The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 11, Issue 2, April- June, 2023
DIP: 18.01.022.20231102, DOI: 10.25215/1102.022
https://www.ijip.in

Research Paper

Correlation between Death Anxiety and Depression in Diabetic and Non-Diabetic Cases

Soumya Srivastava[1]*

ABSTRACT

The present study examined the correlation between death anxiety and depression in diabetic cases. A sample of 100 was taken among which 50 men and 50 females were included. 25 females and 25 males were non-diabetic and other25 males and 25 females were diabetic. Data was collected using 'Thakur Death Anxiety Scale' (1985) and 'Depression Scale' (1986). Means of death anxiety score and depression score was acquired to indicate significance. The study shows significant relation between depression and death anxiety in diabetic males and females than in non-diabetic ones.

Keywords: *Correlation, death anxiety, anxiety, depression, diabetes.*

As the Centers for Disease Control and Prevention (CDC), suggests that 7.6 percent of people over the age of 12 have depression in any 2-week period and as per World Health Organization (WHO), depression is the most common illness worldwide, estimating 350 million people affected by depression, globally.

DEPRESSION ACCORDING TO DSM 5

❖ Highlights of depression as according to DSM 5

As reported by Cecil R. Reynolds and Randy W. Kamphaus (2013): Major Depressive Disorder is divided into 4 heads indicated subjectively or by observation:

A. Five (or more) of the following symptoms have been present during the same 2-week period. Symptoms those are clearly attributable to another medical condition are not included.

1. Depressed mood most of the day, nearly every day (e.g., feels sad, empty, hopeless)
2. Diminished interest in activities almost every day.
3. Significant weight loss when not dieting or weight gain.
4. Insomnia or hypersomnia nearly every day.
5. Psychomotor agitation or retardation nearly every day.
6. Fatigue or loss of energy nearly every day.
7. Feelings of worthlessness or excessive or inappropriate guilt.
8. Lacking ability to concentrate, or indecisiveness.
9. Constant thoughts of death (not just fear of dying), recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.

[1]Psychologist
*Corresponding Author

Received: January 04, 2023; Revision Received: April 18, 2023; Accepted: April 22, 2023

B. The symptoms cause significant distress in social, occupational, or other important areas of functioning.

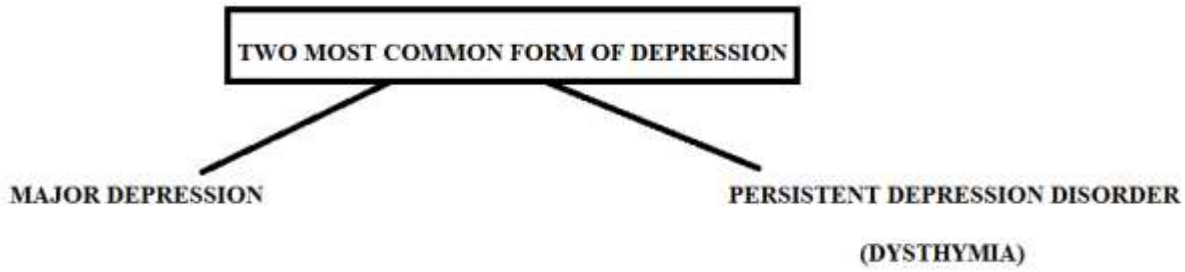
C. The episode is not attributable to the physiological effects of a substance or to another medical condition.

Mezuk, Eaton, Albrecht and Golden (2008) conducted a study aiming to study bi-directional prospective relationship between depression and type 2 diabetes. They studied 6414 diabetic cases and concluded that depression is associated with a 60% increased risk of type 2 diabetes. Depression and diabetes are highly prevalent in the United States as 6.5% of its population has been diagnosed with diabetes and among them 16% suffer different form of depressive disorders also leading to chronic obesity.

Another study aiming to assess the work impact of depression on job performance and work productivity conducted by Debra, Henke and Mosher (2008) found that depression comes from multi-dimensional working patterns and over working which mostly leads to a poor work result. They pointed out multi- tasking as tiring and depressive also, focusing on personal life and work relations. Most employees in the companies accepted to the fact that their work performance is affected by their personal life conflicts and issues.

Bernet and Stein (1999) focused on determining the prevalence of retrospectively recalled childhood trauma among depressed patients and examined the relationship between retrospective recall of childhood maltreatment and the onset, course and severity of major depression in adulthood. Results showed, patients with major depression recalled significantly more severe emotional abuse, emotional neglect and physical abuse than healthy comparison subjects. Among the depressed subjects, the severity of childhood trauma (most notably emotional abuse) predicted 25-28% variance in age at onset of first depressive episode and number of lifetime depressive episodes. Childhood plays a big role in depression of adulthood which carries unsolved childhood conflicts, grudges and hatred to a particular person or object which moves all the way to the adulthood.

TYPES OF DEPRESSION



- Major depression is marked by having symptoms of depression nearly every day for 2 (two) weeks at least, that interferes with ability to work, sleep, and study, eat or enjoy life. An episode can occur only once in a person's lifetime, but more often a person has several episodes.
- Persistent depression or Dysthymia is marked by having symptoms of depression that last for at least 2 (two) years. A person diagnosed with this form of depression may have episodes of major depression along with periods of less severe symptoms.

- Women with prenatal depression experience major depression during pregnancy or after delivery (postpartum depression).
- SAD is a type of depression that comes and goes with the seasons, typically starting in the late fall and early winter and goes away during the spring and summer.
- Psychotic depression occurs when a person has severe depression with some psychosis, like delusions (false- beliefs) or hallucinations (sensory misinterpretations).

DOES DEPRESSION LOOK THE SAME IN EVERYONE?

An article by Albert (2015) suggests that the prevalence of depression is more in women than in men. In 2010 a global annual prevalence of depression was 5.5% in women and 3.2%, in men, representing a 1.7-fold greater incidence in women. In Canada, the prevalence was 5.0% in women and 2.9% in men in 2002 and increased to 5.8% and 3.6%, respectively, in 2012 (1.6-fold greater incidence in women). The most important factor of women being more prone is the biological life-cycle and hormonal factors that are higher and fluctuating in women than men.

A report on "prescription medication used by Canadians aged 6 to 79" published in 2014 by Rotermann M, Sanmartin C, Hennessy D, et al suggests that antidepressants were prescribed more than twice as often to women than men i.e., 9.3% v. 4.2% in patients aged 25–44 years, 2.2-fold; 17.2% v. 8.2% in patients aged 45–64 years, 2.1-fold.

Women more often show internal symptoms than men showing external symptoms for developing depression. Kendler and Gardner (2014) in a study aiming to focus on sex differences in the pathways to major depression among opposite-sex twin pairs displayed that women show more sensitivity to interpersonal relationships, whereas men displayed more sensitivity to external career and goal-oriented factors. Women also experience specific forms of depression-related illness, including premenstrual dysphoric disorder, postpartum depression and postmenopausal depression and anxiety that are associated with changes in ovarian hormones and could contribute to the increased prevalence in women. However, the underlying mechanisms remain unclear; thus, treatments specific to women have not been developed.

The fact that increased prevalence of depression correlates with hormonal changes in women, particularly during puberty, prior to menstruation, following pregnancy and at perimenopause, suggests that female hormonal fluctuations may be a trigger for depression. However, most preclinical studies focus on males to avoid variability in behaviour that may be associated with the menstrual cycle. Nevertheless, primate and rodent studies consistently implicate a role for female hormones, such as estrogen, in depression.

DIABETES

In very simple words Diabetes is a disease in which blood glucose levels are above normal. Diabetes, often known by its medical term **diabetes mellitus**, can be described as a group of metabolic diseases in which the person has high blood glucose (blood sugar). Basically, it's

root is found when the pancreas either does not produce enough insulin or the cells in the muscles and liver and do not use insulin properly or both. As a result the amount of glucose in the blood increases while the cells starve. Over the years, high blood glucose level (hyperglycemia), damages nerves and blood vessels which can lead to complications such as heart diseases, blindness, nerve related problems, gum infections and amputation.
Patients with high blood sugar will typically experience:

- polyuria (frequent urination),
- they will become increasingly thirsty (polydipsia) and
- Hungry (polyphagia).
- Blurring of vision

Diabetes mellitus is characterized by chronic hyperglycemia with disturbances of carbohydrates, fat and protein metabolism resulting from deficit in insulin secretion or insulin action or both.

Most severe form of diabetes includes ketoacidosis and nonkeotic hyperosmolar condition (extreme metabolic derangement in diabetes mellitus patients), which in the absence of effective treatment and may stupor coma and ultimately death. Often symptoms are not severe or may even be absent.

During the evolution of Type 1 diabetes immunologic disturbances such as islet cells or pther antibodies are present and theses may proceed clinically apparent dispense by months o even years (Rewers, et, al, 1996). In some families it is possible to recognize certain forms of diabetes such as families it is possible to recognize certain forms of diabetes such as variation in the glucokinase gene or hepatic nuclear factor genes that cause youth or early adult onset diabetes (Almind, et, al, 2001).

There are three type of diabetes:

1. **Type 1 diabetes**

Type 1 diabetes is an auto immune disease. An auto immune disease results when body system from fighting infection (the immune system) turns against a part of the body. In diabetes the immune system attacks and destroys the insulin producing the cells in the pancreas. The pancreas then produces little or no insulin. A person has Type 1 diabetes must take insulin daily.

2. **Type 2 diabetes**

The most common form of diabetes is Type 2 diabetes. About 90 to 95% of people with diabetes have Type 2 diabetes. This form of diabetes has type 2. This form of diabetes is most often associated with older age, obesity, family, history of diabetes, previous history of gestational diabetes, physical inactivity and certain ethnicities. About 80% of people with type 2 diabetes are overweight (Gavin, et. al., 1997). When Type 2 diabetes is diagnosed the pancreas is usually producing enough insulin but for unknown reasons the body does does not use the insulin effectively, a condition called insulin resistance. After several years, insulin production decreases. The result is the same as for type 1 diabetes gluscose builds up in the blood and the body cannot make efficient use for its main sources of fuel (Turner, et, al,. 1999).

3. **Gestational diabetes**

Gestational diabetes is a condition in which a woman without diabetes develops high blood sugar levels during pregnancy.

DEATH ANXIETY

Death anxiety is the morbid, abnormal, constant or persistent fear of one's own death. It is a type of anxiety which is marked by constant fear of death and death related thoughts. It is also referred to as "**thanatophobia"** or fear of death. It is different from necrophobia, which is a specific fear of dead or dying persons and/or things i.e., others who are dead or dying, not one's own death or dying. There might be a constant fear that one might die, also the thoughts related to death may be very disturbing. One might think about dying a painful death or thinking of end of his possessions and his/her existence, in short materialistically feeling depressed.

Death anxiety is mentioned as a part of anxiety disorder under the head of symptoms concerning brain and mind, as fear of dying.

Concept of thanatophobia and Freud's View– this term was coined by Sigmund Freud as he hypothesized that express fear of death. In Freud's view nobody believes in their own death thus it was not their own death that people believed because the unconscious does not have the capacity to calculate ones death or time of living and also one's fear cannot be death itself, because one has never died. People who express death-related fears, actually are trying to deal with unresolved childhood conflicts that they cannot come to terms with or expressed emotionally. The name Thanatophobia comes from the Greek figure of death known as Thanatos.

SEX AND AGE

Studies show that females tend to have more death anxiety than males. Thorson and Powell (1984) aimed to study this connection, and they sampled men and women from 16 years of age to over 60. The Death Anxiety Scale showed higher mean scores for women than for men. Moreover, researchers believe that age and culture could be major influences in why women score higher on death anxiety scales than men.

Due to their caring role in the family, women who are child bearers or the homemakers constantly fear death. It is this common role of women that leads to greater death anxiety as it emphasize the 'importance to live' for her offspring. Although it is common knowledge that all living creatures die, many people do not accept their own mortality, preferring not to accept that death is inevitable, and that they will one day die. The middle age adult years (40–64 years of age), death anxiety peaks at its highest levels when in comparison to all other age ranges throughout the lifespan. Surprisingly, levels of death anxiety then slump off in the old age years of adulthood (65 years of age and older). This is in contrast with most people's expectations, especially regarding all of the negative connotations younger adults have about the elderly and the aging process (Kurlychek & Trenner, 1982).

Templer (1971) aimed to study the correlation between depression and death anxiety in a population of elderly and late middle aged individuals. He took a sample of 250 people between 51 to 92 years. The results showed a positive correlation between death anxiety and depression. High on death anxiety is commonly part of a depressive syndrome in elderly population.

But surprisingly, in a study determined to focus whether anxiety disorders have higher mortality risk, conducted by Hout, Beekman et, al, (2004) taking a sample of 3107 older men and women; found that in men, the adjusted mortality risk was 1.78 (95%) in cases with diagnosed anxiety disorders at baseline. In women, no significant association was found with

mortality. The study revealed a gender difference in the association between anxiety and mortality. Thus, an increased mortality risk was found for anxiety disorder in men than women.

Another study by Tharson and Powell (2006) taking 599 adolescents and adults. Hypothesized that women would have higher death anxiety than men and older would have lower death anxiety than younger people, concluded that older respondents indicated a concern over the existence of an afterlife and over loss of personal control. Women on the other hand expressed more fear of pain and bodily decomposition.

METHODS

Sample

The study was conducted on the patients who were registered in a diabetic health care in Varanasi. The criteria for entry into the study included a diagnosis of diabetes. Those eligible for inclusion in the sample were diabetic males and females aged between 30 to 60 years total 50 in number and other 50 males and females between the same age group were non-diabetics. Finally, comprising of a sample of 100 (50 diabetic patients among which 25 males and 25 females and 50 non-diabetic among which 25 males and 25 females). Personal data performa was developed which comprised of information regarding age, gender, education, marital status, occupation and type of diabetes.

Tools

Data was collected by calculating the means of death anxiety and depression as per the death anxiety scale and depression scale. These scores were used for statistical analysis. Standard deviation and t- test was used to analyze the difference between diabetic cases and non-diabetic cases with respect to depression and death anxiety. The following tools were used to obtain data for this study:

1. ***Thakur Death Anxiety Scale (1985)***

   It was constructed by Thakur and Thakur (1985) containing 16 items among which, 11 are positive items (including item numbers- 1,2,4,5,7,9,10,13,15) and 5 are negative items (including item numbers – 3,6,8,11,14). The final scale has 16 statements. It is a 5 point scale test ranging from, 'quite true', 'true', 'undecided', 'false', and 'quite false'. The maximum score one could get on the scale is 80.

   - *Reliability*- the reliability using 'Kuder-Richardson' formula was found to be 0.78 and the test-retest reliability coefficient was 0.86.
   - Validity- with a view of ascertaining validity coefficient of the death anxiety scale along with 'Templer's Scale' and 'Mcmordie' scale was found to be 0.75 and 0.78 respectively.

2. ***Depression Scale (1986)***

   It was constructed by Karim S and Tiwari Rama (1986) it contains 96 items for different aspects of depression. It is a 5 point scale ranging from 'not at all', 'little bit', 'moderately', 'quite a bit', 'extremely'. For scoring, 0 was assigned to the first response in the five point scale, 1 mark was assigned to the second response, 2 marks assigned to the third response, 3 marks assigned to the fourth response, 4 marks assigned to the fifth response. Split half and test retest reliabilities have been found 0.86 and 0.89 respectively.

RESULT AND DISCUSSION

Table 1 Showing mean, standard deviation and t value on depression and death anxiety for diabetic and non-diabetic sample.

VARIABLE	TYPES OF CASES	N	MEAN	SD	t
DEATH ANXIETY	DIABETIC	50	50.70	6.76	0.97
	NON- DIABETIC	50	44.02	9.76	
DEPRESSION	DIABETIC	50	118.4	39.30	1.12
	NON- DIABETIC	50	110.48	50.29	

Significant at .01 level.

Through table 1 it is clear that diabetic cases and non-diabetic are significantly different at .01 level on their death anxiety. The mean of diabetic cases on death anxiety is more (50.70) than non-diabetic cases (44.02), similarly diabetic cases has more mean (118.4) than non-diabetic (110.48) in terms of depression.

Table 2 showing mean SD and t value on death anxiety for diabetic male and diabetic female

GROUP	N	MEAN	SD	t	P
DIABETIC MALE	25	50.88	4.83	2.55	<.05
DIABETIC FEMALE	25	50.59	7.97		
NON DIABETIC MALE	25	43.88	9.42	1.59	
NON DIABETIC FEMALE	25	44.16	9.56		

From table 2 it can be observed that diabetic male and diabetic female have significant difference at 0.05 level on death anxiety.

Table 3 showing mean SD and t value on depression for diabetic male and female diabetic female.

GROUP	N	MEAN	SD	t	P
DIABETIC MALE	25	106.84	34.79		
DIABETIC FEMALE	25	109.96	43.64	8.62	<.01
NON DIABETIC MALE	25	110.28	57.85	0.98	
NON DIABETIC FEMALE	25	110.68	41.46		

Table 3 shows that diabetic male and female have significant difference at 0.01 level in terms of depression and on the other hand, non-diabetic male and female share close means, 110.28 and 119.68 respectively.

Table 4 Correlation Between Diabetic and Non-Diabetic Male and Female on Death Anxiety and Depression.

VARIABLE	DIABETIC MALE	DIABETIC FEMALE	NON DIABETIC MALE	NON DIABETIC FEMALE
DEATH ANXIETY AND DEPRESSION	0.49	0.22	0.01	0.09

It is clear that diabetic male were more associated with depression and death anxiety which was 0.49 and a moderate correlation was observed among diabetic females 0.22 in terms of depression and death anxiety. On the other side, negligible correlation between depression and death anxiety was observed among the cases of non-diabetic females and males.

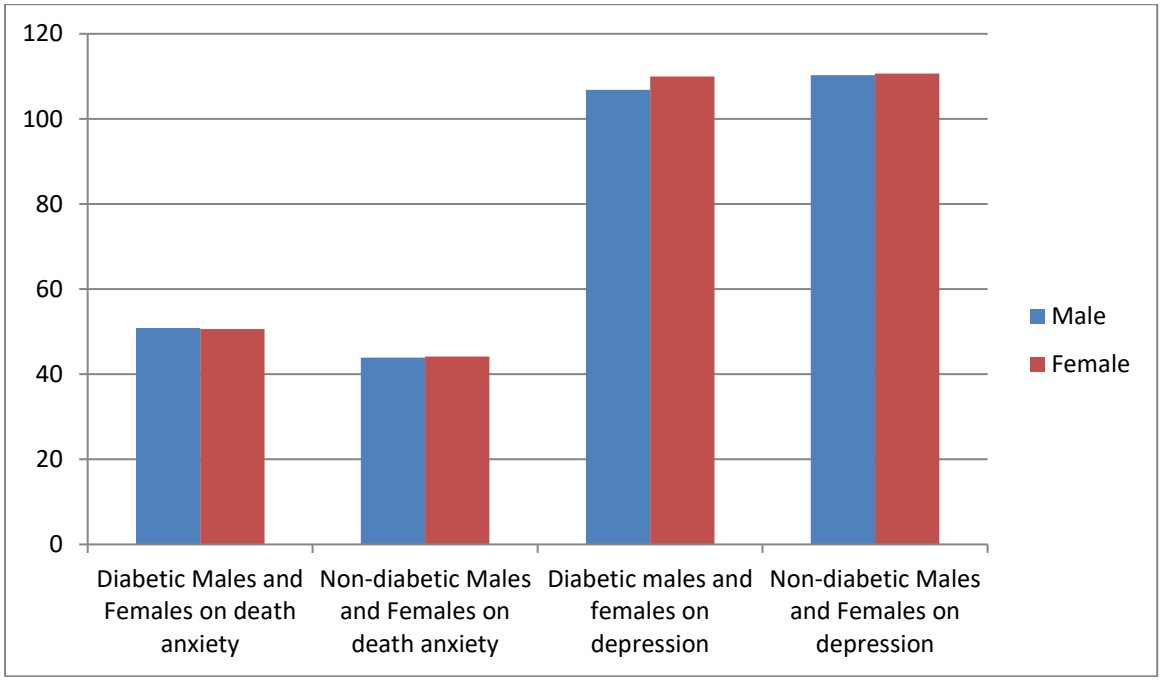


Figure-1 Showing mean of diabetic and non-diabetic groups.

CONCLUSION

Following conclusions were made in this study:

1. It is concluded that diabetic cases are found more depressed with death anxiety than non- diabetic cases.
2. There is a significant relationship between depression and death anxiety among diabetic patients than non- diabetic cases.
3. The correlation of diabetic males and females is 0.49 and 0.22 respectively which represents a strong relation between the two variables, whereas in case of non-diabetic males and females is 0.01 and 0.09 respectively which is a weak relation between the two variables.
4. Diabetes though affecting the physical aspect of life brings with it depression leading to constant fear of death ultimately death anxiety

REFERENCES

Albert, P.R. (2015). Why is depression more prevalent in women? *Journal of psychiatry and neuroscience.* 40(4), 219-221.

Bernet, Z., & Stein, M.B., (1999). Relationship of childhood maltreatment to the onset and course of major depression in adulthood. *Journal of depression and anxiety.* 9(4), 169-174. DOI-10.1002/(SICI) 1520-6394(1999):4<169: AID-DA4>3.0.CO;2-2.

Debra, L., Henke, & Mosher, R. (12008). What does research tell us about depression, job performance and work productivity. *Journal of occupational and environmental medicine.* 50(4), 401-410. Doi:10.1097/JOM.ObO13e31816bae50.

Donald. Charles. "Death Anxiety and Mental Ability" Essence: Issues in the Study of Ageing, Dying and Death. 1979.p85

Harrawood, L. K., White, L. J., & Benshoff, J. J. (2008). Death Anxiety in a National Sample of United States Funeral Directors and Its Relationship with Death Exposure, Age, and Sex. Omega: *Journal of Death & Dying*, 58(2), 129-146. doi:10.2190/OM. 58.2.c

Hannessy, D., & Arthur, M. (2014). Prescription medication use by Canadians aged 6 to 79: A health report. 25(6), 3-9.

Kindler, K.S., & Gardner, C.O. (2014). Sex differences in the pathways to major depression: A study of opposite- sex twin pairs. *AmJ. Psychiatry.* 171, 426-435.

Langs, R. (2004). "Death anxiety and the emotion-processing mind". *Psychoanalytic Psychology*, 21(1), 31-53.

Langs, R. Three Forms of Death Anxiety. Retrieved from http://www.escp.org/death_anxi ety.html

Mezuk, B., Eaton, S., et al,. (2008). Depression and Type 2 diabetes over the lifespan: A meta analysis. *American diabetes association,* 12. Doi:org/10.2337/dc 08-0985.

Rotermann M, Sanmartin C, Hennessy D, et al. Prescription medication use by Canadians aged 6 to 79. Health Reports. 2014; 25:1–9.

Tharson, A. J., & Powell, F.C. (2006). Element of death anxiety and meanings of death. *Journal of clinical psychology,* 44(5). Doi/.1002/1097 4679.

Trenner (*1982).*"Accuracy of perception and attitude: An intergenerational investigation". *Perceptual and Motor Skill,* 54 (1), 271–274.

Templer,D.I. (1971). Death anxiety as related to depression and health of retired persons. *Journal of Gerontology*. 26(4), 521-523.

Van Hout, H.P.J., Beekman, E.B., et al,. (2004). Anxiety and the risk of death in older men and women. *British journal of psychiatry,* 185, 399-404.

Acknowledgement

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Srivastava, S. (2023). Correlation between Death Anxiety and Depression in Diabetic and Non-Diabetic Cases. *International Journal of Indian Psychology, 11(2),* 239-247. DIP:18.01.022.20231102, DOI:10.25215/1102.022