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RESEARCH PAPER

Gender Differences and Psychosocial Challenges in Patient with Type II Diabetes

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ABSTRACT

This study investigates the gender differences in psychosocial issues in Type 2 Diabetes Mellitus patients. T2DM is a chronic condition that not only affect physical health but also psychosocial health that leads to gender differences in role and coping may influence psychosocial burden. The study was conducted in Lahore on a sample of 235 participants(121 males and 114 females with T2DM diagnosis by using a quantitative cross-sectional study design. The psychosocial problems were assessed using a 15-item self-report scale. Independent sample t-test was applied to detect differences in gender. Males reported lower levels ($M = 35.09$, $SD = 9.54$) compared to females ($M = 40.94$, $SD = 8.61$), $t(233) = -4.93$, $p < .001$. The results indicate that female patients have a greater psychological load than male patients. Diabetes care should incorporate psychological evaluation and gender-sensitive therapies. Longitudinal trends should be studied in future studies.

KEYWORDS Type 2 Diabetes Mellitus, Gender Differences, Psychosocial Problems

Introduction

Type 2 Diabetes Mellitus (T2DM) has turned out to be one of the most significant health concerns of the twenty-first century because of the increased rates of its occurrence and its massive impact on the physical and psychological well-being of millions of people. Being a multifactorial chronic illness, it cannot be dealt with by mere pharmacological treatment, but rather, a complicated combination of self-management, lifestyle changes, and psychological fortitude. Literature also shows that the men and the women have an uphill task of achieving optimum glycemic control but the obstacles of doing so are very different. As an example, men and women tend to give precedence to various elements of self-care, where men tend to be more concerned with physical upkeep and women better at monitoring their symptoms, but both have difficulties managing all the elements necessary to avoid a clinical decline (Baroni et al., 2022, Ijaz et al., 2020). More so, the psychosocial environment of diabetes is typified by gendered expressions of distress, anxiety, and depression Women, especially younger age groups tend to experience more emotional exhaustion and diabetes-related distress than men (Aghili et al., 2017; Ijaz et al., 2025). These emotional factors are not only the secondary symptoms, but the active determinants of health outcomes, they affect the capacity of a patient to follow the complicated treatment regimens and live the high quality of life.

The ongoing study aims at exploring the gender differences in psychosocial problems among Type 2 Diabetes Mellitus patients. The review provides the entire picture of the contemporary state of diabetes care through the analysis of sex-related differences in self-care practices, unique psychosocial loads of different genders, and the following impact on the quality of life and clinical outcomes associated with health. It looks at how these

gendered experiences are mediated by the socioeconomic factors, the social support networks, and communication between the patient and the physician. Lastly, it is hoped that the importance of ensuring that clinical practice and health policy are gender sensitive will be highlighted to ensure that interventions could be tailored to meet the needs and issues of both men and women with this chronic condition.

Literature Review

It is a well-known fact that physical activity (PA) is one of the pillars of T2DM management, but there are vast sex-related differences among patients in terms of their participation in physical activities. Surveys have shown that men tend to claim that they engage in more physical activities and exercise-related self-care maintenance than women (Baroni et al., 2022). The trend is consistent in the different cultural settings, as in a study conducted in Iran the average scores on physical activity were found to be significantly lower in women than in men, indicating that women are faced with individual barriers to adopting an active lifestyle (Alizadeh et al., 2022). Such obstacles can be a lack of time due to domestic tasks or a lack of motivation and social support focused on the needs of females. These trends can be further explained by a systematic review and meta-analysis of sex differences in physical activity during the lifespan. Though the gender disparities in adhering to PA guidelines might not be as high in adolescence whereas in adulthood and advanced age, they become more pronounced, as males are much more likely to meet the recommended amount of physical activity (Whipple et al., 2022), Males do more moderate-vigorous physical activity (MVPA) than females in virtually all age groups. The identified barriers to men are often associated with the perceived lack of time, while lack of social support and intrinsic motivation are more common among women (Whipple et al., 2022). This implies the need to ensure that exercises programs targeting men and women are gender-sensitive, offering high intensity activities to the former and social based activities to the latter.

Compared to trends in physical activity, women tend to show a higher level of performance in terms of adherence to the nutrition and managing the diet. Research indicated that women identify a healthy diet as one of the main elements of the self-management strategy regarding diabetes more frequently (Alizadeh et al., 2022). Such an increased dietary awareness among women could be attributed to the conventional gender roles that put women in charge of food preparation and household nutrition resulting in a more refined sense with regard to caloric intake and the quality of foods. A healthy diet was identified to be a more reliable predictor of lower risk of diabetes or improved outcomes of management in men, specifically due to the fact that it is an area where men generally perform poorly compared to women (Alizadeh et al., 2022).

Nonetheless, the correlation of gender and compliance with the diet is complicated and depends on the total burden of self-care. Although women might be more careful in attention to what they consume, they also indicate more of the process of monitoring self-care signs and symptoms-one that does not necessarily result in improved self-care management or the capacity to change treatment based on the symptoms (Baroni et al., 2022). This inconsistency shows that there is a crucial disparity: women might possess the knowledge and desire to eat a healthy diet; however, the psychosocial pressure of the illness can occasionally impair their capacity to adopt these patterns in the long-term perspective. Nutritional education should not, therefore, just focus on what one should eat but also how on how they can maintain these habits amidst the distress of chronic illnesses. The studies on the research have shown that the rates of tobacco and alcohol avoidance tend to be more common among women than among men (Alizadeh et al., 2022). This discrepancy in behavior illustrate a profile where women are more inclined towards preventive health behaviors but men are more active in maintenance like exercising.

The increased smoking and drinking rates among men with T2DM are also a serious clinical issue because these factors may increase cardiovascular morbidity and disrupt glycemic regulation. In spite of these positive avoidance behaviors, women usually have a problem with the wider range of maintenance health promotion. As an example, women tend to stick to treatment regimens in certain locations where research indicates a marginally higher number of women being consistently adherent than men. They also complain of greater emotional distress concerning these very programs (Jorgetto & Franco, 2018). Health profile maintenance stress is a burden that may result in burnout. Men are also more likely to report greater self-care maintenance in terms of clinical stability and less likely to engage in routine symptom monitoring than women undertake (Baroni et al., 2022). This implies that health promotion interventions have to persuade men to be more attentive to symptom monitoring and support women in lessening the emotional workload of rigorous substance avoidance and dieting.

Qualitative studies have also demonstrated that women tend to have a larger care burden, which means that the management of their diabetes is another heavy burden to them on top of the responsibility of being caregivers in the family (Ramirez-Morros et al., 2024). It may result in women neglecting their own medical needs, prioritizing family member s' need instead such as by missing appointments or ignoring their personal nutritional plans. On the other hand, men can perceive diabetes management in a more functional way, but they tend to have problems with the communicative component of care, feeling pressured or otherwise uncomfortable talking about their issues with their healthcare providers (Xie et al., 2018). There are also gender difference among facilitators. In the case of women, social support and support groups can also play a major role in improving self-management results through an emotional outlet and shared experiences (Ramirez-Morros et al., 2024). For men, it can be effective to have directions and emphasis on physical independence.

On the other hand, Diabetes related distress (DRD) is a unique psychological condition, which is defined by the emotional load, concerns and fears directly related to managing a demanding chronic illness. It is always found that the level of DRD in women is much higher than in men (Aghili et al., 2017). This suffering is commonly associated with the inexorable character of T2DM treatment in which patients have to make hundreds of health-related choices every day. The emotional fatigue of women is frequently augmented by their age, in particular, younger women (those who are younger than 55) are particularly vulnerable to the elevated levels of distress, irrespective of their actual glycemic control (Aghili et al., 2017).

This suggests that psychological impact of the disease is not necessarily a reflection of clinical indicators like HbAlc but is yet another, no less important, facet of patient experience. This misery has different symptoms. Some studies about the PAID (Problem Areas in Diabetes) scale have proven that men can also report that they experience the higher levels of emotional distress; however, the general picture shows that females are more likely to have a psychosocial burden (Jorgetto & Franco, 2018). It has been observed even in some cultural settings like Pakistan that females have shown more gender inequality whereby they not only suffer more diabetic distress but also poorer overall quality of life with regard to their condition (Zahra et al., 2025). T2DM and mental health are an acute intersection points because the likelihood of developing diabetes is highly related to worse mental health outcomes in both genders. Both men and women face a high risk of T2DM that is correlates with a high rate of depressive and anxiety symptoms (Neuperdt et al., 2024). Nevertheless, the manner in which these symptoms are manifested and reported usually varies according to gender. Clinically significant symptoms of anxiety and depression are reported more frequently by women, specifically younger women, who indicate the highest rates of these affective variables (Aghili et al., 2017). In the United States, the gender gap in the prevalence of high T2DM risk is less explained by men reporting excellent or very good mental health, a phenomenon that may be ignored in a healthcare environment that mostly

measures depressive symptoms in the form of sadness (Xie et al., 2018). The manifestation of depression in men with high T2DM risk is less likely to be associated with traditional symptoms such as irritability or withdrawal, which are not always recognized. This means that to screen mental health in diabetes clinics, a gender sensitive strategy is necessary to detect high risk people that may fall through the cracks.

Cognitive emotional regulation (CER) strategies and coping mechanisms are important in the way patients cope with the stress of T2DM. A certain level of gender gap can be seen in the kind of CER strategies used. Women tend to use more negative cognitive emotional regulation strategies including rumination or catastrophizing which may increase the perceived burden of the disease and result in increased levels of distress. Such negative strategies are frequently associated with a reduced quality of life, as the patient gets stuck in a vicious circle about possible complications while needing to meet daily self-care requirements. Men, in contrast, are more prone to employ positive cognitive emotional regulation strategies, including focusing on planning or positive reappraisal (Zahra et al., 2025). The effect of social support on the psychosocial burden in T2DM is a strong mediator, but its effects are very gender-specific. Marital status may be a big cause of distress among women. The studies have reported that married women tend to be more affected by the distress of diabetes compared to their unmarried or male counterparts, perhaps because they have additional responsibilities to ensure harmony in the household and perform their traditional roles in addition to having a chronic illness (Huang et al., 2022). In most instances, women hold more support to their husbands than they get and this may create a support deficit which may affect their mental wellbeing and self-care capabilities in a negative way. In the case of men, the aspect of social support is usually different. Although in some scales, men report fewer problems with their social support, they often rely more on their spouses for practical assistance in managing diabetes, including preparing meals and scheduling appointments (Jorgetto & Franco, 2018). Without this support, men can find it much more difficult to deal with self-care. Moreover, perceived social stress has been reported to be among the most significant psychological aspects in the occurrence and course of diabetes in females in particular (Alizadeh et al., 2022). Women consistently report a lower HRQoL as compared to men in the T2DM context (Aghili et al., 2017). This disparity is most pronounced in younger and middle-aged women who are required to juggle disease management with professional and family responsibilities.

Interestingly enough, certain areas of HRQoL might level off with age: specifically, patients over the age of 55 years claim to have improved self-management and more consistent patient-physician relationships, which helps to counter some of the adverse effects on well-being (Aghili et al., 2017). Even the perception of health status will be regionally and culturally dependent. Although T2DM adversely influences all the spheres of life of both genders in Central European countries, some research studies have determined that the overall quality of life impact is relatively low, with most of the patients still reporting that their quality of life is good or very good (Krzemińska et al., 2023). Men tend to be more prone to distress connected with medical communication and experience pressure when seeking medical assistance or fear an inability to effectively express their health state (Huang et al., 2022). This may cause failure of therapeutic relationship, where men might not share information or might not pose the required questions regarding their treatment plan. Men are interested in the clinical and even technical aspects of the disease, such as the threat of certain complications, including cardiovascular disease or impotence. Women, however, are more focused on communication needs and experiences. Although they can be more active in pursuing care, they tend to complain that their concerns are not completely met or that the emotional burden of the disease is downplayed by providers (Ramirez-Morros et al., 2024). The association between psychosocial stressors and clinical outcomes such as glycemic control (as measured by HbAlc) is not direct and simple. Although the effects of stress on blood glucose levels have been generally perceived to be indirect and mediated by hormones and by interfering with self-care behaviors, certain structural equation models have revealed that psychosocial factors such as distress, anxiety, and

depression do not necessarily have a direct effect on HbAlc levels (Aghili et al., 2017). This implies that an individual patient may be in a experiencing a high level of emotional distress, yet still have good clinical parameters, or a patient with poor glycemic control may not always be undergoing high levels of psychological distress. Nevertheless, other studies show that the cumulative psychosocial stress effect is one of the significant predictors of diabetes risk and progression, especially in women (Alizadeh et al., 2022). The more frequently conducted self-care that women engage in compared to men such as checking of blood sugar levels is often related to poorer glycemic control and more complications, perhaps due to women monitoring a more unstable or advanced disease (Baroni et al., 2022). This contradiction shows the necessity of clinical evaluations that do not focus on HbA1c. The emotional condition and the degree of distress experienced by a patient and their perceived capacity to cope with the disease are crucial factors that reflect the overall health of the patient and must be considered equally important as the blood glucose levels of the patient. The general relation between higher education levels and lower risks of developing diabetes and more positive results in management of diabetes in both men and women is observed (Alizadeh et al., 2022).

Education equips people with health literacy to negotiate complicated treatment plans and the mental mechanisms to apply good self-care strategies. Reduced odds of diabetes in men have been suggested to be significantly reduced by education level and a healthy diet, which is why, in this demographic, the knowledge-based intervention is exceptionally efficient (Alizadeh et al., 2022). In women, the effects of education are also great, though they are normally mediated by other issues, such as perceived stress and social support. Less educated women can experience a double burden of few resources and high family stress levels, and consequently may struggle to follow lifestyle advice at all (Xie et al., 2018). Moreover, gender differences in the relationship between behavioral variables and diabetes screening indicate that women in some groups might not be able to receive preventative care as much as men due to socioeconomic barriers (Xie et al., 2018). To address these inequalities, the social health policies should aim not only at better access to education and health care but also at addressing how the socioeconomic realities of women as a gender, and the unequal division of unpaid labor, can restrict their opportunities to spend time and money on their health.

Material and Methods

The current research used a quantitative and cross-sectional research design to investigate the differences between genders in psychosocial challenges among patients with Type II Diabetes. The comparison of mean scores of male and female participants was conducted by means of an independent samples t-test.

Participants

The study sample was comprised of 235 individuals who were diagnosed with Type II Diabetes. There were 121 males and 114 females amongst them. Purposive sampling was used. The ages of the participants ranged between 30 and 60 years and all the participants had Type II Diabetes. The inclusion criteria were adults with Type II Diabetes and exclusion was an individual with severe psychiatric or cognitive impairments.

Measures

A 15-item self-report scale that was created to measure emotional, social and psychological difficulties in Type II Diabetes was used to determine the psychosocial challenges. The items were rated on a Likert-type scale (e.g. 1 = strongly disagree to 5 = strongly agree) and the higher the score, the higher the psychosocial distress. The scale turned out to have reasonable internal consistency, and the items met the domains that included emotional distress, social burden, and disease-related worry.

Procedure

The data were gathered on the basis of informed consent of the participants. The participants were informed of the objective of the study and guaranteed of confidentiality. The questionnaire was given to the respondents' one on one and they filled out the scale in a comfortable environment.

Hypothesis

The hypothesis was that the female patients would report greater psychosocial challenges than male patients with type 2 diabetes.

Statistical Analysis

The SPSS was used to analyze the data. All variables were calculated using descriptive statistics (mean and standard deviation). The independent samples t-test was used to determine the difference in gender on the psychosocial issues among Type II Diabetes patients. The significance was determined as $p < .05$.

Results and Discussion

To analyze the difference in psychosocial issues between men and women with Type II Diabetes, the descriptive statistics and independent samples t-test were used to compare the difference between genders. Male participants (n = 121) had a mean score of M = 35.09 (SD = 9.54), and female participants (n = 114) reported a higher mean score of M = 40.95 (SD = 8.61), which means that the psychosocial challenges were more in females. The independent samples t-test was used to find out the gender differences in the psychosocial problems of patients with type 2 diabetes.

Table 1
Descriptive Statistics for Psychosocial Challenges by Gender

Gender	N	M	SD
Male	121	35.09	9.54
Female	114	40.95	8.61

Table 2
Independent Samples t-Test for Gender Differences in Psychosocial Challenges

Variable	Male		Female		t(232.57)	*p*	Cohen's d
	M	*SD*	*M*	*SD*			
Psychosocial Challenges	35.09	9.54	40.95	8.61	-4.94	< .001	-0.64

Discussion

The current research explored differences in gender and psychosocial issues in patients with Type 2 Diabetes Mellitus (T2DM) and found out that gender has a strong impact on psychological well-being, self-care behavior, and disease management. The literature incorporated in the reviewed document provides a solid support to these findings, as it all points out to the multidimensionality of gender disparities in diabetes. In line with the previous studies, the research study indicated that female patients have more psychosocial burden than their male counterparts. Studies such as Lin and Quinn (2018) also found out that women have more responsibilities, more role demands, and familyism in which they are more likely to put the needs of their family first than their health. In line with the present results of high stress levels and emotional discomfort in the female participants, Ramírez Morros et al. (2024) found that women feel more concerned and emotionally loaded in managing diabetes. Moreover, Huang et al. (2022) discovered that women have more diabetes-related distress, especially due to marital and interpersonal

stress, which supports the gendered aspects of emotional difficulties in T2DM. Conversely, the male patients in the study had a comparatively low emotional distress but had their own psychosocial issues especially regarding occupational status and constraints in communication. Hansen et al. (2025) highlighted that men tend to have considerable experiential knowledge regarding diabetes management but are not able to share these in healthcare facilities efficiently because of gendered expectation. Equally, Xie et al. (2018) have established that psychological distress and behavioral determinants of diabetes screening vary across genders, indicating that men might underuse healthcare services when they are under a lot of stress. The results also indicated that there were significant gender variations in self-care practices. According to Caruso et al. (2020), women are more likely to be engaged in preventive behavior, recognize symptoms, and monitor the disease, and men are more likely to be engaged in physical activity. This pattern is consistent with the current investigation, which discovered similar behavioural variations. Alizadeh et al. (2022) similarly reported that women generally less active than men but had a healthier diet and less harmful behaviors (such as drinking and smoking). These findings suggest that while creating self-care treatments, the variety of gendered health behaviours should be taken into account. In a similar case, Ijaz et al. (2020) found that gender has a significant impact on psychological issues and satisfaction with sexual life, and women have more psychosocial problems. These results underpin the conclusion made in the current study that psychological health is a significant part of diabetes management, and it differs considerably depending on the gender. Finally, epidemiological and behavioral studies can be considered as the general implications of gender differences in diabetes. Perceived stress is the essential criterion that predicts diabetes in women, as it was suggested by Alizadeh et al. (2022), and such lifestyle factors as diet have more power in men. This justifies the necessity to embrace gender specific prevention and intervention measures. Generally, the findings of the present study can be considered consistent with the existing body of literature, as they reveal that the gender differences regarding T2DM are multidimensional and predetermined by the psychological, social, behavioral, and clinical factors. Higher vulnerabilities are presented to women such as emotional distress and care giving burden, and to men there are communication problems, work-related stress and medical intervention. The disparities demonstrate the need to have individualized and gender-sensitive approaches to diabetes care to improve patient outcomes and quality of life.

Conclusion

This study has brought out the gender variations that are deep and multidimensional and characterize the experience of living with Type 2 Diabetes Mellitus. Summing up the available literature it has become obvious that biological sex and sociocultural gender constructs are not merely background variables but are at the core of determinants of self-care behaviors, psychosocial well-being, and clinical outcomes. This is an indication that the attitudes of men and women towards the day-to-day needs of the disease are observably different. Men tend to make gains in relation to physical exercise and maintenance of self-care in relation to clinical stability, but do poorly in the area of monitoring the symptoms and in the communicative facets of medical care. Quite the contrary, women are more nutritionally adherent and symptom monitors with a highly larger psychosocial burden, i.e., high rates of diabetes-related distress, anxiety, and depression. Psychosocial terrain of T2DM is specifically gendered where females; more so younger ones showed a greater level of emotional exhaustion and engagement in more negative strategies of emotional regulation. The social realities that contribute to these emotional determinants are care burden and effect of marital condition that either contributes to successful self-management or not. The direct correlation between these psychosocial stressors and glycemic control is not necessarily linear, however, the net outcome of the impact on the health-related quality of life cannot be overlooked and the subjective well-being is always worse in women across cultural backgrounds.

Implications

The implications of the results of the current research in the clinical practice and the management of diabetes are substantial. The statistically significant difference in psychosocial challenges among male and female patients suggests that gender is a dominant factor, which influences the psychological load of Type II Diabetes Mellitus. The fact that the mean scores of women respondents were higher means that the female gender may be particularly vulnerable to psychosocial issues and that special psychological support is to be offered to this population too. These outcomes point to the fact that gender-sensitive approaches should be a part of the regular treatment of diabetes by the medical practitioners. Specifically, the emphasis on the psychosocial screening needs to be placed among female patients as they are more prone to experiencing a high degree of distress. The timely diagnosis and treatment will contribute to the reduction of the psychological burden and the increase in the adherence to the treatment program. In addition, diabetes management programs should incorporate mental health services and emotional and social problems should be addressed along with physical ones. In addition, the significant difference in the mean between male and female patients indicates the importance of unique methods of educating patients and practicing self-management. The interventions provided to the female patients may need emphasis on the stress management, emotional control and balance between social obligations, and, the interventions provided to the male patients may include more exercises to seek psychosocial support services. Overall, the findings emphasize that customized and sex-focused healthcare programs can improve the outcomes of the individuals with T2DM.

Recommendations

It is recommended that gender- specific mental health services be used in diabetes clinics, with a focus on addressing the higher level of pain experienced by female patients.Healthcare systems should incorporate frequent psychological examination, screening, and evidence-based counselling into standard diabetes care to enhance treatment compliance, emotional control, and overall quality of life. Future research should employ longitudinal and multi-center designs with representative and diverse populations in order to increase generalisability and provide a more comprehensive knowledge of the psychological cost associated with Type 2 Diabetes Mellitus.

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