

Living Beyond Diabetes: Exploring Diabetes Distress, Health Anxiety, Quality of Life and Social Support in Patients Diagnosed with Type 2 Diabetes Mellitus (T2DM)

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Abstract:

Type 2 diabetes mellitus (T2DM) is a chronic physiological condition that has the potential to reduce the quality of life of an individual by affecting their mental and physical health. The current study investigated the relationship between quality of life and diabetes-associated distress in individuals with T2DM, with health anxiety serving as a mediating variable and social support as a moderating variable. The data from 409 individuals was analyzed using the Pearson correlation, mediation, and moderation analyses. Diabetes distress demonstrated a strong positive correlation with health anxiety ($r = .739$, $p < .001$) and a substantial negative correlation with social support ($r = -.541$, $p < .001$) and quality of life ($r = -.619$). Quality of life and health anxiety exhibited a substantial inverse correlation ($r = -.455$, $p < .001$). Quality of life and social support exhibit a strong positive correlation ($r = .615$, $p < .001$). A mediation analysis demonstrated that health-associated anxiety is significantly predicted by diabetes-related distress. The impact of diabetic distress on quality of life through health anxiety was relatively negligible ($B = .004$, 95% CI $[-.067, .071]$). Conversely, social support was a substantial mediator in the relationship between quality of life and diabetic discomfort ($B = .005$, $p = .029$). As a result, the correlation between diabetes-related distress and quality of life was markedly more robust at lower levels of social support ($B = .426$) than at higher levels ($B = .362$). In conclusion, the evidence suggests that a reduced quality of life is substantially correlated with diabetes-related distress in individuals with T2DM. However, the negative effects of diabetes-related distress on overall well-being may be alleviated by social support. The evidence emphasises the importance of addressing diabetes-related distress and improving social support as essential components of comprehensive psychosocial therapy for individuals with T2DM.

Keywords: Diabetes Distress, Health Anxiety, Diabetes Quality of Life, Type II Diabetes Mellitus

Introduction

Diabetes mellitus is a chronic physiological condition that causes significant psychological and emotional distress on a daily basis. Diabetes mellitus is a condition that has arisen as a

consequence of diabetes. T2DM is a persistent metabolic illness that requires continual self-management and exposes patients to the risk of long-term complications, spanning many aspects of daily life (Galindo et al., 2023). Advancements in pharmacological therapies and diabetes management have resulted in enhanced clinical results; yet, compliance with prescribed treatment protocols remains a difficulty (Elkhalifa et al., 2024). Effective diabetes management necessitates not only appropriate medical care but also the willingness and ability of patients to integrate medication, dietary modifications, physical activity, glucose monitoring, and regular communication with healthcare providers into their daily routines (Ahmad & Joshi, 2023). This underscores the complexities of the clinical, psychological, and social aspects that influence treatment adherence. As a result, the focus has shifted to the understanding of the psychosocial experiences that influence the experience and management of illness by individuals (Patel et al., 2025). Type 2 diabetes mellitus is progressively acknowledged as an illness with significant psychological implications. Patients are required to engage in lifelong monitoring of their blood glucose levels, comply with medication or insulin protocols, adhere to dietary limitations, and maintain consistent communication with healthcare providers, all while navigating the uncertainties associated with long-term complications like retinopathy, nephropathy, neuropathy, and cardiovascular ailments (Satapathy et al., 2025) (Ahmed et al., 2025). This is the context that gives rise to psychological distress, and this, in turn, has been consistently linked to poorer health-related QoL.(Chew et al., 2015).

Despite the well-established connection between diabetes-related distress and quality of life, the field has been slower to pinpoint the psychological mechanisms that produce this effect and the underlying resources that could undermine it (Mizokami-Stout et al., 2021). The quality of life is composed of physical functioning, psychological wellness, social interactions and contentment with treatment and daily life as assessed by the patient and not inferred exclusively from clinical markers(Salas-Muriel et al., 2026). Two elements of the QoL literature are of special interest to the present review. Firstly, QoL in T2DM is determined not only by the objective severity of the disease (e.g.HbA1c, presence of complications, insulin dependence), but also to a significant extent by the subjective appraisal of the illness and its threat – making cognitive-appraisal constructs such as health anxiety plausible explanatory mechanisms instead of just correlates. Secondly, QoL outcomes in this population are continuously sensitive to the interpersonal setting, with support from family, friends and health professionals emerging frequently as a correlate or mediator of QoL, diabetic distress and related outcomes such as resilience and self-care(Teli et al., 2023). Social encouragement from family, friends and health care professionals has been frequently demonstrated to attenuate the link between diabetes-related stress factors and distress in the diabetes literature and to connect with resilience, self-care, and QOL (Beverly et al., 2021) (Parviniannasab et al., 2024) (Lee et al., 2018).

Health anxiety is the fear that you have, or will develop, a major illness, fuelled by the disastrous misinterpretation of physical feelings and medical facts. Salkovskis and Warwick (2001) developed a cognitive-behavioural model that conceptualises health anxiety as a consequence of ambiguous bodily sensations being appraised as signs of serious disease. This appraisal generates anxiety, physiological stimulation, selective attention toward bodily cues and safety-seeking behaviours including body-checking, reassurance-seeking or avoidance of health-related information (Salkovskis et al., 2003) (Salkovskis & Warwick, 2001).

The context of T2DM is unique for the development of health anxiety in that bodily sensations such as fatigue, thirst, blurred vision or tingling can be real indicators of glycaemic instability or

emerging complications and patients are explicitly told to monitor their bodies closely (R.N, 2019). A randomised controlled trial provides empirical support for the treatability and comorbidity of health anxiety with broader diabetes distress and QoL. In this trial, cognitive behaviour therapy targeting depressive symptoms and diabetes distress in T2DM patients produced significant reductions in health anxiety alongside gains in QoL and treatment adherence. These findings indicate that health anxiety, distress and QoL are empirically and causally intertwined (Abbas et al., 2023a).

Method

In order to examine the relationships between the psycho-social factors in individuals diagnosed with Type 2 Diabetes Mellitus (T2DM), this study employed a cross-sectional correlational approach. A sum of 409 persons was randomly selected from various hospitals and clinics in Faisalabad. Participants with T2DM who satisfied the defined inclusion and exclusion parameters were included. Individuals must be aged 25 to 45 and have a diagnosis of Type 2 Diabetes Mellitus. Participants with substantial physical or mental health issues, or physical constraints that would impede their involvement or fulfillment of the research evaluations were omitted. The demographic attributes of the concluding cohort are presented in Table 1.

Instruments

A thorough assessment instrument served as the foundation for the study. This comprised a set of standardised psychological tests, a demographic form, and a letter of authorisation. In addition to guaranteeing participants' total confidentiality and informing them of their voluntary right to participate in and withdraw from the study, the informed consent paper explained the goals and purposes of the study. Participants were asked to fill out a demographic form with information about their age, gender, marital status, educational background, length of sickness, method of treatment, family history, and other demographic variables. The study employed the following research instruments.

Distress Scale (DDS) (Polonsky et al., 2005) The Diabetes Distress Scale (DDS-17) is used to evaluate diabetes-associated distress. It consists of seventeen components. Each component of the DDS-17 employs a six-point Likert scale that ranges from 1 (no issue) to 6 (an exceptionally severe issue). The total number of items on the scale was divided by the sum of a patient's responses to 17 items to determine a comprehensive DDS-17 score. DDS-17 evaluates additional components, including interpersonal, physician, emotional, and regimen-related distress. Cronbach's alpha was employed to evaluate the dependability, resulting in a value of 0.98.

Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988) An evaluation of perceived social support was carried out using the 12-item Multidimensional Scale of Perceived Social Support (MSPSS), which was based on a 7-point Likert scale that ranged from 1 (Very strongly disagree) to 7 (Very definitely agree). When calculating a composite score, the total of all 12 components is first computed, and then the result is divided by 12.

Short Health Anxiety Inventory (SHAI) (Salkovskis et al., 2002) The Health Anxiety Inventory (SHAI) has 18 measures intended to evaluate health anxiety independently of the person's physical health status. All these elements are evaluated while assessing health concerns, awareness of bodily changes or symptoms, and the apprehension over the repercussions of illness..

Revised Version of Diabetes Quality of Life (RV-DQOL 13) (Bujang et al. 2018). The Diabetes Quality of Life Questionnaire (RV-DQOL) has been employed to evaluate the quality of life in people with diabetes. It consists of 13 components categorised into three classifications: Satisfaction, Impact, and Worry. Patients assess each item with a 5-point Likert scale. One denotes a lack of influence, indifference, or enduring satisfaction. A rating of 5 signifies that the person is consistently worried, apprehensive, or dissatisfied.

Procedure:

After a thorough review of the existing research, the study's main goal was to find out how diabetes distress, diabetes stigma, social support, and sticking to diabetes medication affect people with type 2 diabetes. The request was first looked at by the department research committee. Then it was sent to the Institutional Review Board (IRB), which eventually decided to allow the study to go ahead. The cross-sectional correlational design and a purposeful sample method were used in hospitals and clinical settings in Faisalabad, Punjab, Pakistan. People between the ages of 25 and 45 who had Type 2 Diabetes Mellitus were asked to take part in the study. which led to 409 questionnaires being looked at in total. After giving their informed consent, people who were eligible filled out a self-report assessment. The poll was meant to find out how people with diabetes feel about stress, the social stigma that comes with having diabetes, their social support, and how well they stick to their treatment plans. SPSS Version 27 was used to look at the data in great detail. To look into the relationships between the research variables being studied, the Hayes MODMED 2.0 macro for SPSS was used to do correlation and mediation-moderation analysis. The descriptive statistic were used to look at the study's demographic and clinical features. With the help of IBM SPSS Statistics version 27, the PROCESS was carried out.

Results

Table 1: *Demographic details of T2DM Patients (N=409)*

Variable	Category	M ± SD	Frequency (n)	Percentage (%)
Age		37.49 ± 5.94		
Gender	Female		172	42.1
	Male		237	100
Marital Status	Married		391	95.5
	Unmarried		18	100
Education		1.85 ± 0.73		
	>Metric		145	35.5
	Intermediate		182	80
	Graduation and above		82	100
Family System		1.43±0.49		
	Nuclear		232	56.7
	Joint		177	100
Religion	Muslim		409	100.0

Variable	Category	M ± SD	Frequency (n)	Percentage (%)
Profession		1.40±.490		
	Employed		247	60.5
	Unemployed		162	100
Monthly Income		41,110.29 ± 16,947.37		
BGL		2.43±.672		
	170–249		42	10.3
	250–349		147	46.2
	350–500		220	100
TOT		2.00. ± 803		
	Medication		131	32.0
	Insulin		146	67.7
	Insulin + Medication		132	100
DOT		1.94± 0.81		
	1 year		146	35.7
	2-3 years		139	69.7
	4-6 years		124	100

NOTE: M= Mean; SD= Standard Deviation; BGL= Blood Glucose Level; TOT= Type of Treatment; DOT= Duration of Treatment

Study sample Includes 409 participants; the mean age was 37.49 years (SD = 5.94). Gender distribution was 237 (58.0%) male, 172 (42.1%) female. Most participants were married (n = 391, 95.5%), with 18 single (4.4%). Education levels were 145 (35.5%) up to matriculation, 182 (44.5%) intermediate, and 82 (20.0%) graduate or higher. Most participants were nuclear families (n = 232, 56.7%) and 177 (43.3%) joint families. All candidates were Muslim. Professionally, 247 (60.4%) were employed and 162 (39.6%) were unemployed. The average monthly income was 41,110.29 (SD = 16,947.37). The participants' blood glucose levels were divided into three groups: 42 (10.3%) had 170–249 mg/dL, 147 (36.0%) had 250–349, and 220 (53.8%) had 350–500. Medicine was given to 131 (32.0%), insulin to 146 (35.7%), and both to 132 (32.3%). Mean treatment time was 1.94 years (SD=.81). Treatment lasted 1 year in 146 (35.7%), 2–3 years in 139 (34.0%), and 4–6 years in 124 (30.3%). (Table 1)

Table 2 *Pearson Corelation for Study variables among T2DM Patients (N=409).*

Variable	M	S D	1	2	3	4	5	6	7	8	9	10	11	12	1 3
EBS	17. 67	5.4 8	—												
PDS	13. 82	4.3 3	.931 **	—											
RDS	17. 66	5.5 5	.939 **	.920 **	—										
IDS	10. 54	3.3 7	.928 **	.897 **	.935 **	—									
DDS	59. .T 69	18. 23	.980 **	.964 **	.979 **	.962 **	—								
SHA	24. I.T 67	15. 65	.727 **	.712 **	.729 **	.699 **	.739 **	—							
SDQ	15. OL 88	6.2 2	.599 **	-.61 3**	-.61 1**	-.61 0**	-.62 5**	-.55 4**	—						
IDQ	12. OL 79	4.9 5	.590 **	-.59 9**	-.59 5**	-.59 0**	-.61 0**	-.54 4**	.97 2**	—					
WD	12. QOL 81	5.0 6	.576 **	-.58 4**	-.58 6**	-.58 6**	-.59 9**	-.53 5**	.97 1**	.96 0**	—				
DQOL.T	41. 48	16. 05	.596 **	-.60 6**	-.60 5**	-.60 3**	-.61 9**	-.55 1**	.99 3**	.98 7**	.98 7**	—			
Fam	10. 12	3.8 9	-.51 8**	-.51 9**	-.52 2**	-.51 9**	-.53 4**	-.32 9**	.61 0**	.60 2**	.59 3**	.60 8**	—		
Frnd	10. 11	3.9 0	-.51 5**	-.51 2**	-.52 2**	-.52 3**	-.53 3**	-.35 2**	.61 6**	.60 4**	.60 2**	.61 4**	.92 9**	—	
MSS	30. .T 31	11. 36	-.52 7**	-.51 9**	-.52 9**	-.52 9**	-.54 1**	-.34 9**	.61 7**	.60 7**	.60 1**	.61 5**	.97 6**	.97 7**	—

Note: EBS; Emotional burden Subscale, PDS; Physician related Distress, RDS; Regimen related distress, IRS; Interpersonal Distress, DDS; Diabetes Distress Scale, HA; Health Anxiety, NC; Negative Consequence, SHAI; Short Health Anxiety inventory, TDS; Treated Differently Subscale, DSAS; Diabetes Stigma Assesment Scale, So; Social, Fam; Family, Frnd; Friends, MSPSS; Multidimensional Social Support Scale.

Our Pearson correlations showed that DDS.T was significantly linked to SHAI.T, DQOL.T, and MSS.T. DDS.T was positively linked to SHAI.T ($r = .739$, $p < .001$) and inversely linked to DQOL.T ($r = -.619$, $p < .001$) and MSS.T ($r = -.541$, $p < .001$). The SHAI.T score was inversely linked to both the DQOL.T ($r = -.455$, $p < .001$) and the MSS.T ($r = -.349$). DQOL.T, on the other hand, was positively related to MSS.T ($r = .615$, $p < .001$), which means that having more social support was associated to having a good quality of life. In general, having higher DDS and health worry was linked to a lower quality of life and less social support (Table 2).

Table 3: Mediation Analysis of SHAI in Association between DDS and DQOL among T2DM Patients (N=409)

Antecedents	Health Anxiety				Quality of Life			
	B	SE	t	P	B	SE	t	p
DDS	0.588	0.042	14.12	<.001	-0.224	0.069	-3.23	.001
SHAI					0.063	0.057	1.10	.272
	R ² =.549				R ² =.444			
	F(2, 406)=247.35, p .002				F(4, 404)=80.50			

Note: DDS; Diabetes Distress Scale, SHAI; Short Health Anxiety Inventory, DSAS; Diabetes Self-Management Scale. B= Unstandardized Regression Coefficient, SE= Standard Error

Table 4: Direct and Indirect effect of, QOL through SHAI among T2DM Patients (N=409)

Effect	B	SE	95% CI	
			LL	UL
Total indirect effect	-0.185	0.056	-0.294	-0.074
DDS → SHAI → DQOL	0.037	0.032	-0.025	0.098
Direct effect	-0.224	0.069	-0.360	-0.088

Note: SE; Standard Error, BootLLCI; Bootstrap Lower Limit Confidence Interval, BootULCI; Bootstrap Upper Limit Confidence Interval,

The mediation analysis was carried out in order to investigate whether or not health anxiety acted as mediating in the connection between diabetes distress and qol It was fascinating to observe that the comprehensive model could account for 44.4% of the variations in quality of life. The indirect pathway through health anxiety was not significant. As a result of this, the mediation hypothesis health anxiety was not found to be statistically significant mediator between diabetes distress and quality of life in patients diagnosed T2DM (Table 4)..

Table 5: Moderation Analysis of the Association between DDS, DQOL through MSS among T2DM Patients (N=409)

Predictor	B	SE	T	P	95% CI	
					LLCI	ULCI
Constant	56.202	5.937	9.47	< .001	44.532	67.873
DDS	-0.523	0.084	-6.19	< .001	-0.689	-0.357
MSS	0.243	0.156	1.56	.121	-0.064	0.550
DDS × MSS	0.005	0.003	2.19	.029	0.001	0.010
Model fit	R = .707, R ² = .500, F(3, 405) = 135.17, p < .001.					

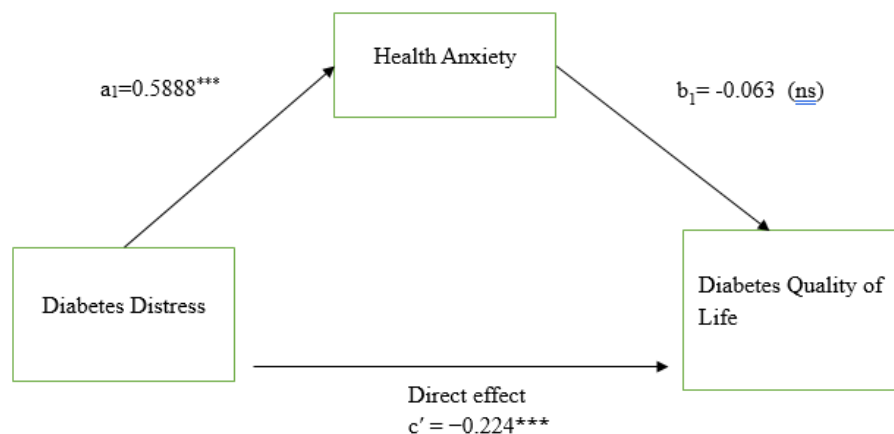
Note: DDS; Diabetes Distress Scale, DQOL; Diabetes Quality of Life, MSS; Multidimensional Social Support Scale, B= Unstandardized Regression Coefficient, SE= Standard Error, LLCI; Lower Limit Confidence Interval, ULCI; Upper Limit Confidence Interval

Table 6: Conditional effect of DDS on DQOL at different level of MSS among T2DM Patients (N=409)

MSS	DDS	SE	T	p	95% CI	
					LL	UL
Low	-0.426	0.049	-8.76	< .001	-0.522	-0.331
Moderate	-0.362	0.037	-9.82	< .001	-0.434	-0.289
High	-0.297	0.046	-6.52	< .001	-0.387	-0.208

Note: DDS; Diabetes Distress Scale, MSS; Multidimensional Social Support Scale SE; Standard Error, LL; Lower Limit, UL; Upper Limit, CI; Confidence Interval

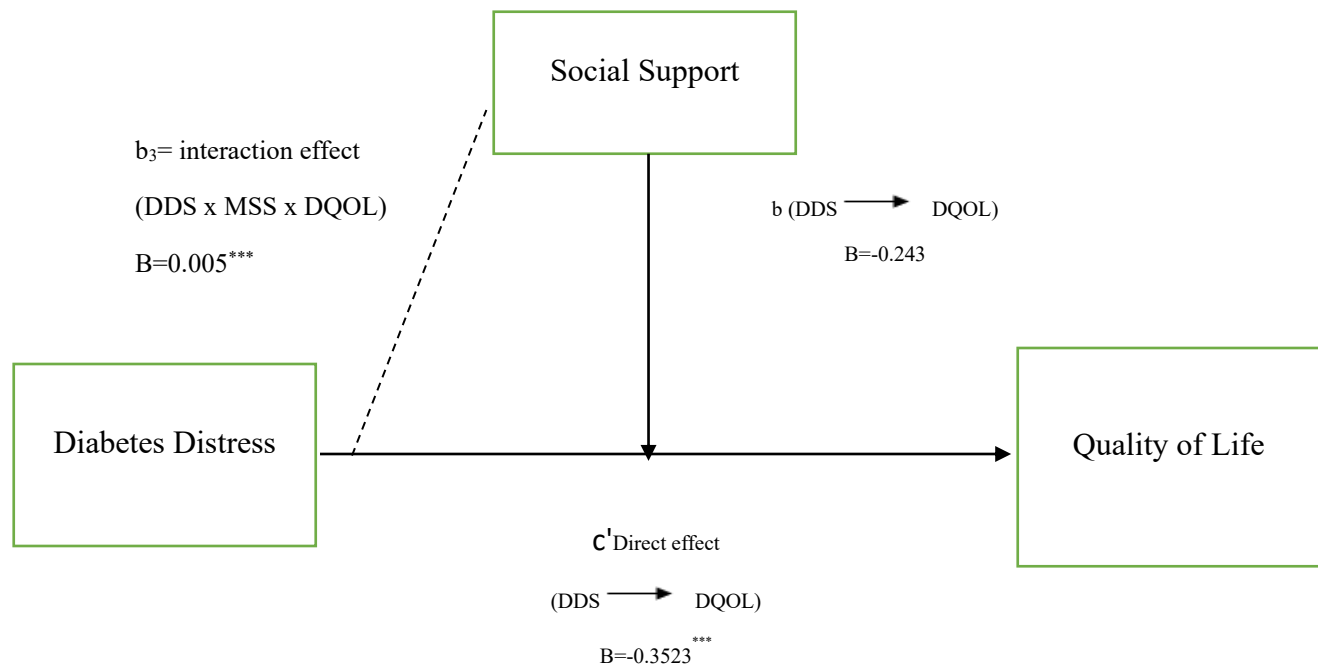
We used the analysis of moderation to evaluate how perceived social support affects diabetic distress and qol. The complete model explained 50.0% of quality of life variance ($R^2 = .500$) and was significant ($F(3, 405) = 135.17, p < .001$). Diabetes-related distress negatively impacts quality of life ($B = -0.523, SE = 0.084, t = -6.19, p < .001, 95\% CI [-0.689, -0.357]$). The main effect of perceived social support was small, $B = .243, SE = .156, t = 1.56, p = .121$. Diabetes distress and perceived social support interacted significantly, $B = 0.005, SE = 0.003, t = 2.19, p = .029, 95\% CI [0.001, 0.010]$. The interaction helped. Contributes 6% to quality of life variance ($\Delta R^2 = .006, F(1, 405) = 4.79, p = .029$). Diabetes-related distress adversely linked with quality of life at low, moderate, and high perceived social support. As perceived social support increased, the negative correlation dropped ($B = -0.426$ low, $B = -0.362$ moderate, $B = -0.297$ high). The study indicated that perceived social support considerably reduced the un-favourable relationship between diabetic pain and QOL.

Figure 1: The Effect of Diabetes Distress on Diabetes Quality-of-Life mediated by Health Anxiety and Diabetes Stigma among T2DM Patients (N=409)

This figure presents the mediation model of health anxiety in association with diabetes distress and diabetes quality of life. A thorough summary of the bootstrap confidence intervals and

statistical significance can be found in the above given table, and the figure summarizes the routes that were investigated in the mediation investigation, both direct and indirect (Figure 1).

Figure 2: *The Moderating Role of Social Support for Diabetes Distress and Quality of Life among T2DM Patients (N=409)*



This figure illustrates that social support moderates diabetes distress and quality of life in T2DM patients. The table above summarizes the conditional effect, bootstrap confidence intervals, and statistical significance, and the picture shows the mediation investigation's direct and indirect paths (Figure 2).

Discussion

The current research concentrated on the link between psychological distress and quality of life in patients diagnosed with Type 2 Diabetes Mellitus (T2DM), highlighting the mediating effect of health anxiety and the social support playing as moderating role. The findings align with the prevailing literature indicating that diabetes is both a metabolic disorder and a persistent psychological and social issue. Individuals with T2DM need to understand the importance of adhering to their medication regimen and dietary limitations, regularly check their blood glucose levels, engage in physical exercise, manage possible complications, and attend scheduled appointments with their healthcare professional. The cumulative stress from this situation can result in psychological turmoil, thereby influencing the patient's perceived quality of life. Prior research has consistently demonstrated that anxiety, depression, stress, and diabetes-related

distress are significant psychosocial elements influencing adaptation to T2DM and diabetes-related quality of life (McCoy & Theeke, 2019a).

The findings of this study are in support with the existing literature, which shows that psychological distress is significant in enhancing the quality of life of individuals with T2DM. Psychological distress can occur as a result of the illness and because of the responsibilities of caring for that illness and may manifest as anxiety, depression, stress, worry and emotional burden. People with diabetes can have a constant worry about their blood sugar levels changing (Cheng et al., 2021) (Jannoo et al., 2017). Research has found that psychological and diabetes related distress is closely linked to reduced health-related quality of life, lending support to this finding. In a systematic review of psychosocial factors in adults with T2DM, it was observed that higher social support was correlated with having fewer emotional distress and more adaptive coping, and that anxiety, depression, stress and diabetes distress was a significant psychological factor (McCoy & Theeke, 2019a). A recent systematic review of T2DM studies highlighted the importance of concurrently evaluating psychological health and qol outcomes, as psychological well-being is a fundamental aspect of diabetes management rather than a peripheral issue (Alzahrani et al., 2023). The association between psychological distress and quality of life is probably not merely unidirectional, but dynamic. Individuals with poorer quality of life may also become increasingly distressed due to increasing functional and emotional difficulties. The present findings are particularly relevant when considering Pakistan where the psychological burden associated with T2DM appears to be substantial. A recent systematic review and meta-analysis conducted in adults with T2DM in Pakistan estimated the pooled prevalence of diabetes distress to be around 66.8%. However, there was significant heterogeneity across studies included in the review. The review identified poor glycaemic control, longer duration of illness, complications, socioeconomic problems, low self-efficacy, poor self-care and limited social support as important correlates of diabetes distress (Asmat et al., 2026). These results suggest that psychological problems in Pakistani diabetic patients should not be viewed as individual weakness alone, but rather in the larger clinical, socioeconomic, familial and cultural context.

The present study makes a significant contribution by exploring health anxiety as a potential mediator between psychological distress and quality of life. The findings indicate that psychological distress may be related to increased health anxiety, which may subsequently result in a reduced quality of life. This mediation path provides a more sophisticated explanation of the link between psychological distress and quality of life in patients with T2DM. Health anxiety has also been shown as a mediating role in studies on psychological variables in patients with T2DM. For example, (Abbas et al., 2023b) investigated diabetes distress, depression, health anxiety, quality of life, and treatment adherence in patients with T2DM and found that cognitive-behavioral therapy significantly reduced health anxiety and diabetes distress, and improved quality of life and treatment adherence. These outcomes are relevant to the present study as they show that health anxiety is not merely a coincidental psychological symptom but can be a significant and alterable element of the psychological experience of diabetes. Cognitive-behavioral approaches may be particularly useful since they can target harmful interpretations, excessive reassurance seeking, avoidance and maladaptive beliefs about illness. The utility of psychological intervention in alleviating health anxiety and improving the quality of life in individuals with T2DM was empirically supported by (Abbas et al., 2023b).

Another important finding of the present study is the moderating effect of social support. The results suggest that social support may mitigate or buffer the adverse relationship between

psychological distress and QoL. Social support may help people living with a chronic illness feel less isolated and helpless and more able to cope with illness-related challenges with the assistance of others.

The moderating effect of social support is very consistent with previous studies. Specifically, (Onu et al., 2022) examined the social support as a moderator between diabetes related distress and diabetes-related quality of life among T2DM patients. They found that social-support significantly moderating the relationship between diabetes distress and QOL, indicating that support can reduce the adverse effects of diabetes-related distress. Comparable findings were documented by (Onu et al., 2021) who investigated psychological distress and diabetes-related quality-of-life in patients having T2DM. Their research indicates that implemented social support influenced the relationships among anxiety, stress, and diabetes quality of life, implying that nurturing social contexts could mitigate the adverse effects of diabetes related distress. Onu and Igwe (2025) recently presented a moderated mediation model demonstrating that social support affects the relationship among diabetes distress, mindfulness, and diabetes related quality of life (Onu & Igwe, 2025). There are likely to be a number of mechanisms through which social support may buffer. Family members can also be very helpful in practical ways with medication, diet, appointments and physical activity. Second, emotional support may alleviate feelings of isolation and helplessness. Third, supportive relationships may promote more adaptive coping and greater confidence in managing diabetes. Finally, interpersonal support can provide reassurance that quells excessive health-related worry. A systematic review of psychosocial factors in adults with T2DM also found that more social support was linked to less emotional distress and better psychosocial outcomes (McCoy & Theeke, 2019b).

Taken together, the findings suggest that psychological distress, health anxiety, quality of life, and social support should be considered as interconnected rather than independent aspects of diabetes management. Psychological distress may increase health-related worries and concerns, which can contribute to poorer quality of life. At the same time, supportive interpersonal relationships may weaken the adverse impact of psychological distress and provide patients with resources to cope more effectively with health-related concerns.

Limitations and Recommendations

Some limitations should be taken into account when interpreting the findings. This study was cross-sectional in nature; therefore, it is not possible to draw causal inferences about the direction of the associations between psychological distress, health anxiety, the social support and diabetes related quality of life. Longitudinal studies are needed to establish if psychological distress predicts subsequent increases in health anxiety and whether these changes translate into reductions in quality of life. Experimental designs could also be used in future research to explore whether interventions targeting health anxiety or social support lead to improvements in quality of life.

Future research should investigate if the buffering function of social support varies by source and type of support. For example, family members' emotional support may work differently than practical or informational support. Future research should examine whether the suggested mediation and moderation pathways are influenced by diabetes duration, complications, glycemic control, socio-economic status, gender and treatment modality.

Conclusion:

In conclusion, the current research adds to the accumulating evidence that psychological health is a crucial element of diabetes care. Psychological distress seems to be significantly associated with a diminished quality of life, whereas health-anxiety may serve as a crucial psychological factor by which distress influences patients' well-being. Simultaneously, social support can function as a safeguarding asset that mitigates the negative effects of psychological turmoil. These results underscore the necessity of transcending a solely biomedical framework of T2DM in favour of a comprehensive bio-psychosocial model that includes psychological evaluation, health anxiety management, and enhancement of social support in standard diabetes treatment.

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