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## Original Article

## Diabetes Self Care, Resilience and Quality of Life among Patients with Type II Diabetes

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## ABSTRACT

Diabetes is highly prevalent disease in Pakistan, and it greatly impacts the quality of life of the patients. Diabetes self-care and resilience can be significant in this regard. **Objective:** To find out the relation among diabetes self-care, resilience, and quality of life in patients with type II diabetes. **Methods:** The correlation research design was used along with purposive sampling to select the sample (N=200) from Government and private hospitals of Lahore. 11 items Summary Diabetes Self-care Activity scale (SDSCA), 18 items Trait Resilience Scale (TRS) and 15 items Diabetes Quality of Life (DQOL) scale were used in the study. Researchers translated English versions of TRS and DQOL scales into Urdu language following the Lexicon Equivalence method of translation. **Results:** Correlation analysis revealed significant positive relation between general diet and resilience (.61,  $p < 0.5$ ), Blood glucose and resilience (.53,  $p < 0.5$ ) and between resilience and quality of life (.77,  $p < 0.5$ ). Multiple linear regression revealed that self-care activities significantly predict quality of life. **Conclusions:** The more the patients are following self-care activities, the better will be their quality of life. The study will be helpful for clinical psychologists to boost the resilience of patients with diabetes.

## INTRODUCTION

There is drastic increase in the prevalence of diabetes all over the world [1]. Four types of diabetes are reported in literature; however, type 2 diabetes mellitus (T2DM) is more common than other types. It accounts for more than 90% of all cases than other types [2]. It is defined as a chronic illness in which body does not utilize insulin properly which resulted in infrequent blood sugar level [3]. Almost 11% Americans are living with diabetes [4]. However, in Pakistan, T2D is 11.77%. The separate prevalence in men and women is 11.20% and 9.19% respectively. In provinces like Sindh and Punjab, it is found to be 16.2% and 12.14% in adult men whereas it is 11.70% and 9.83% in women [5]. Diabetes can cause lower quality of life (QoL), greater risk of heart problems (stroke, peripheral vascular and ischaemic

disease), and reduced life expectancy [6]. Literature revealed that diabetes causes long-term damage to the body particularly to the circulatory system and the heart [7]. There is dire need to practice self-care strategies for the better management of diabetes. Self-care management is a process of awareness or knowledge by surviving with the multifaceted nature of diabetes in a social perspective [8]. This can include maintaining a healthy lifestyle, following treatment regimens, and monitoring blood sugar levels. Literature reveals that diabetic patients reported poor awareness related to self-care training, eating healthy food, following prescribed medicines, and monitoring the level of blood glucose [9]. Self-care is directly correlated with resilience in those with

chronic illnesses[10]. Resilience has been described as the innate ability to cope with stressful events, recover from them, and adjust to new situations. The more resilient the person is, the more will be the resources to adapt to or change the adversity [11]. Research reveals that less resilient persons are more vulnerable to T2DM [12]. Another research reported a positive relationship between resilience and treatment adherence. Patients with greater resilience had better treatment adherence as well as a higher quality of life [13]. Resilience training has a considerable influence on the psychological well-being of type II diabetes patients. It is suggested that resilience training may be utilized to improve patients' quality of life (QoL) as well as their ability to face life's challenges[14]. QoL is defined as a person's subjective perception of emotional, physical, and social health, as well as happiness and satisfaction [15]. Literature revealed that the presence of diabetic symptoms and concern about the condition has a negative impact on patients' QoL. Higher resilience levels were significantly linked with increased QoL [16]. The results revealed that social and psychological dimensions, old age, residing in a rural region were related with a worse QoL, whereas less diabetes-related problems, exercise, general diet, and foot care were related with a higher QoL in patients [17]. Diabetes is a manageable disease, and its prevalence is increasing in Pakistan. The major risk factors include unhealthy lifestyles and hypertension etc. Literature has revealed that diabetes self-care and resilience have an impact on the life quality [18]. The current study aimed to highlight the significance of diabetes self-care and resilience and its impact on the QoL among patients. All these variables are important for the health, better management of diabetes and well-being of diabetic patients.

## METHODS

Correlation research design was used in the study. Purposive sampling was used to select the sample. The size of sample was calculated through G-power software. The sample was selected from Government and private hospitals of Lahore and comprised of patients with type II diabetes(N=200). The age of the sample ranged from 40-60 years ( $M=56$ ,  $SD= 6.8$ ). Inclusion criteria included, diagnosed patients of type II diabetes and minimum duration of disease was at least 2 years. The Demographic sheet was used to assess the demographic variables. Summary Diabetes Self-care Activity scale (SDSCA) scale assesses the frequency of self-care habits [19]. The value of Cronbach alpha is .63. Urdu version of the Summary Diabetes Self-care Activity scale was used in the study. Trait Resilience Scale (TRS) is comprised of 18 statements with a 5-point rating scale. The value of Cronbach Alpha is

.84 [20]. High scores indicate higher trait resilience. The scale was translated into Urdu language in the present study according to the Lexicon Equivalence Method. Diabetes Quality of Life (DQOL) has 13 items assess the three domains, satisfaction, impact, and worry. The value of Cronbach Alpha is .93 [21]. High scores on DQOL assess poor quality of life among patients. The scale was translated into Urdu language in the present study according to the Lexicon Equivalence Method. First of all research topic was approved by the Ethical Board and Board of Studies. The researcher took permission to use and translate instruments for research, which was taken from the authors of the scales through electronic mail. After taking permission from authors, the researcher translated English versions of TRS and DQOL scale following the Lexicon Equivalence method of translation (Reiss, 1983)[22]. Lexicon considerations were followed for forward and backward translations of scales[23]. Different hospitals were visited for data collection permission. Ethical procedures were followed during the whole process of research. Formal permission was taken from the concerned authorities of the Government and private hospitals of Lahore to collect data. SPSS version 21.0 was used for analysis of data.

## RESULTS

The results reveal that women participants were (60%) and men were (40%). Their age ranged from 40-60 years ( $M= 50.6$ ,  $SD= 6.38$ ). Majority of the participants were graduate (34%) and married (85%). The duration of disease was reported less than 7 years in majority of patients (57%). Majority of the patients were taking oral medicines (75%). Table 1 reveals significant positive correlation among all subscales of Summary of Diabetes Self-Care Activity. There is a positive relation between general diet and resilience ( $r=.61$ ,  $p<0.01$ ), blood glucose and resilience ( $r=.53$ ,  $p<0.01$ ) and between resilience and quality of life ( $r=.77$ ,  $p<0.01$ ). Results reveal that higher the resilience, higher will the daily self care. Higher the resilience better will be the quality of life among patients.

Variables	1	2	3	4	5	6	7
General. Diet		.62**	.35**	.52**	.39**	.61**	.45**
Specific. Diet			.30**	.44**	.20**	.41**	.29**
Exercise				.43**	.25**	.34**	.32**
Blood. Glucose					.44**	.53**	.37**
Footcare						.48**	.37**
Resilience							.77**
QoL							

**Table 1:** Pearson Moment Correlation among Subscales of Self-care Activities, Resilience and Quality of Life

Table 2 shows the impact of Diabetes Self-Care Activity (subscales) on Quality of life. The R2 value of .27 revealed that the self-care activities explained 27% variance in QOL

with  $F$  (14.57) =35.1,  $p<.001$ . The findings revealed that subscales of Diabetes Self-Care Activity; General diet ( $\beta = .28$ ,  $p < .01$ ), Exercise ( $\beta = .16$ ,  $p < .05$ ), Foot care ( $\beta = -.18$ ,  $p < .05$ ) are significant positive predictors of quality of life in patients. Hence it is revealed that higher the self-care, the better will be the life quality.

Variables	Quality of Life		
	B	$\beta$	SE
Constant	48.22***		2.
General. Diet	.92**	.28	.51
Specific. Diet	.00	.00	.28
Exercise	.31*	.13	.54
Blood. Glucose	.29	.08	.16
Footcare	.51*	.18	.26
R <sup>2</sup>	.27		.19
F	14.57		

Note. \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

**Table 2:** Multiple Linear Regression Analysis of Diabetes Self-Care Activity(subscales)on Quality of life.

## DISCUSSION

This study aims to explore the relationship among self-care, resilience, and quality of life in patients with T2D. The hypothesis of the study stated that there would be a significant positive relationship among diabetes self-care, resilience, and quality of life. The results revealed significant positive correlation among all study variables. Literature also suggests that there is significant positive relation among these variables and these findings are consistent with previous literature [13, 24, 25, 26]. Next hypothesis claimed that diabetes self-care would likely to predict diabetes quality of life in patients with T2D. The findings revealed that subscales of Diabetes Self-Care Activity significantly predict quality of life among patients. The findings reveal that general diet, exercise, and foot care are significant positive predictors of quality of life. These findings suggest that the more the patient are following the proper diet plans advised by their doctors, regular exercise and taking care of their foot for any wound, the better will be their QOL. Because self-care practices help in the management of disease which ultimately affect the quality of life and these findings are also consistent with the literature[27, 28]. Literature reveals that self-care habits, gender and diabetes complications are significant predictors of QOL [29]. Literature further reveals that patients who are living with diabetes from longer duration show more adherence towards medicine and self-care activities[30].

## CONCLUSIONS

The findings reveal that there was significant positive relation among self-care activities, resilience, and quality of life in patients with T2D. Moreover, the diabetes self-care

activities (general diet, exercise, foot care) were found to be significant positive predictors of quality of life among diabetic patients. The increasing prevalence of diabetes highlights the importance of resilience and quality of life among patients with T2D. The findings of the study will be implicated in health and clinical settings.

## Conflicts of Interest

The authors declare no conflict of interest.

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