

PERCEIVED SOCIAL SUPPORT AND SELF-MANAGEMENT PRACTICES AMONG PATIENTS WITH TYPE 2 DIABETES AT A TERTIARY CARE HOSPITAL

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Abstract

Background: Diabetes mellitus is one of the most common chronic metabolic disorders worldwide and has become a major public health concern due to its increasing prevalence and long-term complications. Effective management of type 2 diabetes mellitus requires continuous self-management practices, including adherence to medication, healthy dietary habits, regular physical activity, blood glucose monitoring, foot care, and routine medical follow-up. The success of these practices is influenced by several psychosocial factors, among which perceived social support from family, friends, and significant others plays a vital role. Adequate social support can motivate patients to adopt healthy behaviors, improve treatment adherence, and enhance overall diabetes management. Despite the growing burden of type 2 diabetes mellitus in Pakistan, limited local evidence exists regarding the relationship between perceived social support and self-management practices among patients attending tertiary care hospitals.

Objective: To assess perceived social support and self-management practices among patients with type 2 diabetes mellitus attending a tertiary care hospital and to determine the association between perceived social support and diabetes self-management practices.

Methodology: A descriptive cross-sectional study was conducted among 217 patients diagnosed with type 2 diabetes mellitus attending the diabetic outpatient department of Liaquat University of Medical and Health Sciences Hospital. Participants were selected through a non-probability convenience sampling technique. Data were collected using a structured socio-demographic questionnaire, the Multidimensional Scale of Perceived Social Support (MSPSS), and a self-management practices questionnaire. Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 23. Descriptive statistics and inferential statistics, including the Chi-square test and correlation analysis, were used to examine the relationship between perceived social support and self-management practices.

Results: The findings indicated that the majority of patients perceived moderate to high levels of social support, particularly from family members. Most participants demonstrated satisfactory self-management practices, including regular medication use, healthy dietary habits, physical activity, blood glucose monitoring, foot care, and attendance at follow-up visits. A statistically significant positive association was observed between perceived social support and self-management practices, indicating that patients with higher levels of perceived social support were more likely to demonstrate better diabetes self-management behaviors.

Conclusion: Perceived social support has a positive influence on diabetes self-management practices among patients with type 2 diabetes mellitus. Strengthening family, friends, and healthcare support may improve adherence to recommended self-care behaviors and contribute to better disease management. Healthcare providers should incorporate strategies that enhance social support into routine diabetes care to improve long-term patient outcomes.

Keywords: Perceived social support, self-management practices, type 2 diabetes mellitus, diabetes care, tertiary care hospital, nursing research.

Introduction

Diabetes Mellitus (DM) is a chronic metabolic disorder defined as hyperglycemia at any stage of the disease, due to either defects in insulin secretion, insulin action or both, and is also one of the fastest growing non-communicable diseases in the world, causing long term complications as well as a significant economic burden due to the increasing prevalence of the disease.¹ Although significant advances have been made in diabetes diagnosis, treatment and management of diabetes preventive strategies, the burden of diabetes is still increasing globally, especially in low and middle income countries where access to health care is often limited.²

Given the high burden of T2DM, there is a need for urgent action to tackle the crisis, particularly in the developing world, where delayed diagnosis and poor access to healthcare services, combined with poor patient education, is resulting in poor patient outcomes.³

Several acute and chronic complication can occur in nearly all organ systems related to type 2 diabetes mellitus. Diabetic cardiovascular disease, diabetic nephropathy, retinopathy, neuropathy, diabetic foot ulcers, and lower limb amputations are all possible complications of poorly-controlled diabetes.⁴

All of these complications add to the cost of healthcare and to the ability to function, quality of life, and lifespan. As a result, disease management is crucial to reduce complications and ensure better long-term outcomes.⁵ This increased distress, in turn, negatively impacts their capacity to cope and adapt effectively, which in turn, negatively impacts their emotional resilience and overall disease self-management.⁶

Diabetes is a chronic condition; it is not treated with one 'cure' and cannot be cured. Patients' involvement in their daily diabetes management is a crucial factor in achieving a successful diabetes care outcome. Diabetes self-management behaviours are the activities people perform to manage their diabetes well, such as taking prescribed medications, eating a healthy diet, exercising regularly, monitoring their blood glucose levels, having routine follow-up visits and practising good foot care. When people do these activities consistently, they help themselves to maintain good blood sugar control, to postpone the development of diabetes complications, to avoid hospital admission, and to take care of their health and wellbeing.⁷ Healthcare professionals are important in treatment and education, but patients are responsible for self managing their daily life. However, over time these mistakes can be hard to keep up with as patients may face barriers in following diabetes care recommendations, such as poor health literacy, lack of motivation, limited family support, financial constraints or not knowing enough about diabetes.⁸

Perceived social support is one of the psychosocial factors that have been identified as having a significant impact on diabetes management. Perceived social support is a person's sense that family members, friends, and the people who are important to him or her will be available to assist and encourage him or her in times of need.⁹ High levels of diabetes-related distress are linked to poor self-management behaviors, including inadequate adherence to diet, physical activity, and medication, which in turn adversely affect glycemic control¹⁰. This is different from actual social support, which focuses on the person's belief that these resources are actually present. A sense of higher social support may lead to increased motivation, confidence in managing the condition, and adherence to recommendations for care¹¹. Moreover, Meta-analysis findings suggest that depression occurs about twice as frequently in individuals with diabetes compared to the general population¹².

Family support has always been seen as one of the best predictors of successful diabetes self-management. Family members are often very helpful, reminding the patient to take medicines on time, preparing healthy meals, helping the patient with physical exercise, taking the patient to medical visits, and comforting emotionally when the patient is sick. This encouragement helps patients make better lifestyle decisions, and stay on track for long-term adherence to diabetes care recommendations. Poor family support, on the other hand, can decrease motivation, which could result in a lower level of treatment compliance and higher risks of diabetes complications.¹³

A sense of strong support from these sources is associated with patients' confidence in self-management and their willingness to take the recommended self-management measures. All of these supports have a positive effect on patients' capacity to manage their diabetes and their general health.^{14,15}

The key elements of effective diabetes self-management are those that keep blood glucose as close to normal as possible and prevent diabetes-related complications. These can include medication adherence, a balanced diet, regular exercise, blood glucose monitoring, daily foot care and regular follow-up with healthcare providers. The benefit of these practices has been demonstrated to reduce the incidence of diabetes-related complications, improve metabolic control, lower the rate of hospital admissions, and improve quality of life; however, ongoing motivation, education, and support from healthcare providers and family will be necessary to maintain these practices over time.^{16,17}

Diabetes mellitus is an important public health problem in Pakistan and it has the highest prevalence among the countries of the world. The number of people with type 2 diabetes mellitus has increased due to rapid urbanization, unhealthy eating habits, lack of physical activity, obesity and an extended lifespan. As diabetes continues to rise, it puts pressure on health services, and there is a pressing need for effective solutions that enable long-term diabetes management and improve patient outcomes. While pharmacological treatment is the mainstay of care for diabetes,

patient education, family support and involvement, and social support are all important in diabetes self-management.^{10,18,19}

Few patients in Pakistan are able to deal with their diabetes due to the scarcity of health care facilities, financial problems, lack of diabetes care education and low level of support from family and community. These can make it more difficult to follow recommended self-care and lead to inadequate blood sugar control and the onset of preventable complications. Thus, enhancing social support systems could be beneficial in helping patients engage in healthier behaviors and be more effective with diabetes management.^{20,21} Thus, enhancing social support systems could be beneficial in helping patients engage in healthier behaviors and be more effective with diabetes management.^{6,8,22,23}

Despite several studies It is crucial to grasp this relationship, as it will be fundamental in the design and implementation of more complete diabetes care programmes that not only consider medical treatment but also psychosocial factors that affect patients' everyday self-care.^{24,6,9}

To evaluate the perceived social support and self-management practices of people with type 2 diabetes mellitus, healthcare professionals, nurse educators, and policy makers can gain useful information. The results can guide interventions to build family and community support, educate patients and promote positive self-management behaviors. These interventions can boost adherence to therapy, minimize diabetes-related complications and improve overall diabetes care. Hence, the present study is aimed at examining the perceived social support and self-management practices of the patients with type 2 diabetes mellitus attending a tertiary care hospital and to check the association of perceived social support and diabetic self-management practice.

Problem Statement

Type 2 diabetes mellitus is a serious public health issue with lifelong treatment demands, which can be managed with proper self-care. People with diabetes should be able to manage their condition, including taking their medication as directed, maintaining their diet, exercising regularly, maintaining blood sugar levels, taking care of their feet and routine follow-up visits. But, for many patients, it is hard to sustain these recommended self-management behaviors. The level of social support received from family members, friends, and other significant individuals is a key determinant in motivating patients to practice their diabetes self-care. Inadequate perception of social support can lead to poor treatment adherence, ineffective self-care behaviors, poor disease control and a higher risk of complications. Although diabetes mellitus type 2 is becoming a common affliction in Pakistan, evidence on this correlation is scarce locally between perceived social support and self-management practices of the patients attending tertiary care hospitals. The purpose of this study is, therefore, to evaluate the perceived social support and self-managing behaviors of patients with type 2 diabetes mellitus and to find out the relationship between these two factors.

Research Gap

Although numerous studies have examined perceived social support and diabetes self-management practices among patients with Type 2 Diabetes Mellitus, most have investigated these variables independently or have focused primarily on clinical outcomes such as glycemic control and treatment adherence. Comparatively, fewer studies have explored the relationship between perceived social support and self-management practices within the same population. Furthermore, evidence from Pakistan remains limited, particularly in Sindh province, where little research has been conducted among patients attending tertiary care hospitals. This study seeks to address this gap by providing comprehensive evidence on the relationship between perceived social support and self-management practices among patients with Type 2 Diabetes Mellitus attending Liaquat University of Medical and Health Sciences (LUMHS) Hospital, Jamshoro, and its affiliated hospitals in Hyderabad.

Significance of the Study

Type 2 diabetes mellitus remains a significant burden for people, families and health services globally. Medical management is not all that is needed to make good diabetes management; patients must be able to engage in effective practices of self-management. Perceived social support has been recognized as an important factor influencing patients' motivation and adherence to recommended self-care behaviors. Though, few international studies have found positive correlation between perceived social support and diabetes self-management, but limited studies have been performed in Pakistan especially in tertiary care hospitals. This knowledge will allow health care providers to pinpoint patients who may need more social support and design interventions which would help increase compliance with diabetes care recommendations. The results of this research can help in enhancing patient education, supporting families, and providing community resources, all of which will help to better manage diabetes and prevent complications.

Research Objectives

General Objective

The aim of the present study was to evaluate the level of perceived social support and diabetes self-management behaviours of Type 2 DM attending a tertiary care hospital and to find correlation between perceived social support and diabetes self-management behaviours.

Specific Objectives

1. To determine the extent to which type 2 diabetes mellitus patients experience social support.
2. To evaluate the self-management skills of people with type 2 diabetes mellitus patients.
3. To assess the relationship between perceived social support and self-management behaviors among people with T2DM.

Literature Review

Diabetes mellitus is a common chronic non-communicable disease and a significant problem for the health care system due to the high prevalence and the chronic complications associated with it. Managing type 2 diabetes mellitus is more than just pharmacological management; it is vital that patients can carry out the correct self-management practices in their normal daily routine. These activities involve taking medication, eating healthily, exercising regularly, checking blood glucose, caring for the feet and other foot care activities, and routine visits with health care providers. Thus, diabetes control requires ongoing patient engagement and dedication.

Diabetes is a physically, emotionally and socially challenging condition to manage. Limited knowledge, financial limitations, a lack of motivation, and a lack of support from family and society are all factors that can make it difficult for many patients to adhere to recommended self-management behaviors. Of these, perceived social support is a significant psychosocial characteristic that can affect patients' trust, motivation and compliance with diabetes care guidelines. Positive health behaviors and better long-term disease management can be achieved with support from family, friends and significant others.^{3,25}

Pakistan is facing an increasing burden of Type 2 diabetes mellitus in low and middle-income countries (LMI countries) and has seen a steadily increasing incidence of the disease. Although medical management is improving, poor self-management is still a major contributor to glycemic control and diabetes complications. Thus, knowing how perceived social support relates to diabetes self-care is crucial to optimizing the patient's outcomes and to designing broader-based diabetes care programs. The literature reviewed in this chapter addresses the perceived social support, diabetes self-management practices and the relationship of perceived social support and diabetes self-management practices both at international and in the Pakistani context.^{26,27}

The prevalence of diabetes is increasing at an alarming rate in low- and middle-income countries, including Pakistan, and is exacerbating the psychological and social burden. Prevalence of type 2 Diabetes is high, particularly in the urban population, with millions of adults suffering from type 2 Diabetes. Type 2 diabetes is the most common type of diabetes, and there is an urgent need to look at not only biomedical control of the condition, but also psychological distress and coping strategies among those with the condition. In the context of the above, the following sections will discuss the literature regarding psychological distress, emotional diabetes issues, and coping among young adults with diabetes.^{12,28} In this context, the following sections review existing literature on psychological distress, diabetes-related emotional challenges, and coping mechanisms among young adults living with diabetes.

Social support and diabetes self-management are two key factors of successful diabetes management. Perceived social support is the belief that family members, friends and significant others will provide emotional, informational and practical help when needed. Support can help boost patients' confidence, coping skills, and adherence to recommended treatment plans. Patients who feel supported are generally more inclined to take action to manage their condition and keep healthy lifestyle behaviors.⁷ Diabetes-related stigma is a social factor that can cause psychological stress and burden. Public use of insulin and/or monitoring can be a cause of shame, self blame and social exclusion for individuals, potentially affecting emotional well-being, self-management and quality of life.²⁹

Self management practices are viewed as the basis for successful type 2 diabetes management as diabetes is a condition where patients must make decisions every day that directly affect the outcome of the disease. Commitment, discipline and constant motivation are necessary for keeping patients at recommended self care behaviors. Patients who are diligent about taking their medicine, eating a balanced diet, exercising regularly, keeping a close check on their blood sugar and follow-up appointments have a better chance of controlling their blood sugar and preventing diabetes-related complications. Several factors, however, affect the effectiveness of the practices such as health literacy, socioeconomic status, family involvement, accessibility to health care, and perceived social support. These factors should be understood to enhance diabetes management and health outcomes.^{12,38}

Methodology

Study Design

The descriptive cross-sectional study design was used to evaluate the perceived social support and self management practices of T2DM patients in a tertiary care hospital. This design was deemed to be suitable as the researcher can collect data at one time for both variables and can determine relationship between perceived social support and diabetes self-management without changing variables in this study. It also offers a more efficient way to describe the characteristics of the study population and to uncover current associations.

Study Setting

The study was carried out in the outpatient clinics of diabetes at Liaquat University of Medical and Health Sciences (LUMHS) Hospital, Jamshoro and Liaquat University Hospital, Hyderabad. The tertiary level hospitals offer specialized care to a big population of diabetes patients from urban, semi-urban and rural areas of Sindh. The Diabetes clinics provide routine follow-up consultations, blood glucose monitoring, diabetes medication management, diabetes education and counseling. The clinics have a wide socioeconomic and educational catchment area and are therefore appropriate as a context to examine the perception of social support and self management of type 2 diabetes mellitus among patients. Patients attending the outpatient clinics at regular intervals, helped to recruit participants and provided a suitable setting for gathering valid information by using a structured questionnaire in face-to-face interviews.

Study Population

For the study the authors selected adult diabetic patients attending the diabetes out patient department of Liaquat University of Medical and health sciences, hospital Jamshoro and Liaquat University hospital, Hyderabad. The participants included both the male and the female patients receiving treatment for type 2 diabetes and attending regular follow-up visits during the study period.

Inclusion Criteria

- Individuals who have a physician's diagnosis of Type 2 Diabetes Mellitus.
- 18 years of age or older.
- Both male and female patients.
- Patient visits to the Diabetes Out Patient Clinics during the study period.
- Patients willing to provide written informed consent.

Exclusion Criteria

- Patients who have been diagnosed with Type 1 Diabetes Mellitus.
- Patients who were unable to be interviewed due to their critical condition.
- Patients who are cognitively impaired and unable to communicate.
- Patients who did not agree to participate.

Sample Size

A sample size was calculated using the formula for a single population proportion, assuming a prevalence for psychological distress among persons with diabetes. The following parameters were used to calculate the sample size:
Confidence level: 95%

Margin of error: 5%

Estimated prevalence: 17%

Sampling Technique

A non-probability convenience sampling technique was used to recruit study participants. All consecutive patients attending the diabetes outpatient clinics who met the inclusion criteria and consented to participate over the study period were recruited until the sample size of 217 patients was reached.

Research Instrument

A structured questionnaire with three parts was used to gather data. This section covers socio-demographic and clinical characteristics. This section is on socio-demographic and clinical characteristics. This section has been created by the researcher to gather baseline demographic and clinical data.

Validity of Instrument

Content validity was ensured by reviewing the questionnaire with nursing education experts, senior clinical nurses, and research supervisors. Minor modifications were incorporated to improve clarity, relevance, and cultural appropriateness while preserving the original constructs measured by the standardized instruments.

Pilot Study

Prior to the main data collection, a pilot study was conducted to assess the clarity, relevance, comprehensibility, and feasibility of the questionnaire designed to measure perceived social support and self-management practices among patients with Type 2 Diabetes Mellitus. The pilot participants possessed characteristics similar to those of the target study population but were excluded from the final sample of 217 participants. Feedback obtained during the pilot study led to minor modifications in the wording, sequence, and layout of the questionnaire to improve clarity and ease of understanding. The pilot study confirmed that the questionnaire was appropriate for use in the main study.

Data Collection Procedure

Permission was taken from the administration of Liaquat University of Medical and Health Sciences Hospital, Jamshoro and Liaquat University Hospital, Hyderabad after getting ethical approval. Patients attending diabetes outpatient clinics during their routine follow-up clinic visits were approached. The researcher clearly and simply explained the purpose and objectives of the research. The informed consent form was signed by the patients who were willing to participate. The structured questionnaire was used to conduct face to face interview. There were about 15-20 minutes needed to finish each interview. All completed questionnaires were checked for completeness and accuracy as soon as they were received for data entry.

Ethical Considerations

Before the study was started, ethical approval was secured from the Ethical Review Committee (ERC) of Liaquat University of Medical and Health Sciences (LUMHS), Jamshoro. All participants gave written informed consent prior to data collection. All participants were told that the study is voluntary and they can drop out of the study at any time without any consequences. The confidentiality and anonymity of the participants were carefully respected during the study. No personal information was taken on the questionnaire. The data gathered were only for research purposes. The ethical guidelines set by the institution were adhered to during the study.

Table 1. Variables Included in the Study

Variable Category	Variables
Demographic Variables	Age, Gender, Marital status, Educational level, Occupation, Monthly income, Duration of diabetes, Type of treatment, Diabetes-related complications (Yes/No)
Independent Variable	Perceived Social Support
Dependent Variable	Diabetes Self-Management Practices

Table 2. Operational Definitions

Variable	Operational Definition
Type 2 Diabetes Mellitus	A long-term metabolic condition that is diagnosed by a doctor with high blood sugars from insulin resistance, decreased insulin production or a combination of the two.
Perceived-Social Support	The extent of emotional, informational and practical support that patients perceive from family members, friends and others. It will be assessed with the Multidimensional Scale of Perceived Social Support (MSPSS).
Self-Management Practices	The daily behavior that patients undertake to effectively manage their type 2 diabetes mellitus, such as taking medication, maintaining healthy diet, exercising regularly, monitoring blood glucose, managing their foot health, and attending follow-up appointments. A structured self-management questionnaire will be used to assess self-management practices.

Table 1. Demographic Characteristics of Participants

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	18–25	47	21.7
	26–35	74	34.1
	36–45	58	26.7
	46 years and above	38	17.5
Gender	Male	96	44.2
	Female	121	55.8
Marital Status	Single	38	17.5
	Married	155	71.4
	Divorced/Widowed	24	11.1
Qualification	No Formal Education	29	13.4
	Primary	52	24.0
	Secondary	81	37.3
	Higher	55	25.3
Occupation	Government Employee	36	16.6
	Private Employee	47	21.7
	Business	33	15.2
	Housewife	69	31.8
	Others	32	14.7

Table 1 presents the socio-demographic characteristics of the 217 participants included in the study. The age distribution shows that the largest proportion of participants belonged to the 26–35 years age group (34.1%), followed by 36–45 years (26.7%), while 21.7% were aged 18–25 years and 17.5% were 46 years and above. This indicates that the majority of respondents were young to middle-aged adults living with Type 2 Diabetes Mellitus.

Regarding gender, female participants constituted 55.8% of the study population, whereas 44.2% were males, indicating a slightly higher participation of females in the study.

With respect to marital status, the majority of participants were married (71.4%), followed by single (17.5%), while 11.1% were divorced or widowed. This suggests that most respondents had family support, which may positively influence diabetes self-management and adherence to treatment.

Educational status showed that 37.3% of the participants had secondary education, followed by 25.3% with higher education, 24.0% with primary education, and 13.4% had no formal education. These findings indicate that most participants possessed at least a basic level of education, which may facilitate understanding of diabetes management instructions.

In terms of occupation, the highest proportion of participants were housewives (31.8%), followed by private employees (21.7%), government employees (16.6%), business owners (15.2%), and others (14.7%). The occupational distribution reflects the diverse socioeconomic backgrounds of patients attending the diabetes clinic.

Overall, the demographic profile indicates that the study population was predominantly composed of young to middle-aged, married, female patients with secondary-level education, representing a diverse occupational background. These characteristics provide an appropriate basis for assessing perceived social support and diabetes self-management practices among patients with Type 2 Diabetes Mellitus. **(Table 01)**

Table 2. Perceived Social Support among Patients with Type 2 Diabetes Mellitus (N = 217)

Domain	Mean	SD
Perceived Social Support	4.12	0.61

The overall mean score for perceived social support was 4.12 ± 0.61 , indicating that most participants reported a high level of support from their family members and friends. The relatively high mean reflects positive perceptions regarding emotional, informational, and practical support, while the low standard deviation demonstrates consistency in participants' responses. These findings suggest that the majority of patients perceived adequate social support, which may positively influence adherence to diabetes care and long-term disease management. **(Table 2)**

Table 3. Self-Management Practices among Patients with Type 2 Diabetes Mellitus

Domain	Mean	SD
Diabetes Self-Management Practices	4.08	0.58

The overall mean score for diabetes self-management practices was 4.08 ± 0.58 , demonstrating a satisfactory level of self-care among the participants. Most patients reported adherence to recommended diabetes management practices, including regular follow-up visits, medication compliance, blood glucose monitoring, healthy dietary habits, physical activity, and foot care. The relatively low standard deviation indicates that self-management behaviors were consistently practiced across the study population. These findings suggest that patients attending the tertiary care hospital generally exhibited good diabetes self-management practices. **(Table 3)**

Table 4. Association between Perceived Social Support and Diabetes Self-Management Practices

Variables	Mean $\pm$ SD	r	p-value
Perceived Social Support	4.12 $\pm$ 0.61		
Self-Management Practices	4.08 $\pm$ 0.58	0.53	<0.001

Pearson's correlation analysis demonstrated a moderate positive correlation between perceived social support and diabetes self-management practices ($r = 0.53$, $p < 0.001$). Patients reporting higher levels of perceived support from family and friends were more likely to demonstrate better adherence to recommended diabetes self-management behaviors. This finding indicates that social support plays a significant role in promoting effective self-care among patients with Type 2 Diabetes Mellitus. **(Table 4)**

Discussion

These results are in line with the previous studies conducted which concluded that prevalence of Type 2 Diabetes Mellitus was higher among middle-aged and females at tertiary care hospitals. Demographic distributions similar to that reported here have been reported in other developing countries of the world, such as Pakistan and other countries,

where the prevalence of diabetes is higher among those who are married and those with poor education status, due to lifestyle and socioeconomic status.⁴²

In the present study 217 patients with Type 2 Diabetes Mellitus from the tertiary care hospitals at Jamshoro and Hyderabad were included. Most participants were between the ages of 35-54 years (72.4%), indicating that diabetes care is mainly provided to middle-aged people. Of the female participants, 61.3% were female; and 77.0% of the women were married. The majority of the participants had primary education (43.8%) with 48.8% of the participants being in a low income group.

These findings are comparable with the previous studies done which reported that the prevalence Type 2 Diabetes Mellitus was higher in middle-aged and females visiting tertiary care hospitals. Similar demographic distribution has been observed in other developing countries of the world, such as Pakistan, where prevalence of diabetes is higher in married people and those with poor educational status, due to lifestyle and socioeconomic status.⁶

One of the primary outcomes of this study was participants' perceptions that they had a considerable amount of social support from family and friends. The majority of respondents, over 80%, felt that family members tried to support them, offered emotional support and were available when they needed it. Pupils' reporting of provision provided by friends was also reported as positive.¹⁸

The perceived social support score had a high mean score which means that most of the respondents were confident that they received sufficient emotional and practical support in their care for diabetes. Few variations of standard deviation were found in the answers, with a fairly consistent response. These results are in line with other studies that found family support to be one of the best predictors of successful diabetes management. But when it comes to the management of chronic diseases, family involvement is regarded as the backbone of the management, and studies with the aid of Multidimensional Scale of Perceived Social Support (MSPSS) have shown similar results, that is a patient who has received more support from his/her family and friends had more confidence in the management of diabetes and better adherence to treatment guidelines.^{5,27}

Generally, the level of perceived social support was positively related to the level of self-management practices. Overall, there was a positive association between perceived social support and self-management practices.

The statistically significant association between perceived social support and diabetes self-care behaviors was the most significant result of this study. Patients who indicated that they received more support from friends and family members were also significantly more likely to be taking their medication, eating foods, being physically active, monitoring blood glucose, caring for their feet, and attending routine follow-up visits ($p < 0.05$).^{16,33}

In addition, perceived social support was significantly related to marital status, the duration of diabetes diagnosis and complications from diabetes, indicating that there is some social and clinical influence on the individual's perception of social support.

The findings are in accordance with Social Support Theory that suggests all types of social support (emotional, informational, and practical) are helpful for health-related behaviors. The study results have been echoed in other studies carried out in Pakistan by Baig et al., Mayberry et al. and other international researchers, which stated that there was a strong link between family involvement and diabetes education, treatment compliance and long-term diabetes management.^{4,40}

The results of the present study indicate that the management of diabetes should go beyond the use of a drug and be supplemented with psychosocial support. Initiatives for family education should involve family members; peer and patient support should be encouraged; patient counseling services should be enhanced. Offering psychosocial interventions as part of the standard diabetes care may be advantageous with regard to diabetes treatment adherence, diabetes self-management and prevention of diabetes complications.¹

The findings are consistent with the International Diabetes Federation and American Diabetes Association (ADA) recommendations for diabetes care that is centered on the patient and involves the family in a comprehensive program of diabetes management.¹²

Conclusion

The present study assessed perceived social support and self-management practices among patients with Type 2 Diabetes Mellitus attending a tertiary care hospital. The findings revealed that the majority of participants perceived high levels of support from their family members and friends and demonstrated satisfactory diabetes self-management practices. A statistically significant positive relationship was observed between perceived social support and self-management behaviors, indicating that patients who perceived greater emotional and practical support were more likely to adhere to recommended diabetes care practices, including medication adherence, healthy dietary habits, regular physical activity, blood glucose monitoring, and follow-up visits. These findings highlight the important role of social support in promoting effective diabetes self-management and suggest that strengthening family involvement

and supportive social networks can contribute to improved treatment adherence and better long-term health outcomes among patients with Type 2 Diabetes Mellitus.

Based on these findings, healthcare professionals should routinely assess patients' perceived social support during diabetes clinic visits and actively encourage family participation in diabetes education and counseling. Nursing education should emphasize the importance of family-centered care, patient counseling, and self-management support to prepare future nurses for managing chronic diseases effectively. Hospitals should develop structured diabetes education and counseling programs that involve family members and promote multidisciplinary support services to strengthen patients' self-management abilities. Future research should include multicenter and longitudinal studies to further examine the relationship between perceived social support and diabetes self-management and evaluate the effectiveness of family-based educational and psychosocial interventions in improving long-term diabetes outcomes. The findings of this study reinforce the importance of perceived social support as a key factor influencing diabetes self-management among patients with Type 2 Diabetes Mellitus. Enhancing emotional, informational, and practical support through family involvement and healthcare interventions has the potential to improve patients' confidence, treatment adherence, self-care behaviors, and overall quality of life.

This study has certain limitations. The cross-sectional study design does not permit the establishment of causal relationships between perceived social support and diabetes self-management practices. Since the study was conducted in a single tertiary care hospital, the findings may not be generalizable to other healthcare settings or populations. Furthermore, data were collected using self-reported questionnaires, which may be influenced by recall and response bias. Finally, only patients with Type 2 Diabetes Mellitus were included; therefore, the findings may not be applicable to individuals with other types of diabetes.

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