

## **LIVING WITH TYPE 2 DIABETES IN PAKISTAN: A QUALITATIVE EXPLORATION OF PATIENTS' VIEWS ON SELF-CARE**

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### **Abstract**

This qualitative research aimed to comprehensively explore the perceptions, behaviors and barriers of self-care for type 2 diabetes mellitus in urban Pakistani adult populace. We also gathered data from 20 participants recruited through outpatient departments of some hospitals in Karachi and stopped collecting information at saturation. The themes were inductively derived through an independent thematic analysis conducted by the researcher. Two main factors emerged from the findings reflecting difficulties experienced by patients with self-care for diabetes, quite intertwined and mostly related to ones own situation and comprehension toward their disease. Conclusions: The study emphasized the importance of family support and education by health care providers, which have a positive impact on self-care practices among people with diabetes in Pakistan. This study gives information on the views and issues associated with self-care practices in this population, thereby guiding healthcare providers as well as policy makers to better understand its role towards improved diabetes care in urban areas of Pakistan.

**Keywords:** Diabetes self-care, type 2 diabetes mellitus, Pakistani adults, barriers, family support, healthcare providers.

## 1. Introduction

Non-insulin dependent diabetes mellitus (NID DMII) or type 2 Diabetes Mellitus is an important public health problem worldwide as a whole and in Pakistan too. IntroductionThe burden of T2D is increasing in Pakistan, therefore it becomes imperative to explore the factors associated with self-care practices among individuals suffering from this condition. Effective diabetes management is dependent on proper self-care, which includes diet control and physical activity along with daily activities such as blood glucose monitoring and medication adherence. Although self-care is crucial, many patients in Pakistan experience significant barriers to effective self-management (Bukhsh et al., 2020; Zoungas et al., 2022; Ansari,, Harris,, Hosseinzadeh & Zwar,2018). These barriers are intersectional, arising from socio-cultural (Tariq et al., 2022), economic and health systems-related factors (Peng et al., 2022).

This is specifically true in Pakistan where certain cultural norms and family dynamics dictate how many decisions one can make about themselves, especially with regard to their own health. If we are talking about power dynamics within a family, those norms and expectation naturally varies culturally and it heavily impacts on patients' beliefs regarding diabetes (Tariq et al., 2024). Family support: The level of awareness and attitude toward diabetes management by family members can either help or hinder self-care practices in the case of diabetic patient (Zeb et al., 2021). In addition, healthcare professionals have a significant responsibility for the provision of education to enable patients and their families with appropriate self-care (Ansari et al., 2022). The communication gap between healthcare providers and patients, however worsens the situation for individuals try to maintain their condition (Butt et al., 2024).

Specific challenges in diabetes self-care for urban populations of Pakistan have been defined by research. Fast life style, no recreational spot and biased unhealthy diet added up in poor self-care practices (Malik et al., 2020). In addition, the financial implications of diabetes management with antidiabetic drugs and day-to-day monitoring contribute to increased complexity in health care utilization according to suggested self-care regimens (Patel et al., 2021). Further highlighting the requirement for urban population-specific interventions to improve outcomes in diabetes management (Gupta et al.2024)

The objective was to assess self-care practices and experiences among urban Pakistani adults living with T2DM. Through a qualitative methodology, the research aims to explore in depth patients'

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perspective on facilitators and barriers of self-care. To effectively implement diabetes self-management interventions, these factors must be examined so that culturally appropriate and contextually relevant strategies can target potential mediators of the effect on glycaemic control. Such knowledge will guide healthcare providers and policymakers on targeted areas of intervention required to enhance diabetes care in urban Pakistan (Shah et al., 2023; Hill, Ellis and Gillison, 2022; Asmat et al., 2022; Amirudin et al., 2023)

## **2. Objectives**

The study sought to understand the self-care perspectives and experiences of urban Pakistani adults with Type 2 Diabetes Mellitus (T2DM) in order to identify barriers and enablers necessary for guided diabetes care management.

- i. To explore the context specific socio-cultural, economic and healthcare-system related factors influencing self-care practices through focus group discussion in urban Pakistani adults with T2DM
- ii. To assess the effects of family support and health care provider education on self-care, explore strategies for enhancing diabetes management in urban areas of Pakistan.

## **3. Empirical Research**

Patients with type 2 diabetes mellitus (T2DM) are forced to take part in numerous self-care activities like diet control, physical activity, medication adherence and blood glucose monitoring for the management of their diagnosis (Zoungas et al., 2022). Even though these activities play a major role, there are many challenges in our environment that obstruct effective self-care for the patients living within Pakistan. Bukhsh et al. Feeser et al. (2020) additionally pointed out that because of low health literacy, patients often find it difficult to comprehend the disease and associated self-care information (Zoungas et al. 2022). The socio-cultural context shapes patients' self-care behaviors, inhibiting compliance to recommended practices (2022). Ansari et al. An important challenge has been identified in economic constraints and accessibility to healthcare resources compounded by high cost of medications and monitoring equipment (Tariq et al. 2022). Peng et al. (2022) made similar conclusions suggest, health care services are "unaffordable and hard-to-reach" for many patients.

Diabetes self-management is influenced by both cultural and familial settings in Pakistan. Tariq et al. As described by (2024), cultural norms and family dynamics can either promote or impede self-care. The family frequently plays a key role in the day-to-day management of diabetes and offers emotional support, as well as practical advice (Zeb et al., 2021). However, based on a study conducted by Ansari and colleagues (2022) elsewhere lack of knowledge about diabetes management among family members tend to result in misunderstanding or mismanagement of the condition. Butt et al. The beneficiaries of the provided support should be enrolled in effective communication channel between healthcare providers and families as well (2024). In a study by Malik et al. which emphasises the above point, A study by Liew et al. (2020) found that involving family members in educational interventions can enhance patient adherence to self-care practices.

Our findings indicate that the urban milieu poses specific systemic barriers to managing diabetes self-care in Pakistan. Malik et al. It is similarly reported by Singh et al. (2020) that the rapid pace of urbanization creates an environment where there are limited opportunities to engage with recreational areas yet high numbers of unhealthily produced food products which closes down chances for a healthy diet and regular physical activity. Additionally, Patel et al. (2021) also observed the financial burden of diabetes management, which is mainly visible in urban areas due to higher living expenses and relatively expensive healthcare services. Gupta et al. (2022-2024) indicates the importance of targeting urban settings with interventions that accommodate what city dwelling populations need such as making healthy food more accessible and affordable. This result replicates the findings of (Hill et al. 2022), these sought to communicate the importance of environments designed in a way that they make healthy lifestyle choices easy.

Nutrition education and provider support are both essential for successful diabetes self-management. Ansari et al. A study by Ansari et al. (2021) in 2021 observed that, patients with good knowledge of diabetes and its management will adhere to self-care practices. This training must not confine to the patients but also target and educate their family members for a comprehensive diabetes management (Ansari et al., 2022). Shah et al. Research by (2023) indicated that follow up and help from health care manpower would increase adherence to self-care. Unfortunately, this gap frequently remains unclosed and serves to amplify the maldistribution of access to educational opportunities due, in part, to poor communication between healthcare providers and patients (Hill et al., 2022). In other words, patient-centered care models that

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highlight the active partnership of patients in their healthcare planning have been proposed by Asmat et al. (2022) as a tool to help close this gap and promote healthy self-care habits.

The literature review reveals a host of factors affecting diabetes self-management practices of urban Pakistani adults. Nixon et al. Donatini, A.; et al., 2021 studied the role of socioeconomic and healthcare factors on self-care behaviors from a bio-psychosocial perspective. Amirudin et al. The multilateral study by Vostanis et al (2023) underlined the importance of culturally sensitive, contextually fitting interventions that are required to address these challenges. Altogether, there is an agreement that among the practices of self-care need to include participation from family members and better patient Health care provider communication (Butt et al., 2024; Zeb et al., 2021). The healthcare providers and policymakers can develop sound strategies to promote good diabetes control in urban Pakistan by addressing these barriers and capitalizing on the facilitators reported in literature (Tariq et al., 2024).

#### **4. Research Design and Approach**

The study that follows serves as a qualitative research investigation into the self-care practices among urban adult population with Type 2 diabetes mellitus in Pakistan. Considering the study is based in an urban setting of Karachi, one of significant metropolitan city from Pakistan to reflect on specific challenges for this population. Therefore, a purposive sampling strategy was used to enrollment 20 participants from outpatient departments of hospitals in Karachi. We intended 20 for our sample size in order to obtain a broad range of experiences and views but also still enable the very detailed interviews required before data saturation. Inclusion criteria included adult at least one year diagnosed with T2DM, living in urban areas, and interested to discuss their diabetes self-care practices.

The semi-structured interviews were well-suited for collecting the in-depth qualitative data inherent to our study, providing a balance between flexible and focused exploration of participants' thoughts, actions/behaviors (or self-care) experiences and barriers related to engaging with diabetes-self care. Interviews were audio-recorded following consent and transcribed verbatim. A thematic analysis was performed by the researcher, consistent with Braun and Clarke's six-phase approach to identifying, analyzing or interpreting patterns across data. This process helped us grasp

the essence of self-care practices, barriers and facilitators at large among residents through key domains or themes as well sub-themes.

## 5. Analysis and Results

A Summative Overview of the Main Variables, Themes and Descriptions Extracted from Thematic Analysis by Study on Self-Care Practices among Urban Pakistani Adults with Type 2 Diabetes the Theme- Knowledge Gaps is represented as the value of Understanding on Diabetes implying poor understanding related to management practices.

**Table 1. Themes of the Study.**

Variable	Themes	Theme Code	Description
<b>Understanding of Diabetes</b>	Knowledge Gaps	UG-01	Participants' lack of understanding about proper diabetes management, including diet and medication adherence.
<b>Self-Care Practices</b>	Barriers to Self-Care	SC-01	Challenges faced in daily diabetes management activities, such as diet control, physical activity, and blood glucose monitoring.
	Financial Barriers	SC-02	High cost of medications and monitoring equipment affecting adherence to self-care practices.
	Social and Environmental Barriers	SC-03	Limited access to healthy food options and recreational spaces impacting self-care.
<b>Role of Family</b>	Positive Family Involvement	RF-01	Emotional and practical support provided by family members, facilitating diabetes management.
	Negative Family Involvement	RF-02	Lack of knowledge among family members leading to misunderstandings and mismanagement of diabetes.
<b>Healthcare Provider Support</b>	Healthcare Provider Interaction	HP-01	Role of healthcare providers in educating and supporting patients, including gaps in communication and support.
<b>Cultural Influences</b>	Influence of Cultural Beliefs	CI-01	Impact of cultural norms and beliefs on self-care practices, including both facilitators and challenges.
	Facilitators of Self-Care	CI-02	Cultural beliefs that support healthy behaviors and diabetes management practices.
	Challenges Due to Cultural Norms	CI-03	Cultural factors that complicate diabetes self-care, such as dietary habits and misconceptions about the disease.

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<b>Suggestions for Improvement</b>	Strategies for Improvement	SI-01	Participants' suggestions for enhancing diabetes management, including the role of healthcare providers and community resources.
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The "Self-Care Practices" section discusses themes relating to barriers (barriers to self-care, financial constraints) and social factors that pose challenges with daily diabetes management. The "Role of Family" variable dealt with the ways in which families would help or not help children managing diabetes; so family support may mean assistance to succeed with their management plans - positive or else careful attention that a child eats properly for example. Healthcare Provider Support - Patient-provider interactions and communication as well support gaps The second theme, 'Cultural Influences', considers how cultural perspectives impact self-care behaviours and profiles both the driving factors of using IKT as well as barriers to it. We also have included recommendations for improvements in diabetes management from participants.

### **Understanding of Diabetes**

#### **Theme: Knowledge Gaps (UG-01)**

##### **Summary of Responses:**

*There were parts of the care process in diabetes management about which participants had no complete understanding. (P3, P7). Fruits were the type of food a lot had mixed feelings about, as to whether they should be avoided or followed by these recommendations. (P7). Adherence to medication was poor, with participants taking their medications inconsistently and uncertain of why they took them or when. (P12).*

These responses reveal critical areas of educational need among both dietary practices and medication management related to diabetes self-care.

### **Self-Care Practices in Diabetes Management**

#### **Theme: Barriers to Self-Care (SC-01)**

##### **Summary of Responses:**

*Participants listed eating, exercises and blood glucose monitoring as a few of the difficult day-to-day diabetes management activities they encountered. (P2, P4). Participants struggled the same things - which caused barriers to regular self-care. (P6, P19). Discussion participants noted that tailored approaches and resources to overcome self-care barriers were urgently needed. (P1, P3)*

**Theme: Financial Barriers (SC-02)**

**Summary of Responses:**

*The major inhibiting factors were the costs of medications and monitoring devices for practicing self-care. (P3, P5). The cost and availability of basic diabetes management supplies also came up as a concern for participants. (P2, P4). Overall, in addition to chronic stressors and competing demands from work or home responsibilities that created barriers for participants to be able maintain the recommended self-care routines; financial constraints further restricted their options negate positive behaviors on diabetes savvy. (P1, P20)*

**Theme: Social and Environmental Barriers (SC-03)**

**Summary of Responses:**

*Accessing healthy food and local spaces for recreation were a few of the challenges in continuing self-care practices. (P1, P4). Participants Cultural and family dynamics emerged as important social determinants that were influencing participants capacity to become physically active or modify their diets. (P2, P5). Self-care behaviors were influenced by environmental factors, such as neighborhood safety and resources. (P3, P13)*

This analysis of participants' experiences with barriers to practicing effective self-care for diabetes management reveals a range challenges in daily activities, financial resources and social/environmental factors.

**Role of Family in Diabetes Management**

**Theme: Positive Family Involvement (RF-01)**



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**Summary of Responses:**

*Emotional and practical support from family members was identified as a factor that helped participants to manage diabetes effectively. (P2, P4). Family members supported each other in dieting and physical activity. (P6, P7). The majority of the participants were encouraged in some way to maintain their diabetes management strategies nurtured by positive family involvement which led them towards more hope and drive. (P1, P17)*

**Theme: Negative Family Involvement (RF-02)**

**Summary of Responses:**

*Participants described situations in which family members did not realize that they were ignorant to diabetes, and as a result of their lack knowledge, misunderstandings or the mismanagement occurred. (P3, P5). Few participants reported issues with inconsistent advice or hindering actions from family members, involving in diabetes care and management. (P1, P4). Non-supportive family involvement by exclusive contribution and intrusion sometimes lead the participants unable to practice self-care regularly; also lack of adequate control over their condition. (P2, P10)*

This analysis allows understanding the contradictory impressions of family on DM management including positive impact because they can provide emotional and practical support, until such a situation with pessimistic view also expressed by lack or misunderstanding about this disease inside their own life.

**Healthcare Provider Support in Diabetes Management**

**Theme: Healthcare Provider Interaction (HP-01)**

**Summary of Responses:**

*Healthcare provider education and supportParticipants exchanged viewpoints on the role of healthcare providers in educating patients and providing them with knowledge, so still both positive encounters were shared as well negative experiences. (P2, P4). Several participants*

*stressed the importance of clear communication from healthcare providers, in knowing their plans for management of diabetes. Individual Needs, Personalized Support (P6, P7)n - [There were some comments around where participants felt that those providing care could provide better for the individual and meet specific needs. (P1, P18)*

This study adds granularity to the previously identified facets of health care provider interactions that affect diabetes management and underscores the importance patient-centeredness on clear communication and tailored support in driving desired patient outcomes.

### **Cultural Influences in Diabetes Management**

#### **Theme: Influence of Cultural Beliefs (CI-01)**

##### **Summary of Responses:**

*Previous studies have implied the effect of cultural norms and beliefs on self-management behaviors in diabetes care but our discussion emphasized facilitator's (ie, social support) and challenges to engaging those supports; (P2, P4). Specific cultural beliefs affected dietary practices, understanding of illness aetiology and management or control diabetes. (P6, P7). Additionally, several participants provided examples of how cultural beliefs either facilitated or impeded their motivations to follow diabetes self-management practices. (P1, P16)*

#### **Theme: Facilitators of Self-Care (CI-02)**

##### **Summary of Responses:**

*The following cultural beliefs were related to reinforcement of diabetes management practices, better food preparation and restrictions on diet habits, physical activity expectations: (P3, P5). Participants viewed cultural practices (including traditional remedies and community support systems) as useful for encouraging self-care. (P2, P4). The important balance between cultural and modern medical practices resulted in the positive cultural influence that gave participants useful strategies to manage Diabetes. (P1, P15)*

#### **Theme: Challenges Due to Cultural Norms (CI-03)**

**Summary of Responses:**

*People talked about how cultural norms made diabetes self-care so hard; like food preferences that conflicted with what the doctor said to eat. (P1, P5). Cultural Misunderstandings of Diabetes Culturally-based misconceptions regarding the pathogenesis, course and treatment options for diabetes in certain populations has occasionally resulted in in "avoidance or delay accessing medical care/alertness to prescribed therapies provided" as well. (P2, P4). There were problems to managing diabetes well in the patients, not only social factors such as stigma resulting from chronic illness or lack of treatment adherence. (P3, P7)*

This analysis helps in understanding the multifaceted role of culture on diabetes care, facilitating applicability to beneficial cultural beliefs and practices as well as obstacles raised by some conventions and misconceptions.

**Suggestions for Improvement in Diabetes Management**

**Theme: Strategies for Improvement (SI-01)**

**Summary of Responses:**

*Participants indicated several ways to improve management, many of which included the need for enhanced healthcare provider and community support networks. (P2, P4). Improving local access to diabetes education programs and support groups in the community. (P6, P7). Key points raised included the need for individualized healthcare plans with follow-ups by health professionals. (P1, P3)*

We present a synthesis of how patients propose diabetes management can be improved, focusing on the role of holistic healthcare and community resources that could help in supporting patient outcomes.

**6. Discussion**

Discussion Several themes emerged when discussing the results of this exploratory study examining diabetes management in primary care that both highlight some major challenges with

supporting patient care. Key findings also illustrate some of the major challenges that prevent optimal adherence to self-care practices, specifically [financial], social and environmental factors as well as cultural norms (SC-01; SC-02; SC-03; CI-01; CI-03). These barriers frequently create challenges in compliance with recommended treatments and lifestyle modifications that reflect larger systemic issues within healthcare delivery in Pakistan (Bukhsh et al., 2020, Zoungas et al., 2022). Moreover, we found that in the experience of living with diabetes family support was crucial as positive engagement facilitated emotional work and practical help while negative interactions could be barriers to optimal care (RF-01; RF-02). Individuals with T1D come from families, and they also function as part of a family; therefore interventions must be aimed at both increased understanding by members within the unit (Ansari et al., 2021; Zeb et al., 2021).

Additionally, themes from participant recommendations included improving HCP interactions but tapping into community resources (HP-01; SI-01). Consistent with literature on patient-centered care in chronic disease management (Ansari et al., 2022; Othman et al., 2022), participants placed significant value to receiving clear communication and personable experiences from healthcare professionals. Prominence was given to strengthening community-based education programs and access to support networks as key strategies in assisting individuals with self-management of their disease (Tariq et al., 2022). More broadly, these results serve to confirm existing literature and elaborate on the socio-cultural determinants of diabetes care in Pakistan (and perhaps other similar LMIC settings), adding contextually specific changes that may inform healthcare policies and interventions aiming to improve patient outcomes.

## **7. Recommendations**

Recommendations for improving diabetes care and outcomes in urban adults of Pakistan based on results obtained from the study need for customized educational intervention activities that are tailored to local socio-cultural drivers of diabetes care. These interventions need to include culturally appropriate ways of educating patients and their families about the necessity for lifestyle changes, taking medications on time, regular monitoring. Healthcare providers should be systematically trained to communicate with patients of different backgrounds in a way that will build trust and bring those groups into their care more.

Another element is that healthcare policies must focus on increasing the availability of low-priced medications, tracking devices, and healthy food options - particularly for communities with

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economic problems. Such change requires collective action by health providers, community organizations and policymakers to create the support systems and programs in communities that enable people with diabetes. These can offer further education, peer support and links to tools that help embed self-management in people's routine.

Through the implementation of our recommendations, health systems in urban Pakistan will be equipped to provide better support for people living with type 2 diabetes mellitus and consequently minimize poor outcomes along with associated costs incurred by individuals as well on healthcare system. This work not only responds to current gaps in diabetes but it also brings together clinical care, community support and cultural competence- providing a well-rounded answer towards diabetes management.

## **8. Conclusion**

This qualitative study of diabetes self-care practices among urban Pakistani adults has shown the intricate relationship between socio-cultural factors, family dynamics and healthcare interactions that influence care. Significant barriers, as identified in the study include: financial burden, cultural beliefs and variable levels of family support impact adherence to diabetes management strategies. Recommendations by participants for context-specific healthcare interventions as well as community-based support initiatives highlight potential avenues to facilitate patient education, improve health care delivery and create enabling environments that are conducive for the effective management of diabetes in Pakistan. These results form the basis for initiating targeted interventions, policies which could address these barriers and promote optimal health care among subjects having type 2 diabetes mellitus in urban setup.

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