients (7.8%) had a mother with diabetes, and 66 patients (64.7%) had no family history of diabetes. In moderate QoL, 14 patients (9.1%) had both parents with diabetes, 25 patients (16.2%) had a father with diabetes, 13 patients (8.4%) had a mother with diabetes, and 102 patients (66.2%) had no family history of diabetes. Among participants with good QoL, 22 patients (11.3%) had both parents with diabetes, 29 patients (14.9%) had a father with diabetes, 14 patients (7.2%) had a mother with diabetes, and 129 patients (66.5%) had no family history of diabetes. The association between family history of diabetes and overall QoL was not statistically significant ($p = 0.916$).

Received Diabetes Information:

Among participants with poor QoL, 32 patients (31.4%) had not received any information regarding diabetes, while 70 patients (68.6%) had received diabetes-related information. In moderate QoL, 54 patients (35.1%) had not received diabetes information, while 100 patients (64.9%) had received diabetes information. In good QoL, 61 patients (31.4%) had not received diabetes information, while 133 patients (68.6%) had received diabetes information. The association between receiving diabetes information and overall QoL was not statistically significant ($p = 0.736$). [Table 4]

A total of 450 diabetic patients were included in the study. The age-wise distribution showed that the

highest proportion of participants belonged to the 51–60 years age group (26.9%, n=121), closely followed by the 61–70 years age group (26.2%, n=118). The 41–50 years age group accounted for 22.7% (n=102) of the study population. Participants aged 71–80 years constituted 12.9% (n=58), while 4.2% (n=19) were in the 81–90 years age group. A smaller proportion of patients were in younger age groups, with 4.4% (n=20) in 31–40 years, 2.0% (n=9) in 21–30 years, and only 0.7% (n=3) in ≤20 years. It was statistically significant ($p < 0.001$). [Figure 1]

A total of 450 diabetic patients were included in the study. The sex distribution showed a slight male predominance. Males accounted for 52.7% (n=237) of the study population, while females constituted 47.3% (n=213). It was statistically significant ($p = 0.110$). [Figure 2]

DISCUSSION

The present study assessed health-related quality of life (HRQoL) and its associated sociodemographic and clinical factors among 450 patients with diabetes attending a diabetic clinic in Kolkata, West Bengal. The findings demonstrated that most demographic variables, including age, sex, residence, religion, marital status, education, family size, lifestyle habits, diabetes type, treatment modality, family history of diabetes, and diabetes-related information, were not significantly associated with overall QoL. However, family income and associated chronic illnesses showed significant relationships with QoL.

Mahala et al,^[10] conducted a cross-sectional study among adult diabetic patients attending a lifestyle clinic in West Bengal and reported that socioeconomic and clinical factors significantly influenced quality of life. In the present study, age and other demographic factors were not significantly associated with QoL, which may be attributed to uniform access to diabetic care among patients attending a specialized clinic.

Pattanayak et al,^[11] evaluated health behaviour and quality of life among adults with non-communicable diseases in an urban field practice area of Kolkata and emphasized the importance of socioeconomic determinants in influencing health outcomes. Similarly, the present study found a significant association between family income and QoL ($p=0.045$), suggesting that better economic status may improve access to healthcare facilities, medication adherence, and lifestyle modifications.

Basu et al,^[12] studied quality of life and depression among diabetic patients in West Bengal and reported that psychological factors and diabetes-related complications adversely affected QoL. In agreement with these findings, the present study observed a significant association between other chronic illnesses and QoL ($p=0.044$), with cardiovascular disease being the most common comorbidity among participants.

Pramanik et al,^[13] assessed HRQoL and its determinants among elderly diabetic patients in West Bengal and highlighted that ageing, functional limitations, and diabetes complications negatively affect quality of life. Although the present study included a large proportion of middle-aged and elderly individuals, age group was not significantly associated with overall QoL ($p=0.439$), possibly due to differences in study population and healthcare access.

Shetty et al,^[14] conducted a multicentre study among individuals with type 2 diabetes mellitus and reported that HRQoL was mainly influenced by disease-related factors, socioeconomic status, and complications rather than isolated demographic characteristics. Similarly, the present study found no significant association between treatment modality, diabetes type, and QoL, indicating that broader clinical and psychosocial factors may have greater influence.

Das et al,^[15] reported that depression and diabetes-related complications significantly impaired quality of life among patients with type II diabetes mellitus. The present study also demonstrated reduced QoL among patients with additional chronic illnesses, supporting the importance of early identification and management of comorbid conditions in diabetic care. Jose et al,^[16] evaluated HRQoL and associated factors among adults with type 2 diabetes mellitus in rural Kerala and reported that socioeconomic status, self-care practices, and disease-related factors were important predictors of quality of life. The present findings similarly highlight the role of socioeconomic factors and comorbidity burden in determining HRQoL among diabetic patients.

CONCLUSION

The present study concluded that most diabetic patients had moderate to good health-related quality of life, with sociodemographic and clinical factors influencing QoL (QOLID) outcomes. Family income and presence of other chronic illnesses showed significant associations with overall QoL (QOLID), whereas age, sex, residence, marital status, education, lifestyle factors, type of diabetes, treatment modality, and diabetes information were not significantly associated. The findings emphasize the importance of comprehensive diabetes management, socioeconomic support, and effective control of comorbid conditions to improve patients' quality of life.

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