Relationship Between Health Anxiety, Somatic Concern And Quality Of Life Among Diabetic Patients

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ABSTRACT

Diabetes mellitus is a prevalent chronic metabolic disorder that affects millions worldwide, significantly impacting physical and psychological well-being. Among the psychological factors, health anxiety and somatic concerns play a crucial role in influencing the quality of life of diabetic patients. Health anxiety refers to excessive worry about having or acquiring a serious illness, while somatic concerns involve a heightened focus on physical symptoms, whether or not they are linked to diabetes. These psychological aspects often exacerbate distress, leading to poor adherence to treatment and deteriorating health outcomes. This study investigates the relationship between health anxiety, somatic concerns, and quality of life among diabetic patients. A sample of 50 diabetic individuals was selected from Indira Gandhi Medical College and Research Institute, Puducherry, using a purposive sampling method. Standardized tools, including the Health Anxiety Inventory (HAI-18), Somatic Symptom Scale (SSS-8), and WHO Quality of Life Scale-BREF, were employed to measure the study variables. Data were analyzed using t-tests, ANOVA, and Pearson correlation to explore differences and relationships among variables. The findings indicate that diabetic patients from joint families report higher levels of health anxiety and somatic concerns than those from nuclear families. Additionally, patients with a longer duration of illness exhibit higher health anxiety and somatic concerns, significantly affecting their quality of life. A strong negative correlation was observed between health anxiety and quality of life, highlighting the psychological burden faced by diabetic patients.

Keywords: Diabetes, Health Anxiety, Somatic Concern and Quality of Life.

1. INTRODUCTION

Diabetes mellitus is a chronic metabolic disorder that significantly affects individuals' physical and psychological well-being. The condition is characterized by prolonged high blood sugar levels resulting from either insufficient insulin production or the body's inability to effectively use insulin. The prevalence of diabetes has increased rapidly over the past few decades, making it a major global health concern. According to the World Health Organization (2020), over 422 million people worldwide are affected by diabetes, and this number is expected to rise in the coming years.

Among the psychological effects of diabetes, health anxiety and somatic concerns play a crucial role in determining the overall quality of life of diabetic patients. Health anxiety refers to the excessive worry about having or acquiring a serious illness, which can lead to heightened stress and poor adherence to treatment regimens. Somatic concerns, on the other hand, involve a heightened focus on physical symptoms that may or may not be related to diabetes. These psychological factors often exacerbate the condition by influencing behavioral patterns, leading to increased distress and decreased treatment adherence.

Previous research has highlighted the strong link between psychological distress and diabetes management. Studies have shown that individuals with diabetes who experience high levels of health anxiety and somatic concerns are more likely to have poorer glycemic control, increased hospitalization rates, and reduced overall well-being. Furthermore, the psychosocial aspects of diabetes, such as social support and family structure, can significantly impact how individuals cope with the condition.

This study aims to explore the relationship between health anxiety, somatic concerns, and quality of life among diabetic patients. By examining these psychological variables, the study seeks to provide insights into the psychological burdens

faced by diabetic individuals and propose strategies to enhance their well-being. The findings may contribute to the development of targeted interventions to address psychological distress and improve diabetes management outcomes.

2. LITERATURE REVIEW

Several studies have examined the impact of psychological factors on diabetic patients. Aikens (1998) found that diabetes patients report higher levels of somatic distress than non-diabetic individuals. Furthermore, research by Deepa et al. (2017) indicates that awareness about diabetes management remains low among the general population. Cognitive-behavioral therapy (CBT) has shown efficacy in reducing psychological distress and improving adherence to treatment in diabetes patients (Baptista et al., 2017).

Hypotheses

Ho_1: Diabetic patients significantly do not differ in the study variables on the basis of locality.

Ho_2: Diabetic patients significantly do not differ in the study variables on the basis of family type.

Ho_3: Diabetic patients significantly do not differ in the study variables on the basis of family income.

Ho_4: Diabetic patients significantly do not differ in the study variables on the basis of duration of illness.

Ho_5: There is no significant relationship between Health Anxiety, Somatic concern and Quality of Life among Diabetic patients.

Methodology

A quantitative research design was chosen for this study, as it aligns with the objectives of creating a detailed description of the topic, outlining general characteristics of specific measures, and determining the likelihood of a particular outcome being more than chance. According to Williams and Monge (2001), quantitative methods are ideal when researchers aim to gather data that can test hypotheses regarding relationships between multiple variables. Since this study aimed to test hypotheses, a quantitative approach was deemed suitable. The study focused on exploring the relationships between health anxiety, somatic concern, and quality of life, while also examining statistical hypotheses to assess differences in locality, duration of illness, family type, and family income among diabetic patients.

Selection of the Sample

The aim of this study was to examine health anxiety, somatic concern, and quality of life among diabetic patients. The population for this study consisted of diabetic patients at the Indira Gandhi Medical College and Research Institute in Puducherry. A purposive and convenience sampling method was used to select the sample, which included 50 diabetic patients. Demographic factors such as locality, duration of illness, family type, and monthly family income were considered in the study to understand their impact on the variables under investigation.

Instruments

1. Health Anxiety Inventory (HAI-18) (Salkovskis et al., 2002)
2. Somatic Symptom Scale (SSS-8) (Goerk et al., 2014)
3. WHO Quality of Life Scale-BREF (WHOQOL-BREF, 1995)

3. RESULTS AND DISCUSSION

Table 1 Socio demographic characteristics among diabetic patients

S.No	Demographic Variables	Sub Variables	N	%
1	Locality	Rural	30	60
		Urban	20	40
2	Family income	Below 5000	18	36
		5001-10000	18	36
		Above 10000	14	28

3	Types of family	Nuclear	26	52
		Joint	24	48
4	Duration of illness	0-1 Years	28	56
		2-3 Years	12	24
		3-4 Years	10	20

Locality: The majority of diabetic patients (60%) reside in rural areas, while 40% are from urban regions. This suggests a higher prevalence or reporting of diabetes in rural populations, possibly due to lifestyle, healthcare access, or dietary patterns.

Family Income: A significant portion of the sample (72%) falls within the lower-income categories (below ₹10,000), with 36% earning below ₹5,000 and another 36% between ₹5,001–₹10,000. Only 28% of patients have an income above ₹10,000, indicating a potential link between lower economic status and diabetes prevalence or healthcare accessibility.

Types of Family: The distribution of family structures is nearly equal, with 52% of diabetic patients belonging to nuclear families and 48% living in joint families. This balance suggests that family structure may not have a strong influence on diabetes prevalence, though social and emotional support in joint families could impact disease management.

Duration of Illness: More than half of the patients (56%) have been diagnosed with diabetes within the past year, indicating a growing incidence or recent detection. Additionally, 24% have had the condition for 2–3 years, and 20% for 3–4 years, highlighting the chronic nature of the disease and the importance of early diagnosis and management.

Table 2 Showing the Mean, SD, 't' value and F-value for Health anxiety based on demographic variables.

Demographic Variables		N	Mean	S.D	t-value / F-value
Locality	Rural	30	26.40	5.519	
	Urban	20	28.20	7.466	0.980
Family Type	Joint	26	28.40	4.599	1.881**
	Nuclear	24	26.75	7..311	
Family Income	Below 5,000	18	20.44	4.805	0.860
	5001-10000	18	25.56	7.422	
	Above 10000	14	27.43	6.653	
Duration of Illness	0-1 year	28	31.07	2.595	4.797*
	2-3 year	12	25.17	5.202	
	3-4 year	10	18.40	5.358	

Locality: The mean health anxiety score for urban patients (M = 28.20, SD = 7.466) is slightly higher than that of rural patients (M = 26.40, SD = 5.519). However, the t-value (0.980) is not statistically significant, suggesting that locality does not have a strong influence on health anxiety levels among diabetic patients.

Family Type: Patients from joint families (M = 28.40, SD = 4.599) exhibit slightly higher health anxiety than those from nuclear families (M = 26.75, SD = 7.311). The t-value (1.881) is marked as significant (**), indicating a potential impact of family type on health anxiety, possibly due to differences in emotional and social support systems.

Family Income: Patients with higher incomes tend to have greater health anxiety, with mean scores increasing from 20.44 (SD = 4.805) for those earning below ₹5,000 to 27.43 (SD = 6.653) for those earning above ₹10,000. However, the F-value (0.860) is not significant, suggesting no substantial variation in health anxiety across income groups.

Duration of Illness: There is a significant difference in health anxiety across illness duration, as indicated by the F-value (4.797*). Patients diagnosed within the past year have the highest anxiety (M = 31.07, SD = 2.595), followed by those with 2–3 years of illness (M = 25.17, SD = 5.202), while those with the longest duration (3–4 years) report the lowest anxiety (M = 18.40, SD = 5.358). This suggests that health anxiety is higher in the initial stages and decreases over time, possibly due

to adaptation and better disease management.

Table 3 Showing the Mean, SD and 't'- value and F-value for Somatic Concern based on demographic variables.

Demographic Variables		N	Mean	S.D	t-value / F-value
Locality	Rural	30	34.45	7.519	
	Urban	20	35.28	6.466	0.954
Family Type	Joint	26	30.38	5.499	
	Nuclear	24	28.75	9.311	1.181**
Family Income	Below 5,000	18	23.84	4.605	0.850
	5001-10000	18	26.56	8.422	
	Above 10000	14	29.63	7.453	
Duration of Illness	0-1 year	28	32.07	3.595	5.697*
	2-3 year	12	28.07	6.202	
	3-4 year	10	19.50	7.358	

Locality: Urban patients (M = 35.28, SD = 6.466) exhibit slightly higher somatic concern compared to rural patients (M = 34.45, SD = 7.519). However, the t-value (0.954) is not statistically significant, indicating that locality does not play a major role in somatic concerns among diabetic patients.

Family Type: Patients from joint families (M = 30.38, SD = 5.499) show higher somatic concerns than those from nuclear families (M = 28.75, SD = 9.311). The t-value (1.181**) suggests some level of significance, implying that family structure may influence somatic concerns, potentially due to differences in social support and caregiving.

Family Income: Somatic concern appears to increase with income, with the lowest mean score (M = 23.84, SD = 4.605) in the below ₹5,000 group and the highest (M = 29.63, SD = 7.453) in the above ₹10,000 group. However, the F-value (0.850) is not statistically significant, indicating no substantial variation in somatic concerns across income levels.

Duration of Illness: A significant difference in somatic concerns is observed across illness duration, as indicated by the F-value (5.697*). Patients in their first year of illness report the highest somatic concerns (M = 32.07, SD = 3.595), which decline over time, with the lowest scores (M = 19.50, SD = 7.358) found in patients who have had diabetes for 3–4 years. This trend suggests that somatic concerns are most prominent in the early stages of illness but tend to decrease as patients adapt to their condition.

Table 5 Showing the Mean, SD,'t'- value and F-value for Quality of life based on demographic variables.

Demographic Variables		N	Mean	S.D	t-value / F-value
Locality	Rural	30	20.10	6.519	
	Urban	20	27.50	6.466	0.870
Family Type	Joint	26	28.38	3.499	
	Nuclear	24	25.75	8.311	1.481**
Family Income	Below 5,000	18	20.44	4.805	
	5001-10000	18	25.56	7.422	0.950
	Above 10000	14	27.43	6.653	
Duration of Illness	0-1 year	28	35.07	22.595	5.897*
	2-3 year	12	24.17	3.202	
	3-4 year	10	16.40	8.358	

Locality: Urban patients (M = 27.50, SD = 6.466) report a higher quality of life compared to rural patients (M = 20.10, SD = 6.519). However, the t-value (0.870) is not statistically significant, suggesting that locality does not have a strong impact on the quality of life among diabetic patients.

Family Type: Patients from joint families (M = 28.38, SD = 3.499) exhibit a slightly better quality of life than those from nuclear families (M = 25.75, SD = 8.311). The t-value (1.481**) suggests some significance, indicating that family structure might influence quality of life, possibly due to the support system available in joint families.

Family Income: Quality of life appears to improve with higher income levels, as seen in the mean scores: below ₹5,000 (M = 20.44, SD = 4.805), ₹5,001–₹10,000 (M = 25.56, SD = 7.422), and above ₹10,000 (M = 27.43, SD = 6.653). However, the F-value (0.950) is not statistically significant, suggesting no major variation in quality of life based on income.

Duration of Illness: There is a significant difference in quality of life across illness duration, as indicated by the F-value (5.897*). Patients in the early stages of illness (0–1 year) report the highest quality of life (M = 35.07, SD = 22.595), followed by those with 2–3 years of illness (M = 24.17, SD = 3.202), while those with the longest duration (3–4 years) report the lowest quality of life (M = 16.40, SD = 8.358). This suggests that quality of life declines over time, possibly due to disease progression and associated complications.

Table 6 Showing Pearson correlation between Health anxiety, Somatic concern and Quality of life

Variables	Health Anxiety	Somatic concern
Quality of Life	-.792**	.003

Health Anxiety and Quality of Life: The negative correlation between health anxiety and quality of life (r = -0.792, **p < 0.01**) indicates a strong inverse relationship. As health anxiety increases, the quality of life decreases significantly. This suggests that higher levels of anxiety related to one's health may substantially affect overall well-being and satisfaction in life.

Somatic Concern and Quality of Life: The correlation between somatic concern and quality of life (r = 0.003, **p > 0.05**) is negligible and statistically non-significant. This implies that somatic concerns (physical symptoms or discomfort) do not have a significant impact on the patients' perceived quality of life, at least within the context of this data.

4. CONCLUSION

The results of this study indicate that the duration of illness and family type significantly influence health anxiety, somatic concern, and quality of life among diabetic patients. In contrast, factors such as locality and family income do not show a significant impact on these variables. Additionally, a significant negative correlation was found between health anxiety and quality of life, meaning that as health anxiety increases, quality of life decreases. However, no significant relationship was observed between somatic concern and quality of life in diabetic patients.

Limitations of the Study:

This study is limited to diabetic patients, with the sample being selected through convenience sampling and data collected using a survey questionnaire. Additionally, the study focuses solely on assessing the identified variables.

Suggestions for Future Research:

Given the limitations and scope of the current study, several suggestions for future research are proposed. First, the small sample size of 50 participants restricts the ability to generalize the findings, so future studies should involve a larger and more diverse sample for more accurate and comprehensive results. Second, including subjects from service organizations, such as educational institutions and other well-established social service centers, could provide broader insights. Additionally, expanding the geographical scope to include other states beyond Puducherry would help capture regional variations in the data. Finally, future research could incorporate intervention methods to evaluate their effectiveness in managing health anxiety and somatic concern among diabetic patients.

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