

GENERALIZED ANXIETY SYMPTOMS AND PSYCHOSOCIAL PROBLEMS AMONG PATIENTS WITH DIABETES: EXAMINING GENDER DIFFERENCES

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ABSTRACT

The psychosocial health of people with diabetes may be significantly impacted by symptoms of generalized anxiety disorder (GAD). While psychosocial issues related to diabetes have been studied in the past, less focus has been placed on the connection between GAD symptoms on the basis of difference of gender while taking Type 1 and Type 2 diabetes into account. By investigating the relationship between GAD symptoms and psychosocial issues among diabetic patients and comparing these results across gender, this study seeks to close this gap. A purposive sample of 200 patients with diabetes—100 with Type 1 diabetes and 100 with Type 2 diabetes was used in a correlational study design. Statistical Analysis SPSS Statistics will be used for data analysis. Independent-samples t-tests evaluate variations by gender as there was a significant difference of anxiety symptoms on the basis of gender whereas $t(198) = -2.40, p < .05$. On the other hand, there was no significant gender difference found with psychosocial problems. Finding reveal that there is a different experience of anxiety symptoms in male and female. The results could guide integrated, diabetes-specific psychosocial therapies and encourage routine psychosocial assessment in diabetes care in both males and females.

I. INTRODUCTION

Diabetes mellitus is a long-term metabolic disease marked by a steady rise in blood sugar levels. The primary source of energy for bodily cells is glucose, which is mostly derived from carbs in diet. Following digestion, glucose enters the circulation and has to be carried into cells in order for energy to be produced. The hormone insulin, which is produced by the pancreatic beta cells, is primarily responsible for controlling this process. Insulin facilitates the transfer of glucose from the bloodstream into body cells, including muscle and fat. Hyperglycemia results from glucose remaining in the circulation due to either insufficient insulin production by the pancreas or ineffective insulin utilization by the organism. Diabetes is a disorder that needs ongoing medical treatment and lifetime self-management since prolonged hyperglycemia can progressively harm tissues and organs. Frequent urination,

excessive thirst, increased appetite, inexplicable weight loss, exhaustion, hazy eyesight, dry mouth, recurring infections, and delayed wound healing are all typical signs of diabetes. Clinically, Type 1 diabetes usually develops suddenly and severely (Anderbro, 2010). Although a variety called as latent autoimmune diabetes in adults (LADA) can manifest much later in life, it often manifests during childhood, adolescence, or early adulthood. Patients typically exhibit the classic triad of clinical symptoms: polyphagia (extreme hunger due to cellular starvation), polydipsia (excessive thirst resulting from severe dehydration), and polyuria (excessive urination caused by osmotic diuresis as the kidneys attempt to excrete the excess glucose). Patients often report acute weariness, generalized weakness, and abrupt, unexplained weight loss despite increasing their food intake. This routine necessitates careful, 24-hour attention to detail. To establish the proper insulin doses, patients must regularly check their blood glucose levels, track their physical activity, and calculate the amount of carbohydrates in their meals. Because insulin has a limited therapeutic window, there is a daily risk of hypoglycemia, or dangerously low blood sugar, which makes the clinical care of Type 1 diabetes extremely difficult and complex (Anderbro, 2010).

Previously known as non-insulin-dependent or adult-onset diabetes, type 2 diabetes mellitus is the most common kind of the illness, accounting for 90% to 95% of all occurrences of diabetes globally. An autoimmune assault does not cause Type 2 diabetes, in contrast to Type 1. Rather, a twofold metabolic defect a significant tissue insulin resistance followed by a gradual, relative decrease in insulin secretion defines its pathogenesis. Insulin resistance, a condition in which the body's target tissues mainly skeletal muscle, liver, and adipose (fat) tissue show a dramatically reduced response to normal circulating amounts of insulin, is usually the starting point for the pathogenesis of Type 2 diabetes (Ali, 2006) (Anderbro, 2010). The pancreatic beta cells over secrete insulin in an effort to counteract this cellular resistance and preserve normal blood glucose levels, which initially results in hyperinsulinemia. The prolonged strain on the beta cells causes cellular fatigue and increasing malfunction over time, frequently years or even decades. After the pancreas is unable to Blood glucose levels start to gradually rise as they release enough insulin to overcome the severe peripheral resistance, moving from a condition of prediabetes to overt, clinical Type 2 diabetes. Type 2 diabetes is a very complicated and multifaceted etiology that is based on a significant interaction between behavioral or environmental variables and genetic predisposition. Sedentary lifestyles, bad eating habits, and obesity, especially visceral or central adiposity, are the most important modifiable risk factors. Systemic insulin resistance is exacerbated by adipose tissue's high metabolic activity, which constantly releases pro-inflammatory cytokines and non-esterified fatty acids that obstruct insulin signaling pathways (Ali, 2006).

Diabetes creates a complicated web of psychosocial issues that affect every aspect of a patient's external existence, going beyond the emotional, cognitive, and physiological domains of concern (Asghar, 2016). The phrase "psychosocial" describes how a person's social surroundings and psychological condition interact. These issues are complex and quite disruptive when it comes to diabetes. Family dynamics and interpersonal connections are often affected by the disease. Despite their good intentions, family members frequently take on caring or monitoring responsibilities, which can result in tense situations marked by perceived nagging, a loss of patient autonomy, and ongoing family strife. Once a space for socializing and pleasure, the dinner table may become a battlefield for portion management and nutritional decisions. As a result, the disease's emotional toll is dispersed across the family, resulting in marital or parental tension as well as collective weariness. Patients with diabetes can face significant stigma and misinformation in the larger societal context. Misconceptions regarding diabetes are common in society, especially when it comes to moral flaws, lack of discipline, or bad lifestyle choices. The patient has intense feelings of guilt and humiliation as a result of this social condemnation. Social events, which are usually centered on food and drink, end up being far more stressful than enjoyable. Patients may feel alienated and compelled to inject insulin or check their blood sugar in public, which may attract unwelcome attention and uninvited peer advice. Many people with diabetes start to isolate themselves and cut off important social support systems in order to minimize this pain, which simply makes their underlying worry and suffering worse. (Asghar, 2016).

II. LITERATURE REVIEW

Through the DAWN research, (Peyrot, 2005) that psychosocial issues such family conflict, financial stress, and work-related challenges are significant predictors of poor glycemic management, as seen by higher HbA1c values. This

implies that social and environmental pressures might have a detrimental effect on diabetes patients' psychological health as well as their physical health. Lloyd (2000) also presented a comparative view on mental health across diabetes types, demonstrating that people with Type I diabetes tend to report greater levels of anxiety disorders, whereas people with Type II diabetes are more likely to have depressive symptoms. This difference emphasizes how the psychological impact of diabetes might differ depending on the kind of illness. Overall, the reviewed literature consistently shows that anxiety symptoms and psychosocial issues are common in diabetics and are strongly associated with poor self-care behavior's, elevated emotional distress, and negative health outcomes. These findings underline the necessity of addressing both psychological and social factors in the management and treatment of diabetes.

In Pakistan, psychosocial issues are becoming more widely acknowledged as significant predictors of diabetes outcomes. At the Independent University Hospital in Faisalabad, (Sarraz, 2023) carried out a randomized controlled experiment to evaluate the efficacy of Progressive Muscle Relaxation (PMR) therapy in lowering anxiety and diabetic distress in individuals with Type 2 diabetes. The GAD-7 questionnaire was used to evaluate anxiety, while the diabetic Distress Scale (DDS) was used to quantify diabetic distress. After three months of treatment, the intervention group's anxiety ratings, emotional distress, and HbA1c levels were significantly lower than those of the control group. These results imply that psychosocial therapies help diabetes patients maintain better metabolic control in addition to improving psychological well-being. 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, 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 labour, can restrict their opportunities to spend time and money on their health.

III. METHOD

Participants

A correlational research design was applied to examine the relationship between Generalized Anxiety Disorder (GAD) symptoms and psychosocial problems among patients with diabetes. Population comprises of adult patients who were diagnosed with diabetes Type 1 and Type 2 from outpatient clinics across different hospitals of Lahore. A purposive sampling method was used with the age range in between 30 to 60 years including the both male and female patients. Patients who were receiving any form of diabetes treatment, including insulin or oral hypoglycemic agents, were eligible for the participation in the research. Patients with gestational diabetes, severe psychiatric disorders, or critical medical conditions were excluded from the study.

Measures

[I] Generalized Anxiety Disorder Scale (GAD-7): The Generalized Anxiety Disorder Scale (GAD-7), developed by (Spitzer, 2006), is a brief, self-administered screening tool designed to assess the frequency of generalized anxiety disorder symptoms over the preceding two weeks. The scale comprises 7 items, each rated on a 4-point Likert scale ranging from 0 ("Not at all") to 3 ("Nearly every day"), yielding total scores that range from 0 to 21, with established cut-off scores of 0–4 for minimal anxiety, 5–9 for mild anxiety, 10–14 for moderate anxiety, and 15–21 for severe anxiety. Regarding its psychometric properties, the GAD-7 demonstrates excellent internal consistency, with Cronbach's alpha values reported between .89 and .92, alongside good test-retest reliability and strong convergent validity with other anxiety measures. **[II] Psychosocial Problem Scale for Type II Diabetes:** The psychosocial problem scale was developed by (Ijaz, 2025) to measure psychological and social problems experienced by patients with diabetes. The 39 questions on the scale are divided into two primary subscales, one of which focuses on psychological issues and the other on social issues, including a crucial component pertaining to illness. The instrument has proven sufficient construct validity, good internal consistency, and has been especially validated for usage within the Pakistani community. Participants reply using a Likert-scale style.

Procedure

Informed consent was obtained from all participants after explaining the purpose and procedures of the study. Confidentiality and anonymity of all data was strictly maintained; participants' names were not appeared on any questionnaire. The right to withdraw from the study at any time without any penalty or effect on their medical care was clearly communicated. No psychological or physical harm is anticipated, but participants showing clinically significant Generalized Anxiety symptoms was provided with referral information for mental health services. Participants were chosen from endocrinology departments and diabetes outpatient clinics at particular Pakistani hospitals. Formal consent was acquired from the appropriate hospital authorities and the relevant institutional ethics committee prior to the start of data collection. The relevant medical personnel and hospital management were informed about the study's goals, research methods, and ethical issues. Healthcare professionals helped identify eligible participants based on the predetermined inclusion criteria. During normal fulfill appointments at the endocrinology or diabetes outpatient clinics, patients who satisfied the eligibility requirements were contacted. The researcher gave the prospective volunteers a quick introduction and described the nature and goal of the study. Participants were made aware that their involvement in the study was entirely voluntary and that they could choose to participate or leave at any moment without incurring any repercussions or having their medical care affected. Before any data was collected, each participant gives written informed consent. Additionally, participants received assurances that their information would be kept private and utilized exclusively for study. For Statistical Analysis SPSS 25 version was used. Independent Samples t-test was used to find out the differences in gender and psychosocial problems among the Diabetes 1 and 2 patients.

IV. RESULTS

Table 1: Independent Samples t-tests Comparing Generalized Anxiety, Psychological and Social Problems on Gender (N=200)

Variables	Men		Women		<i>t</i> (198)	<i>p</i>	Cohen's <i>d</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>			
GAD-7 Total	5.41	4.32	6.90	4.46	2.40	.01	.34
Psychological Problems	26.39	8.07	26.93	6.79	.51	.60	.07
Social Problems	34.42	8.89	34.79	8.10	.31	.75	.04

Note. *M* = mean; *SD* = standard deviation; *t* = independent-samples *t* statistic; *p* = significance value; GAD-7 = Generalized Anxiety Disorder-7. Men, *n* = 100; women, *n* = 100. Cohen's *d* was calculated using the pooled standard deviation.

Table 1 independent-samples *t* test was conducted to examine gender differences in social problems, psychological problems, and anxiety symptoms. There was no significant gender difference in social problems, *t* (198) = −0.31, *p* = .759, or psychological problems, *t* (198) = −0.51, *p* = .609. However, a significant gender difference was found in anxiety symptoms, *t* (198) = −2.40, *p* = .017. Women reported higher anxiety symptoms (*M* = 6.90, *SD* = 4.46) than men (*M* = 5.41, *SD* = 4.32), with a small-to-moderate effect size (*d* = −0.34).

V. DISCUSSION

The goal of the current study was to investigate psychosocial issues and generalized anxiety symptoms in diabetic patients. The gender differences in social and psychological problems, and differences in psychosocial problems between patients with Type 1 and Type 2 diabetes were the four main areas of focus for the study. The first hypothesis was that there is likely to be a significant gender difference in the social and psychological problems of patients with diabetes. The results showed that social issues among diabetic patients did not differ significantly by gender. This implies that the social challenges faced by male and female patients in the current group were comparatively comparable. One explanation might be that both men and women with diabetes face a number of common difficulties. Patients of any gender may have to deal with medication, food restrictions, treatment regimens, doctor's appointments, and worries about potential problems. The lack of notable gender disparities may also suggest that variables other than gender have an impact on psychological issues. Psychological and social functioning may be influenced by a number of factors, including social support, the family environment,

socioeconomic conditions, coping mechanisms, the length of the disease, the demands of treatment, and access to healthcare. The significance of coping and social support in influencing psychological and social outcomes has also been highlighted by research on psychosocial aspects in diabetes (Beverly, 2019).

It is crucial to differentiate this result from the notable gender disparity in anxiety symptoms found in the current investigation. H1 particularly suggested disparities in psychosocial issues, despite the fact that women reported higher levels of anxiety symptoms. As a result, H1 is not supported by the gender difference in anxiety. The results indicate that medical personnel should refrain from presuming that gender is the only factor influencing psychosocial issues. Individualized social evaluations should take into account the unique requirements and circumstances of each patient. Future studies should look at whether factors including coping mechanisms, financial level, familial support, and the burden of sickness better explain individual variations in psychosocial functioning than gender. The second hypothesis was that there is likely to be a significant difference in social problems of patients with Type 1 and Type 2 diabetes. The results showed that patients with Type 1 and Type 2 diabetes had significantly different social problems, with Type 1 patients having more social issues. Social activities, family routines, work obligations, and involvement in daily life may all be impacted by these pressures. As a result, people with Type 1 diabetes may find it more difficult to continue playing their typical social duties. The results also imply that individuals with Type 1 diabetes can benefit from more focus on their everyday functioning and social adjustment. Patients with Type 2 diabetes, however, should not be exempt from psychosocial problems because both groups may experience psychological issues. Because there was a substantial difference in social difficulties but not in psychological problems, H2 was therefore partially validated.

Limitations and Suggestions

The fact that only patients in Lahore provided the data for this study was one of its main drawbacks. The results may not be typical of diabetic patients residing in other Pakistani cities, rural areas, or provinces because the study was limited to a specific geographic area. Anxiety and psychosocial issues can be influenced by cultural differences, socioeconomic circumstances, family dynamics, healthcare accessibility, and the availability of psychiatric therapies. Future researchers should thus gather information from a variety of Pakistani cities and regions, taking into account both urban and rural people. This will enhance the findings' generalizability and offer a more thorough comprehension of psychological issues among Pakistani diabetic patients. The study's cross-sectional design was another drawback. Because the data was gathered all at once, it is difficult to determine if generalized anxiety symptoms and psychosocial issues are causally related. It is not possible to establish that anxiety directly causes psychosocial problems, despite the fact that anxiety statistically strongly predicted these issues. To investigate how anxiety and psychosocial issues evolve over time and if shifts in anxiety are accompanied by shifts in psychosocial functioning, future research should employ longitudinal methods.

Implications

Clinical psychologists might utilize the results to develop psychological evaluation and treatments. Interventions that concentrate on anxiety management, coping mechanisms, stress reduction, emotional control, relaxation, and adjustment to chronic disease may be beneficial for patients who suffer from anxiety. Psychosocial and psychological therapies have been shown in systematic reviews to enhance anxiety and other psychological outcomes in individuals with diabetes (Franquez, 2023).

VI. CONCLUSION

This study demonstrates a significant gender difference in the presentation of generalized anxiety disorder (GAD) symptoms among patients with Type 1 and Type 2 diabetes ($t(198) = -2.40, p < .05$), despite overall psychosocial problems not varying significantly by gender. Male and female patients experience and report GAD symptoms differently, highlighting that anxiety does not manifest uniformly across genders in this population. General psychosocial problems remain consistent across male and female groups, showing that broad emotional or social challenges affect both genders similarly regardless of whether they manage Type 1 or Type 2 diabetes. Diabetes care plans should move past a one-size-fits-all approach by incorporating routine, gender-sensitive GAD screenings and customized, integrated psychosocial therapies for both men and women.

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