

Research Paper

Quality of life, Anxiety & Depression of Type 2 Diabetic Mellitus Patients: A Cross-Sectional Study on Garhwal Region

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ABSTRACT

Objectives: The present study aims to assess the quality of life, anxiety & depression level in type 2 diabetic patients and to compare the quality of life and anxiety & depression level between male and female patients. **Methods:** 120 type 2 diabetic patients (male-60 & female-60) were included in this study. Their ages ranged between 40-86 years (group $M \pm SD$, 57.16 ± 9.38). Signed informed consent was obtained from all the patients. The patients willing to participate in the study were included and those having cognitive impairment and major psychiatric illness were excluded from the study. The sample was collected from Guru Tegbahadur Hospital, Dehradun & Pilkhi Hospital, Ghansali Uttarakhand. Quality of life was assessed by the Quality-of-life SF-36 and anxiety and depression was assessed by the Hospital Anxiety and Depression scale (HADS). Pearson's correlation was used to determine the correlation between the quality of life and anxiety & depression of type 2 diabetic patients. T-test was used to analyze the data. **Result:** There was a significant negative correlation between the score of quality of life and anxiety & depression in type 2 diabetic patients. There is no significant difference found between genders in their Quality of life, anxiety & depression level. **Conclusion:** The data revealed that there is a negative correlation between the quality of life and anxiety and depression so it is clear that quality of life might change the thinking patterns of diabetic patients which directly influence the rate of chances of having anxiety and depression.

Keywords: *Quality of life, Anxiety, Depression, Type 2 diabetes*

Metabolic diseases are becoming more common due to our faulty life style and adjustment to very fast changing environment & demands and diabetes is one of them. Diabetes might be one of the most talked about diseases across the world and especially in India, but awareness about it can well be estimated by the fact that India today has more people with Type-2 diabetes mellitus than ever before. Indian's population suffering from diabetes has dramatically increased from 11.9 million in 1980 to 64.5 million in 2014, making it the top three countries with high diabetes population along with China and the United States. Prevalence of diabetes has more than doubled for men (3.7 to 9.1 percent). It has also increased by 80% among women in India (4.6 to 8.3 percent) (Sharma, 2017). Often known as the diabetes capital of the world, India has been witnessing an

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alarming rise in incidence of diabetes according to the international journal of diabetes in developing countries. According to a WHO, fact sheets on diabetes, an estimated 3.4 million deaths are caused due to high blood sugar in the world. The present study is on the diabetic Uttarakhand population. Uttarakhand has more than two Lac type 2 diabetes mellitus affected patients. Records of the health directorate reveal that cases of diabetes have increased in Uttarakhand in the last years. In 2013, the number of diabetes type 1 & 2 patients was 42,570 of which barely 4,407 suffered from type 1 diabetes whereas a significant count, 38,163 belonged to the type 2 diabetes group. Currently, the state has over two Lac type 2 diabetes patients as marked by the health department. Every year around 100 people are dying due to diabetes, the data shows. According to this record the plain district of Uttarakhand Dehradun, Haridwar and Udham Singh Nagar have more diabetes type 2 patients due to rapid urbanization (Azad, 2015). Diabetes mellitus is a pathological condition in which the body is unable to utilize normally the carbohydrate element of its dietary and as a result sugar appears in blood and excreted in urine. Insulin dependent diabetes mellitus or Type 1 is insulin dependent diabetes and it occur at any age, this type of diabetes used to be known a juvenile diabetes. Non-insulin dependent diabetes mellitus or Type 2 is not usually required to sustained life. It is a long-term metabolic disorder that is characterized by high blood sugar, insulin resistance, and relative lack of insulin. Type 2 diabetes primarily occurs as a result of obesity, physical exercise and poor life style or quality of life. Diabetes mellitus is an increased risk of developing depression and stressful life. If a person has symptoms of depression than there is greater chance of developing type 2 diabetes (Eren, Erdi & Sahin, 2008). A study showed that quality of life of type 2 diabetes patients has significant adverse effect on their health (Lucombe, 2000). The present research work specifically focused on the Type 2 diabetic patients of hilly areas of Uttarakhand. And also studied their health-related quality of life and depression & anxiety which influenced their psychosomatic health.

MATERIAL & METHODS

Objectives

- To correlate the quality of life with anxiety and depression in patients with type 2 diabetes mellitus.
- To compare the quality of life, anxiety and depression between genders of type 2 diabetes mellitus.

Hypothesis

- There would be no correlation between quality of life and anxiety-depression level of type-2 diabetic patients.
- There would be no significant difference in quality of life, anxiety and depression between males and females with type-2 diabetes mellitus.

Variables

- Independent variable: Type-2 Diabetes Mellitus
- Dependent variable: Quality of life, Depression & Anxiety, Gender

Study Design & Sample

A cross sectional correlation study was conducted and patients were assessed once. 120 type-2 diabetes mellitus patients were participated willingly. Their ages ranged between 40-86 years (group $M \pm SD$, 57.16 ± 9.38). The data were collected from Guru Tegbahadur

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Hospital & Pilkhi Hospital, Dehradun & Ghansyali. Signed informed consent was obtained from all the patients.

Inclusion & Exclusion Criteria

Patients who were diagnosed with type-2 diabetes mellitus were included in this study. And excluded who were diagnosed with type-1 diabetes or other diseases.

Tools

The assessment of quality of life and depression and anxiety were assessed using two different questionnaires.

- 1. Assessment of Quality of Life:** Quality of life SF-36 was developed in 1980, to measure self-reported HRQOL sponsored by the RAND Corporation. SF-36 is a set of generic, coherent, and easily administered quality-of-life measures. SF-36 consists of eight scales scores, which are the weighted sums of the questions in their section. Each scale is directly transformed into a 0-100 scale on the assumption that each question carries equal weight. The lower score defines the more disability or poor quality of life and a score of 100 is equivalent to no disability or good quality of life. The eight scale of the SF-36 are: Vitality, Physical functioning, Bodily pain, General health perceptions, and Physical role functioning, Emotional role functioning, social role, Mental health (Brazier, J. E. 1992).
- 2. Assessment of Depression & Anxiety:** Depression & anxiety was assessed by HADS (Hospital Anxiety & Depression Scale). HADS was originally developed by Zigmond and Snaith (1983). The HADS is a 14 items scale that generates ordinal data. Seven of the items relate to anxiety and seven related to depression. It takes 2-5 minutes to complete.

Data Analysis

Data were analyzed using SPSS version 24.0. Pearson's correlation and Independent sample T-test were used.

RESULTS

H₀: There is no correlation between quality of life and anxiety-depression level of type-2 diabetic patients.

Table 1: Analysis of relationship between QoL and Anxiety & Depression

Variables	N	M±SD	r value
QoL	120	2196.17±701.16	-.071
Anxiety & Depression		12.58±7.57	

Form the above table it has been concluded that the obtained value of Pearson correlation value (-.071) found negative. The results indicate that there is a negative relationship between QoL and Anxiety & Depression of the type 2 diabetic patients. And the null hypothesis is rejected.

H₁: There would be no significant difference in quality of life, anxiety and depression between males and females with type-2 diabetes mellitus.

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Table 2: Analysis of difference between Gender in their Qol and Anxiety & Depression

Variable	Gender	N	M±SD	SEDm	T value
QoL	M	60	2229.58±707.58	91.35	-.52
	F	60	2162.75±699.029	91.24	
A & D	M	60	11.88±6.57	.848	1.00
	F	60	13.27±8.46	1.09	

From the above table it has been concluded that the obtained value of t-test of the quality of life (-.52) and anxiety & depression (1.00) between genders not found significant at any level. The results indicate that there is no significant difference between male and female in their quality of life and anxiety or depression level. And the null hypothesis is accepted.

DISCUSSION

The present study was about to the study of the psychological effects of diabetes. No doubt it is a physiological disease, an endocrine disease but more or less it has psychological impact like anxiety, depression and poor life style also. The result of present study indicated that the life style of hilly areas were very tough and different from other areas. Quality of life is the general well-being of the individual's and societies. Qol observes life satisfaction including physical health, family, education, employment, wealth, religious beliefs, finance and the environment. A study showed that type 2 diabetes has associated with the poor health related quality of life. And some psychological measures show that type 2 diabetes is frequently associated with adverse psychological effects, particularly depression (Ali et.al 2010).

The finding of the present study, table 1 shows the negative correlation (-.071) between quality of life and anxiety & depression of type 2 diabetes patients. The anxiety and depression level in diabetes-2 patients is high. It means that if the quality of life of diabetic person is poor or mal- adjusted, lack of social support, emotional instability, and lack of physical exercise then there are more chances of having depression and anxiety. And life style and mental well-being has effect on our physical health. A study found that overall diabetes patients' depression and anxiety seems to be a determinant of poor health related quality of life. Finding of the present study shows t-value found (-.52) of quality of life of male and female with type 2 diabetes. It means no significant difference found between male and female's quality of life. The *p-value* is greater at 0.05 and 0.01 level, therefore the null hypothesis is accepted which means that the quality of life is same between male and female with type-2 diabetes. The patients face same daily routine changes, challenge emotional problems and health change. And the t- value found (1.00) of anxiety & depression, the *p-value* is greater at 0.05 and 0.01 level, which means that anxiety and depression level was found same in male and female with type 2 diabetes patients. The reason of the depression and anxiety of the diabetic patients are poor life style, lack of energy, lack of happiness, over thinking about their life.

CONCLUSION

The data revealed that there is a negative correlation between the quality of life and anxiety and depression so it is clear that quality of life might change the thinking patterns of diabetic patients which directly influence the rate of chances of having anxiety and depression.

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Suggestions

The sample present study was 120; a large could have been taken for better results. Therefore, it is advised that larger sample covering different hilly areas of state should be studied to get representative results. It is also suggested to have marital status, duration of disease and other variables and thus get more insight into the problem.

REFERENCES

- Ali, S., Stone, M., Skinner, T.C., Robertson, N., & Davies, M. (2010). The association between depression and health related quality of life in people with type-2 diabetes: A systematic Literature review. *Diabetes/Metabolism Research and Reviews*, 26 (2), 75-89.
- Azad, S. (2015, Nov 13). Uttarakhand has more than two lac type II diabetes affected patients. *Times of India*. Retrieved from <http://m.TimesofIndia.com>
- Brazier, J. E., Harper, R., Jones, N. M., O' Cathain, A., Thomas, K. J., & Usherwood, T. et.al. (1992). Validating the SF-36 health survey questionnaire: new outcome measure for primary care. *British Medical Journal*, 305(6846): 160–164. doi: 10.1136/bmj.305.6846.160
- Eren, I., Erdi, O., & Sachin, M. (2008). The Effect of depression on quality of life of patients with type-2 diabetes mellitus. *Depression and Anxiety*, 25 (2), 98-106.
- Lucombe, F.A. (2000). Health related quality of measurement in type 2 diabetes. *Value in Health* 3(1), 15-28.
- Maia, A.C.O., Braga, A.A., Paes, F., & Machado, S. (2013). Comorbidity of Depression and Anxiety: Association with Poor Quality of life in Type 1 and 2 diabetic patients. *Clinical practice and epidemiology in Mental Health*, 9, 136.
- Sharma, A. (2017, Nov 22). Is India the Diabetes Capital of the world? The Citizen Is Hopeful. Retrieved from <http://www.thecitizen.in>
- Zivanovic, D.B., Stojanaska, M.M. & Zovisic, B.K. (2012). The quality of life in patients with diabetes mellitus type 2. *Vojnosanitetski Pregled*, 69 (10), 858-863.

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Conflict of Interest

The author(s) declared no conflict of interest.

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