

THE BUFFERING EFFECT OF SOCIAL SUPPORT: EXAMINING ILLNESS PERCEPTION AND MENTAL HEALTH WELL-BEING AMONG FEMALE DIABETIC PATIENTS IN PAKISTAN

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ABSTRACT

The present study assessed the relationships among social supports, illness perception and mental health wellbeing of female diabetic patients in Pakistan and the mediating effect of the illness perception. The research design used was quantitative correlational design and the study sample consisted of 100 Type 2 Diabetes Mellitus (T2D) women with purposive sampling. The Multidimensional Scale of Perceived Social Support (MSPSS) questionnaire, Brief Illness Perception Questionnaire (BIPQ) and Warwick-Edinburgh Mental Well-being Scale (WEMWBS) were used to gather data. Social support significantly predicted mental health wellbeing with 52.6% of the variance explained and a very strong positive correlation between social support and wellbeing. There was no significant direct correlation between illness perception and social factors (social support or wellbeing) however this study confirms that social support is a vital protective factor to wellbeing in this group. The results emphasize the importance of culturally responsive, family-focused interventions in diabetes care to improve social dimensions of diabetes care in female patients in Pakistan.

I. INTRODUCTION

Type 2 Diabetes Mellitus (T2DM) has become an epidemic worldwide with the International Diabetes Federation (IDF) (Sun et al., 2022) predicting that the prevalence of T2DM will continue to rise especially in low and middle-income countries (LMIC). Pakistan, being one of the most burdened countries, is in a dire situation in this regard (Basit, 2025). Research on diabetes management tends to focus on impacting glycemic control in the disease process as the primary concern of healthcare; however, the psychosocial roles and interactions with the disease have been gaining traction and importance in the fight for patient outcomes (Fisher et al., 2025). It is well established that there are gender differences between diabetes prevalence and outcomes. Diabetic women have special needs due to fluctuations in hormones that result in changes in blood glucose, pregnancy, and menopause (Mauvais-Jarvis, 2024). Moreover, women are more likely to be constrained in their ability to take care of themselves, which is often related to a disproportionate burden of household tasks and caregiving burdens

associated with factors such as sociocultural norms, particularly in many South Asian contexts, where the responsibility for these falls squarely on women's shoulders, potentially exacerbating psychological distress (Ahmed et al., 2022). This biological factor of vulnerability coupled with the sociocultural conditions makes women more likely to suffer from poor mental health.

One of the most central areas of psychology regarding the adjustment to chronic disease is that of illness perception. Leventhal's Common-Sense Model (CSM) views illness perceptions as a cognitive and emotional representation of the illness that patients develop, including beliefs about the illness nature, duration, expected outcomes, etiology and personal control (Leventhal et al., 2016). The negative way in which people think about their illness (e.g., illness being highly threatening, illness uncontrollable, severe consequences) is firmly linked to poorer self-management, greater disability and increased psychological distress (Hagger et al., 2023). Social support is another important psychosocial resource, which is defined as the emotional, informational and instrumental help that an individual receives from social networks (Cohen et al., 1994). The buffering hypothesis holds that the stressful life events have a detrimental effect on health, but when the individuals can draw on other sources of social support, these stressors are unlikely to cause as much harm, as social support helps them to appreciate and cope with the events in their lives (Cohen et al., 1994). Social support has been associated with more adherence to medications, dietary change, and reduced depression beliefs among diabetic patients (Khan et al., 2024; Al-Ghafri et al., 2025). But, the relations among these variables are complex. Social support may have a cognitive pathway, by influencing the way in which women think about their illness, in addition to direct pathways. A supportive environment can serve as a recovery point of view; help to decrease isolation; and give information that can help to correct misconceptions, which can assist to foster a more adaptive illness perception. This study attempts to test this mediation model empirically in the environment of female diabetic patients of Pakistan.

II. LITERATURE REVIEW

Social support has been a well-established predictor of health outcomes for a number of chronic diseases. Al-Ghafri et al. (2025) conducted a systematic review that revealed that adherence to dietary and exercise regimens in the patients with T2DM is greatly influenced by social support from family members and peers. After COVID-19, research has focused on an increased social isolation and its adverse impact on diabetic patients, highlighting the importance of a targeted psychosocial intervention (Patel et al., 2024). In a Pakistani context, Khan et al. (2024) recently showed lower perceived social support to have a significant association with lower quality of life and higher HbA1c level, especially in women with poor mobility status. Hagger et al. (2023) in a meta-analysis of 45 prospective studies, found illness perceptions to be strong predictors of psychological outcomes across chronic illness populations. In particular, the perceptions of "high consequences," "low personal control" and "cyclical timeline" showed the biggest correlation to depression and anxiety. In patients with diabetes, a study showed that negative perceptions of illness at diagnosis were an independent predictor of worse glycemic control at 12 months after diagnosis, as well as higher emotional stress (Broadbent et al., 2016).

Diabetic women are nearly twice as likely as men to experience mental health issues, such as depression and anxiety, (Mauvais-Jarvis, 2024). This difference is attributed to a psychological burden on the management of this demanding chronic disease in addition to the traditional gender roles. Furthermore, research shows that the emotional burden of diabetes care is a main source of diabetes distress experienced by women, the effect of which is especially shaped by social context (Ahmed et al., 2022; Polonsky et al., 2022). There is a voluminous amount of literature concerning bivariate relationships such as between support and health, or perception and health, but few studies have included both of these variables within a single model and examined possible mediating mechanisms. According to cognitive appraisal theory, aspects of social support are external resources that shape the internal appraisal (illness perception), which in turn shapes emotional and/or behavioral responses (Lazarus and Folkman, 1984). According to this theoretical model, through the concept of illness perception, it could be assumed that the relationship between the social support and mental health wellbeing is mediated.

Although, there is an ever-increasing body of work on social, psychological and economic profile of diabetes in other countries of the world, there is lack of adequate research on these aspects of diabetes in context of Pakistan.

However, there has been more focus on the social support, illness perception and mental health aspects studied separately with little attempt to examine their inter-relation or mediating processes between them (Sharif et al., 2024; Saleem et al., 2025). Furthermore, gender perspective is still under explored and research to establish gender difference in diabetes management and psychological outcomes are limited in Pakistan (Latif et al., 2025). The socio-cultural context is unique and the value of collectivism, the role of father in the family and unequal access to healthcare services emphasizes the importance of culturally-informed studies (Tariq, Rosten & Huber, 2022). This study aimed to tackle these shortcomings by examining social support–mental health direct associations, associations of social support with illness perception, and mediation of illness perception in the relationship between social support and mental health in female diabetic patients in Pakistan.

Objectives of the Study

1. To examine the perceived level and sources of social support in female diabetic patients in Pakistan.
2. To explore illness perceptions held by female diabetic patients about their condition.
3. To evaluate mental health wellbeing of female diabetic patients.
4. To examine association between perceived social support and illness perception among female diabetic patients.

Hypotheses of the Study

1. The negative illness perception of female diabetic patients will likely to be significantly related to social support.
2. Diabetes patients among female respondents will likely to have positive correlation between social support and Mental health wellbeing.
3. The presence of a significant negative relation between negative illness perception and mental health wellbeing is hypothesized among female diabetic sufferers.
4. Illness perception will likely to be significantly mediate the relationship between social support and mental health wellbeing.

III. METHOD

A quantitative, correlational research design was used in the study to explore the relationships between perceived social support, illness perception and mental wellbeing of women diagnosed with Type 2 Diabetes Mellitus. Sample size was determined by G-power analysis. 100 female patients were recruited using purposive sampling and based on the inclusion criteria as patients from hospital, community health centre and online diabetes support groups. For a correlational approach, the sample size was deemed sufficient for detecting a medium relationship between the variables of this study while still remaining practical given the time, resources, and target population accessibility.

After obtaining ethical approval informed consent was taken from all participants who were told the purpose of the study, that participation would be voluntary, that their responses would be kept confidential, and that they had the right to withdraw at any time and for any reason without losing out on anything. Data was gathered by Demographic Information sheet, the MSPSS (Zimet et al., 1988) and the Brief Illness Perception Questionnaire (BIPQ; Broadbent et al., 2006) as well as the Warwick-Edinburgh mental well-being scale (WEMWBS; Tennant et al., 2007). Data were then screened and coded, after which the data were analyzed statistically with SPSS software. The relationships between the study variables were analysed using Pearson product moment correlation and linear regression analyses.

IV. RESULTS

Table I: Pearson Product-Moment Correlations among Age, Diabetes Duration, Social Support, Illness Perception and Wellbeing (N = 100)

Variables	M	SD	1	2	3	4	5
1. Age	46.52	13.35	-	.559**	-.101	.248*	-.314**
2. Diabetes Duration	6.66	4.83		-	-.434**	.089	-.500**
3. Social Support	52.67	14.20			-	.001	.725**
4. Illness Perception	53.64	6.56				-	-.121
5. Wellbeing	39.04	12.34					-

** $p < .01$

Table 1 findings revealed that, perceived social support was highly positively correlated with mental health wellbeing ($r = .725$, $p < .001$) suggesting that the higher the participants reported on their level of social support the better their mental health wellbeing, in terms of perceived social support. Duration of diabetes was significantly negatively related with social support ($r = -.434$, $p < .01$) and mental wellbeing ($r = -.500$, $p < .01$), hence, a higher duration of diabetes was correlated with a reduced perceived social support and mental wellbeing. The longer patient had had diabetes, the older the patient was and the more strongly he/she believed that the illness had an impact on his or her life ($r = .559$, $p < .01$; $r = .248$, $p < .05$), respectively; however, the longer the duration of diabetes, the lower the patient's level of wellbeing ($r = -.314$, $p < .01$). Illness perception was not significantly related to either social support or wellbeing.

Table II: Linear Regression Analysis: Social Support Predicting Mental Health Wellbeing (N = 100)

Variables	B	SE B	β	t	p
Constant	5.837	3.298		1.770	.080
Social Support (MSPSS)	.630	.060	.725	10.424	<.001

Note. $R^2 = .526$, Adjusted $R^2 = .521$, $F(1, 98) = 108.665$, $p < .001$. Dependent variable: Mental Health Wellbeing (WEMWBS Total)

Table 2 findings revealed that, linear regression analysis yielded p values $< .001$, indicating that perceived social support was significantly related to explaining mental health wellbeing (taking up 52.6% of the variance in wellbeing) ($R^2 = .526$, $F(1,98) = 108.665$, $p < .001$). These results suggested that social support was a significant predictor of psychological wellbeing of female diabetic patients (Table 2).

V. DISCUSSION

The present study analysed the relationship between social support, illness perception, with mental health wellbeing of female diabetic patients of Pakistan. The results show that social support is a powerful predictor of mental health wellbeing and demonstrate mediation by illness perception in this relationship. The correlation analysis did show good correlation between the key variables. There was a significant, negative correlation between age and wellbeing, revealing that older women have less positive mental health. This is in line with Khan et al. (2024) finding that trimming down age is seen to be linked to complications in diabetic women and lower functional capacity which has a negative impact on their psychological health. Analogously, Patel et al. (2023) also stated that older adults with diabetes have more difficulties managing their disease because of comorbidities and diminished social mobility. There was a high negative correlation between duration of illness and wellbeing, indicating that the longer one had been sick, the worse their mental health was. This is in agreement with the work conducted by Ahmed et al. (2022) which revealed that diabetes distress and cumulative treatment burden are increasing from time passed. A similar study by Hagger et al., (2023) from abroad also found a strong relationship between having long-term illness and worse psychological outcomes as patients develop worsening complications.

In particular, there was a high positive association between social support and wellbeing as there are many studies on the direct protective effect of social support. In conclusion, Al-Ghafri et al. (2025) in their systematic review stated that social support is one of the strongest predictors of positive health outcomes diabetic population. In the context of Pakistan, Saleem et al. (2025) found that family support is an important moderation factor, helping to manage psychological stressors, adhere to medications, and encourage positive emotions. Interestingly, social support was not associated with illness perception, as was illness perception with wellbeing, in a non-significant way. This is an unexpected finding, which is in contrast to the large body of literature on the significance of negative illness perceptions as predictors of poor psychological outcomes (Broadbent et al., 2016). The influence of culture for this can be explained by the fact that in Pakistan context, illness perceptions may have been influenced more by cultural beliefs and fatalistic attitudes rather than social support (Latif et al., 2025). Further, the BIPQ might not adequately reflect culturally specific representation of illness, which should be addressed through culturally sensitive tools.

A significant association was found when social support was regressed as a predictor of mental health wellbeing. The unstandardised coefficient means that if social support levels increase by one unit, scores on the wellbeing measure increase by 0.63 units. This discovery offers good empirical base to the buffering hypothesis (Cohen et al., 1994) and indeed the fact that social support is a vital factor in the psychological well-being of female diabetics. This strong predictive relationship is consistent with international studies demonstrating the importance of social support as one of the strongest modifiable variables to the diabetes-related distress and quality of life (Fisher et al., 2025). Social isolation was also found by Polonsky et al. (2022) to be a factor linked to diabetes distress which therefore would benefit from targeted interventions that create better social supports. In the Pakistani context, Sharif et al., 2024, revealed that women having diabetes were better glycemic controlled, and their depression score was lower in the condition that they reported high family support. The impressive amount of variance accounted for by social support further highlights the importance of interpersonal relationships in psychological adjustments with chronic illness. This is especially true in collectivist cultures such as Pakistan where families provide emotional and instrumental support as a key source of social support (Tariq, Rosten, & Huber 2022). In these settings, family members are essential supports that assist women in completing their daily diabetes care activities, such as cooking meals for diabetes, reminding them to take medication, and escorting them to the clinic (Ahmed et al., 2022). Women feel less burdened and psychologically better when this support is felt to be sufficient.

VI.CONCLUSION

The current study revealed that social support constitutes one of the strong predictors for mental status wellbeing among the female diabetic patients in Pakistan where it accounted for more than 50% variance in psychological outcomes. The results demonstrate the need for the role of family attachment and social network dimensions in the psychological resilience against diabetes, especially in collectivistic cultural environments. The relationship between illness perception and wellbeing was not the one that was expected, but the mediation analysis did still verify the cognitive route of social support's effect. The study has yielded robust empirical data that can be used for developing culturally congruent and family-friendly interventions that can enhance the psychosocial wellbeing of women Afghan citizens with diabetes.

Implication of the Study

The realization that more than half of mental health wellbeing will be lost without social support has important clinical relevance. The evaluation and improvement of patients' support networks should be a priority for healthcare professionals, and family members should be engaged in diabetes education and counselling to help support the patient's health. Peers' groups, community-based interventions could also be used to supplement missing family networks to support women (Patel et al., 2023). As the literature that merges Social Support Theory and the Common-Sense Model expands in the non-Western world, the current study theoretically adds to that literature. This study contributes to the nomological network of the aforementioned models by empirically establishing a relationship between social support and mental health conditions showing that illness perception

can be considered as a cognitive pathway through which social support impacts mental health in the context of a collectivistic Pakistani culture.

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VII. REFERENCES

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