Effect of Age on the Level of Anxiety, Depression and Stress among Diabetic Type-II Persons

Hardik A. Patel
Research Scholar, Department of Psychology, Sardar Patel University, Vallabh Vidya Nagar, Anand, Gujarat.

Received: June 11, 2018 Accepted: July 30, 2018

ABSTRACT *Developed countries have made many advance health mechanism and management plans to control infectious diseases thereby resulting in increased life expectancy of individuals, whereas non-infectious chronic diseases have not received the same attention. The purpose of the present study is to know the effect of age on the level of anxiety, depression and stress of diabetic patients. A sample consisting of 360 diabetes type-II person age range between 30 to 65 years has taken into consideration from Anand district. To calculate and interpret the scores, mean, SD and F-test were used. Findings of the study revealed that old age people with diabetes have greater symptoms of anxiety, depression and stress as compared to young age diabetic people.*

Keywords: *Anxiety, Depression, Stress, Diabetes, patients*

Introduction:

Developed countries have made many advance health mechanism and management plans to control infectious diseases thereby resulting in increased life expectancy of individuals, whereas non-infectious chronic diseases have not received the same attention. Diabetes is one of those chronic diseases which has now become a major global health problem. It is both progressive and life-threatening with potentially devastating consequences for health (*Suresh*, 2006).

In the health sector, India has made enormous strides over the past decades. The life expectancy has crossed 67 years, infant and under-five mortality rates are declining as is the rate of disease incidence. Many diseases, such as polio, guinea worm disease, yaws, and tetanus, have been eradicated. Another major cause of common health issues in India is the pollution. Pollution of air, water and soil has affected the health of many citizens. Airborne diseases are mainly caused because of polluted air. There are many diseases or health issues that commonly occur among Indians. The disorders can be quite severe and precautions should be taken to avoid them. Diabetes can have a significant impact on both the 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).

Anxiety is a psychological response to a real or imagined threat. It is a complex emotional state characterized by a general fear or foreboding usually accompanied by stress and tension. It is associated with apprehension and fear and is frequently linked with failure, either real or anticipated. It often has to do with interpersonal relations and social circumstances and situations. Feelings of refusal and insecurity are usually a part of anxiety. According to *Frost* (1970), anxiety is an uneasiness and feeling of foreboding often seen when an individual is about to embark on a hazardous venture; it is often lead by a strong desire to excel. Therefore, anxiety state arises from flawed adaptations to the stress and is caused by over actions in an attempt to meet this complicatedness. A certain level of anxiety is needed for peak performance of a human being. Our body autonomous nervous system prepares for completion with the fight or flight response which quickness reaction time, sharpens our sense and increases our strength.

Depression is a highly prevalent, severely disabling, mood disorder with a universal bearing (*Gilbert,* 1992; *Renneberg et al*., *2005*). Depression is an emotional condition in which individual experiences discouraged, gloomy, hopeless, unmotivated or disinterested in his or her life. However, when this state

persists for more than two weeks and when the thoughts interfere with daily activities than it likely transforms into a psychological disorder that absolutely requires a medical intervention (*APA*, *2013*).

The modern approach to understanding stress embraces an interactive viewpoint, though it is integral to be aware of manageable stressor in the environment. Because a high proportion of the population is engaged in paid employment outdoor and most of the research tends to focal point on occupational stress, five of these categories are concerned with work and workplace stress.

Glucose intolerance is associated with ageing (*Ferrannini et al., 1996*). Ageing has been associated with elevated levels of both glucose and insulin after oral glucose challenge testing. As a result, elderly individuals are more likely to be classified as having abnormal glucose status compared to younger adults using similar diagnostic criteria for diabetes (*American Diabetes Association.Diabetes Care. 2012*). Diabetes in older adults is a growing public health burden. The unprecedented ageing of the world's population is a major contributor to the diabetes epidemic, and older adults represent one of the fastest growing segments of the diabetes population. Of impending concern is that these numbers are projected to grow dramatically over the next few decades (*Narayan et al. 1996*).

Statement of Problem:

The present investigation attempts to ***"Effect of Age on the Level of Anxiety, Depression and Stress among Diabetic Type-II Persons"***

Objectives:

1. To examine the level of the Anxiety, Depression and Stress among Diabetic patients with reference to Age (AG-I & AG-II).

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 defences 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:

- ***($H0_1$)*** There will be no significant difference between diabetic person age group-I and age group-II in relation to Anxiety level.
- ***($H0_2$)*** There will be no significant difference between diabetic person age group-I and age group-II in relation to Depression level.
- ***($H0_3$)*** There will be no significant difference between diabetic person age group-I and age group-II in relation to the Stress level.

Research Design:

The present study was not possible experimentally because of the nature of the 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 a 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 Age, was taken as Independent Variables and it is manipulated through selection method whereas, level of Anxiety, Depression and Stress were taken 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. Age group-I (160) and Age group-II (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 the age ranges of 30 to 65 years.
C. The patients must have at least a 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 of 48 items divided into Three Sub Scale –

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

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

The 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 the 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 a 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 the response column by choosing the 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 Age. 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 Age group-I and Age group-II diabetic patients for dependent variable Anxiety.

Age	N	Mean	SD	F	Sig. Level
AG-I	160	6.92	2.88	84.84	*p*<.01
AG-II	160	9.75	3.54		

Calculated F value of age groups is to be found F (1, 160) = 84.84, which is quite significant (*p* <.01). As Table No. highlighted that mean score of age group – I (30-45 yrs.) is 6.92 (SD=2.88), whereas a mean score of patients of age group – II (50-65 yrs.) is 9.75 (SD=3.54) and the difference between mean scores is 2.83 which is quite significant. It was concluded that age has a significant impact on the anxiety level of diabetic patients. Findings might be interpreted in terms of as the age increases, level of tolerance decreases. Thus $\boldsymbol{H0_1}$ is rejected.

Table 2:- Showing Mean, SD & Mean difference between Age group-I and Age group-II diabetic patients for dependent variable Depression.

Age	N	Mean	SD	F	Sig. level
AG-I	160	5.50	2.91	48.075	*p*<.01
AG-II	160	7.70	3.09		

Table no. 2 highlighted that there is a significant main effect for status, F (1, 160) = 48.07, *p*<.01. Diabetic patients of Age group – II (50-65 yrs) have a higher mean score (M = 7.70, SD = 3.09) for depression as compared to diabetic patients of age group – I (30-45 yrs) M = 5.50, SD = 2.91), wherein mean difference for both the group is 2.20. There is a wide mean difference on depression. This wide depression on mean suggested that older age people i.e. Age group – II have perceived greater depression as compared to young age diabetic patients. Therefore, $\boldsymbol{H0_2}$ is also declined.

Table 3:- Showing Mean, SD & Mean difference between Age group-I and Age group-II diabetic patients for dependent variable Stress.

Age	N	Mean	SD	F	Sig. level
AG-I	160	6.71	2.91	59.34	*p*<.01
AG-II	160	9.08	3.03		

Calculated F value of age groups is to be revealed F (1, 160) = 59.34, which is quite significant (*p* <.01). As Table No. 20 and figure no. 17 displayed that mean score of age group – I (30-45 yrs.) is 6.71 (SD=2.91), whereas a mean score of patients of age group – II (50-65 yrs.) is 9.08 (SD=3.03) and the difference between mean scores is 2.37 which is quite significant. It was concluded that age has a significant effect on the stress level of diabetic patients. Findings might be interpreted in terms of as the age increases, level of tolerance decreases. Hence, $\boldsymbol{H0_3}$ was also discarded.

Conclusion:

The aim of the present investigation was to study the effect of Age on Anxiety, Stress and Depression among Type 2 diabetic patients. 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. As far as the role of Age is concerned with the level of anxiety, depression and stress among diabetic patients, it has been noticed that old age people with diabetes have greater symptoms of anxiety, depression and stress as compared to young age diabetic people, It was apparent that a lifestyle-intervention programme is effective and induces beneficial changes in health only when implemented with conviction.

Implications of present research:

- A National Diabetes Prevention Initiative must be launched that will study the prevalence of diabetics and then implement intervention programmes such as health-enhancing, diabetes preventing extension programmes for old age people.
- Prevention strategies must pervade all ages and include institutions such as schools, colleges, hospitals and Primary Health Centres. School-based programs have been shown to be effective in the U.S. and Singapore already.

References:

- American Diabetes Association (2012). Standards of medical care in diabetes--. Diabetes Care ;35(Suppl 1):S11–63.
- Bhatanager, P.,Singh, M.,Pandey, M., Dandhya, Amitabh (2011) Manual for Anxiety, Depression and Stress Scale, National Psychological Corporation, Agra.
- Edward L. Fox & Donald K. Mathews, (1981). Blood flow and gas transport, The Physiological basis of Physical Education and Athletes, New York: Saunders College Publishing, p.239.
- Ferrannini E, Vichi S, Beck-Nielsen H, et al. (1996) Insulin action and age. European Group for the Study of Insulin Resistance (EGIR) Diabetes;45:947–53.
- Gilbert, P. (1992). Depression: The Evolution of Powerlessness. New York, NY: Guilford Publications.
- Narayan KM, Boyle JP, Geiss LS, Saaddine JB, Thompson TJ (2006) Impact of recent increase in incidence on future diabetes burden: U.S., 2005–2050*. Diabetes Care;*29*:*2114–2116.
- Renneberg, B., Heyn, K., Gebhard, R., Bachmann, S. (2005). Facial expression of emotions in borderline personality disorder and depression. Journal of Behavior Therapy and Experimental Psychiatry, 36, pp.183-196.