

Original Research Paper

Efficacy of Gender on Anxiety, Depression and Stress Level of Diabetic Patients

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ABSTRACT

Health and wealth are prime concerns for the journey of healthy life; health is defined as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". The main objective of present study was to assess the level of anxiety, depression and stress among diabetic patients. It was hypothesized that there will be a significant difference between male and female diabetic patient with reference to anxiety, depression and stress. The researcher has adopted the quantitative descriptive research to gain the objectives of the present study. For the present research work researcher has selected 320 diabetic patients (Type-II) age range between 30 to 65 years with the help of purposive random sampling techniques. Further they were classified into 2 groups i.e. Male (160) and Female (160). Anxiety, Depression and Stress Scale was used, it was developed by Bhatnagar, P. et al. (2011). Data were analyzed by using means, standard deviation and F tests. As far as the role of Gender is concerned with the level of anxiety, depression and stress among diabetic patients, it was revealed that female diabetic patients have greater symptoms of anxiety, depression and stress than the male diabetic patients.

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INTRODUCTION:

Health and wealth are prime concerns for the journey of healthy life; health is defined as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity". According to WHO Ottawa Charter 1986, for Health Promotion, it was stated that health is "a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities." Overall health is achieved through a combination of physical, mental, emotional, and social well-being, which, together is commonly referred to as the Health Quadrangle (*Edward and Mathews, 1981*).

Patients experience emotional distress due to the life-threatening nature of their disease and are faced with functional impairments that may influence the quality of life. These psychological manifestations interfere with adherence to treatment and increase the risk of mortality and morbidity towards illness. The risk incurred by psychological factors is of equal magnitude to that of standard risk factors. People with diabetes beliefs about the cause of their illness are important to efficient medical communication, psychological adaptation, and adherence to suggestion. Health anxiety and stress occur frequently and recognition of their symptoms can be difficult because of co-morbid medical situation.

Diabetes can have a significant impact on both physical and psychological functioning of a human being which can impair their quality of life. In terms of psychological functioning, the needs of diabetes care can have an effective influence on mood, both short-term and long-term. Adjustment to diabetes is regularly accompanied by way of a variety of negative emotional responses, inclusive of anger, guilt, frustration, denial, and

loneliness. Frequent hypoglycemic episodes can be exhausting, discouraging and frightening. In addition, chronically elevated blood glucose levels can also lead to continual fatigue, which can exacerbate depressed mood. Psychological stress can additionally affect diabetes control and the release of counterregulatory hormones often results in elevated glucose levels. In addition, stress can disrupt diabetes manage in a roundabout way thru its influence on diet, workout and other self-care behaviours (*Surwit, 2002*).

An attempt was made by ***Shahi & Mohammadyfar (2017)*** to compare depression, anxiety, stress, quality of life, and alexithymia in people with type II diabetes and their non-diabetic counterparts. This study was a causal-comparative study. All the people suffering from type II diabetes who referred to the clinics of Semnan were selected. Sample consists of 60 patients (30 males and 30 females) were selected through random sampling technique and 60 healthy subjects were selected as the control group. Findings of this research revealed that people with diabetes suffer from several mental disorders that make it harder for them to continue living, regardless of the numerous difficulties that they experience due to this chronic disease.

Rajput et al. (2016) conducted an investigation on patients of Type 2 diabetes mellitus (T2DM) patients in Rohtak district of Haryana in India to study the prevalence and predictors of depression and anxiety. Four hundred ten consecutive patients having T2DM and 410 healthy controls matched for age and sex were included in this investigation. Socio-demographic and relevant clinical variables were collected. For evaluation of depression and anxiety, Hamilton Depression Rating Scale and Hamilton Anxiety Rating Scale were used respectively. The present findings revealed that diabetic cases had significantly higher depression and anxiety as compared to healthy controls.

Statement of Problem:

The present investigation attempts to "***Efficacy of Gender on Anxiety, Depression and Stress Level of Diabetic Patients***"

Significance of the study:

The researcher believes that anxiety affects patient's response to the feeling of discomfort, pain and whole health behavior, with patients who are anxious about their health being more likely to consult physicians and report increased health problems. Another important aspect of this research work is stress. Stress can have serious health implications, increasing the risk of exacerbating medical conditions such as diabetes, hypertension and depression. Stress is unavoidable, that is why it is globally accepted that in the modern era, stress plays significant role in leading or causing various fatal diseases like chronic diabetes, hypertension. Diabetes, anxiety, and depression, are frequent pathologies, and each constitutes a public health problem in our country. These pathologies are known to be more frequent in elderly people. Whereas diabetes is easy to detect and diagnose, this is not always the case with anxiety and mood disorders.

Objectives:

1. To assess and examine the level of the Anxiety, Depression and Stress among Diabetic patients with reference to gender (Male and Female).

Operational Definitions:

Anxiety: Anxiety is a psychological and physiological state characterized by cognitive, somatic, emotional and behavioural components. These components combine to create an unpleasant feeling that is typically associated with uneasiness, fear or worry. Anxiety is a generalized mood or state that occurs without an identifiable triggering stimulus. Anxiety is a normal reaction to stress. It may help a person to deal with a difficult

situation, for example at work or at school, by prompting one to cope with it. When anxiety becomes excessive, it may fall under the classification of an anxiety disorder.

Depression: In the present study, the term “Depression” refers to symptoms of depression such as hopelessness and irritability, as well as physical symptoms that were measured by the Beck Depression Inventory, Beck & Beamesdefer, (1974).

Stress: Stress is a normal physical response to events that make you feel threatened or upset your balance in some way. When you sense danger—whether it's real or imagined—the body's defenses kick into high gear in a rapid, automatic process known as the “fight-or-flight-or-freeze” reaction, or the *stress response*.

Diabetes: Type 1 diabetes results from the body's failure to produce enough insulin. This form was previously referred to as "insulin-dependent diabetes mellitus" (IDDM) or "juvenile diabetes". The cause is unknown.

Type 2 diabetes begins with insulin resistance, a condition in which cells fail to respond to insulin properly. As the disease progresses a lack of insulin may also develop. This form was previously referred to as "non insulin-dependent diabetes mellitus" (NIDDM) or "adult-onset diabetes". The primary cause is excessive body weight and not enough exercise.

Patient with Diabetes In the present study, “Patients with Diabetes” implies to those who suffer from type 2 diabetes who are newly diagnosed (less than three months).

Hypothesis:

- (*H₀₁*) There will be no significant difference between Male and Female diabetic patients in relation to Anxiety level.
- (*H₀₂*) There will be no significant difference between Male and Female diabetic patients in relation to Depression level.

- ($H0_3$) There will be no significant difference between Male and Female diabetic patients in relation to Stress level.

Research Design:

The present study was not possible experimentally because of nature of investigation. The researcher has adopted the quantitative descriptive research to gain the objectives of the present study. Quantitative Descriptive research includes data collection through questionnaire quantification of the responses of the respondents and fact findings. Quantitative Descriptive research involves collecting data in order to test hypothesis or to answer questions concerning the current status of the subjects of the study.

Variables:

The independent variable as the explanatory variable, it is presumed cause of changes in the values of the dependent variable, the dependent variable is the expected outcome of the independent variable. Dependent variables are also termed criterion variables and independent variables, as predictor variables.

In the present investigation Gender, was taken as Independent Variables whereas level of Anxiety, Depression and Stress were selected as Dependent Variables.

Sample:

For the present research work researcher has selected 320 diabetic patients (Type-II) age range between 30 to 65 years with the help of purposive random sampling techniques. Further they were classified into 2 groups i.e. Male (160) and Female (160).

Criteria

The following inclusion /exclusion criteria were followed in the present study:

Inclusion Criteria

- A. Only new diagnosed (less than three months) diabetic patients with type 2 diabetes were selected.
- B. All the patients were selected between age ranges of 30 to 65 years.
- C. The patients must have at least secondary school education.

Exclusion Criteria

- A. The patients should not have any other problem (complications) with diabetes.
- B. The patient should not have any Mood Disorders due to Bipolar disorder, Mood disorder and Substance-induced mood disorder.
- C. The patient should not have any Anxiety disorders due to Generalized Anxiety Disorder and Social Anxiety Disorder.
- D. The patients should not have any other acute / chronic illness.

Tools:

The investigator after screening a number of available tests finally selected the following tool to collect the data:

Anxiety, Depression and Stress Scale: - This scale was developed by Bhatnagar, P. et al. (2011) and published by National Psychological Corporation. This scale consists 48 items divided into Three Sub Scale –

- I. Anxiety,
- II. Depression and
- III. Stress.

This scale was administered to 1177 adults. This scale consists satisfactory validity and reliability.

Procedure of Data Collection:

The investigator with great interest planned the data collection soon after selecting the sample and finalizing the research. General and private hospitals were approached and requested to grant permission for data collection. All of them asked about aims and objectives of this research work. After fulfilling some official formalities and conditions, arrangements to meet the patients of diabetic (Type-II) were made. Personally established good rapport with the subjects, only new diagnosed (less than three months) type- 2 diabetic patients were selected.

Each subject was given a questionnaire and requested to read statements one after the other and give their responses in response column by choosing appropriate response for each statement, whichever they felt correct and appropriate. The expectations of the questionnaire from the subjects were explained in detail. The investigator clarified and explained the doubts if they had any. There was no limitation of time to respond. The respondents were requested not to leave any item unanswered and incomplete.

Scoring:

Scoring of the obtained data was done with help of respective manuals available for the tests in the present study. The data have been arranged in the respective tables according to the statistical tests applied.

Statistical Analysis:

Descriptive statistical measures like mean and standard deviation were used to see the level of Anxiety, Depression and Stress among individuals with diabetes type-II of according to Gender. ANOVA (Analysis of variance) was computed to determine whether there is a significant mean difference between various pairs of diabetic patients.

RESULT & DISCUSSION

Table 1:- Showing Mean, SD & Mean difference between Male and Female diabetic patients for dependent variable Anxiety.

Gender	N	Mean	SD	F	Sig. Level
Male	160	6.81	2.80		
Female	160	9.85	3.59	98.05,	<i>p</i> <.01

When F test was applied to check the impact of gender on anxiety level of diabetic type-II patients then significant F value was found. The F value is reported $F (1, 160) = 98.05, p < .01$ (Table no.1). Table-1 reveals that mean scores of male and female individual with diabetes type – II are 6.81 ($SD = 2.80$) and 9.85 ($SD = 3.51$) respectively and the difference between two means is 3.04. On the basis of significant mean difference it can be said that female patients have perceived greater anxiety than the male patients. Thus H_0_1 is rejected.

Table 2:- Showing Mean, SD & Mean difference between Male and Female diabetic patients for dependent variable Depression.

Gender	N	Mean	SD	F	Sig. level
Male	160	5.78	3.40		
Female	160	7.41	2.75	26.58	<i>p</i> <.01

Results reveal that gender had significant impact on depression of patients with diabetes type-II. Table-2 indicated F ratio and mean values for Gender. In which mean for male diabetic patients is 5.78 ($SD = 3.40$) and for female diabetic patient is 7.41 ($SD = 2.75$). Whereas, mean differences for both the group is 1.63. $F (1, 160) = 26.58, p < .01$ is significant main effect for gender. Females with type – II diabetes, experienced higher anxiety than male type – II diabetic patients. Therefore, H_0_2 is also declined.

Table 3:- Showing Mean, SD & Mean difference between Male and Female diabetic patients for dependent variable Stress.

Gender	N	Mean	SD	F	Sig. level
Male	160	6.82	2.95		
Female	160	8.96	3.07	48.60	p<.01

As again F test was applied to check the efficacy of gender on stress level of diabetic type-II patients then significant F value was reported $F(1, 160) = 48.60, p <.01$ (Table no.17). Table -3 reveals that mean scores of male and female persons with diabetes type – II are 6.82 ($SD = 2.95$) and 8.96 ($SD = 3.07$) respectively and the difference between two means is 2.14. On the basis of significant mean difference one can well imagine that female patients have more stress than the male patients. Hence, $H0_3$ was also discarded.

CONCLUSION:

The aim of present investigation was to study the effect of Gender on Anxiety, Stress and Depression among Type 2 diabetic patients. As far as the role of Gender is concerned with the level of anxiety, depression and stress among diabetic patients, it has been noticed that all the three dependent variables i.e. anxiety, depression and stress influenced by independent variable gender. Some forms of psychological intervention, spiritual as well as social practices more directly address stressful and depressive life experiences by teaching social and spiritual skills of diabetic type-II patients. To enhance social support and increase the likelihood of positive life experiences of diabetic patients and by teaching problem-solving skills which help depressive people identify solutions to interpersonal and other problems. Yet life stress is inevitable, and therefore, learning strategies for reducing and dealing with life stress and depression are critical to the psychological well-being of diabetic patients.

IMPLICATIONS OF PRESENT RESEARCH:

- The finding of the present research work will be useful in achieving a better understanding of diabetic patients and also in training and counselling them.
- A complete understanding of the demographic factors acquired through the present research will be useful for the well being of the diabetics in the future.

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Conflict of Interest:

The authors colorfully declare this paper to bear not conflict of interests

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