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Research Paper

# Depression and Anxiety among Diabetic Patients

Gayathry P R[1]*

## ABSTRACT

**Introduction:** Aim of study was to understand the significant relationship between Anxiety and depression among diabetic patients. Beck Depression Inventory and Hamilton Anxiety Rating were used to administer the study. **Methodology:** Study was to understand the strength of correlation between anxiety and depression among diabetic patients. Standardized questionnaires were chosen and distributed among 60 participants. Quantitative analysis and Pearson Correlation were constructed to find out the significant relationship between anxiety and depression. T test were administered to find out the impact of these variables in men and women. **Result And Discussion:** Anxiety and depression are highly correlated and had significant correlation in diabetic patients. There is no significant gender differences among diabetic patients. **Conclusion:** Concludes that there is significant relationship between anxiety and depression

***Keywords:*** *Depression, Anxiety, Diabetic Patients*

Diabetes is a chronic disease that requires ongoing, multispeciality medical care combined with patient self-management, family support, and education to prevent or delay end-organ morbidity and mortality (ADA, 2010). Depression and anxiety are the common mental disorders in human societies that can have a significant impact on prognosis in diabetic patients. So, this study was done with the aim to survey anxiety and depression.

There is a globally agreed target to halt the rise in diabetes and obesity by 2025. About 422 million people worldwide have diabetes, the majority living in low-and middle-income countries, and 1.5 million deaths are directly attributed to diabetes each year. The rate of diabetes diagnoses is increasing around the world, including in India. India has the second-highest total population in the world at more than 1.3 billion people. A recent epidemiological study of 90686 participants found that depression was more prevalent in people with diabetes, regardless of the fact that they had diagnosed or undiagnosed diabetes. The same study showed that anxiety was more prevalent only in participants who were aware of their diabetes. Hamiltons anxiety scale and Beck depression scale is used here. The comorbidity of diabetes and depression is associated with adverse diabetes outcomes. Compared with non-depressed diabetic patients, depressed diabetic patients have poorer glycaemic control, a higher risk of multimorbidity and mortality, increased functional impairment, and poorer adherence to diet, exercise, and diabetes self-management. In

[1]Bsc. Psychology, Department of Psychology, Christ College (Autonomous), Irinjalakuda
*Corresponding Author

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addition, coexisting depression has a negative impact on the quality of life of patients with diabetes and is associated with a significant increase in total expenditure on health care. There are evidences that suggest the bidirectional relationship between depression and diabetes with depression developing earlier in life leading to an increased risk of diabetes and diabetes increasing the subsequent risk of depression. In addition to being a risk factor for diabetes, depression with diabetes increases the risk of developing diabetes-related complications (diabetic retinopathy, nephropathy, neuropathy, macrovascular complications, and sexual dysfunction).

Diabetes is the third cause of death by disease and the leading cause of new blindness in adults aged 20–74. Compared to the general population, patients with diabetes have a twofold increase in the risk for heart disease and stroke, and a 17-fold increase in the risk for renal failure (Cited by Mark E. Molitch.). Treating diabetes early is important because it puts patients health on a trajectory for the rest of their lives," Laiteerapong said. "Its not that you can't improve your blood sugar levels later, but if you don't start early, you have to work that much harder to stay healthy." Anxiety orients us to danger and prepares our bodies to either challenge or escape it. Anxiety can also motivate us to take action, such as when we realize we have an important deadline, and it can give us a bit of a thrill, such as when we ride a roller coaster or play a fast-paced competitive game(mental health foundation). Depression and associated mental disorders can have a profound effect on all aspects of life, including performance at school, productivity at work, relationships with family and friends, and ability to participate in the community (WHO).

According to a 2016 study of 90,686 participants, people with diabetes may be around two to three times more likely to experience depression than people who do not have the condition. The same study found that anxiety was more prevalent in people who were aware they had diabetes due to their health concerns.

Conclusion of study implies that people with diabetes are 2 to 3 times more likely to have depression than people without diabetes. Having diabetes can cause a condition called diabetic stress which has traits of stress, depression and anxiety.(Cited by Centres for disease control and prevention)

So diabetic patients are likely to go through depression compared to non-diabetics.
Although more research is needed to fully understand the link between diabetes and depression, it's clear that there's a connection. It's thought that alterations in brain chemistry tied to diabetes may be related to the development of depression. For example, damage resulting from diabetic neuropathy or blocked blood vessels in the brain may contribute Trusted Source to the development of depression in people with diabetes. Conversely, changes in the brain due to depression may cause an increased risk for complications. Studies Trusted Source have shown that people with depression are at higher risk for diabetes complications — but it hasn't been determined if depression increases the risk for complications, or vice versa. Symptoms of depression can make it more difficult to successfully manage diabetes and prevent diabetes-related complications. A 2011 study Trusted Source found that people who have type 2 diabetes and experience symptoms of depression often have higher blood sugar levels. Additionally, the results of a separate 2011 study Trusted Source suggest that people who have both conditions are 82 percent Trusted Source more likely to experience a heart attack. (Joann Jovinally, 2022)

Depression is one of the leading causes of disability worldwide and it is a serious disorder linked to diminished quality of life, medical morbidity and mortality with a lifetime prevalence ranging from approximately 7.8 to 14.8%. However, the prevalence of depression has been reported to be higher and almost doubled among people with type 2 diabetes mellitus (T2DM). Additional to several well-known risk factors for developing T2DM, such as obesity, physical inactivity, sedentary lifestyle, and high fat intake, it has also been suggested that depression plays a role for an increased risk of T2DM. This has previously been shown in meta-analyses. Furthermore, findings from a meta-analysis of cross-sectional, population-based studies suggest a positive association between depressive symptoms and insulin resistance. A potential pathophysiological mechanism linking depression to T2DM is that depression increases the activity of the hypothalamus pituitary adrenal axis (HPA) and the sympathetic system leading to increased cortisol and adrenaline/noradrenaline as well as pro-inflammatory cytokines. These stress hormones have various metabolic effects and that can result in insulin resistance and subsequent T2DM. However, increased HPA axis activity might not be the only potential mechanism between depression and increased risk of T2DM. Several studies have found that the use of antidepressant medications are associated with increased risk of T2DM, possibly through its effect on weight gain. Despite many studies done to investigate the relationship between depression and T2DM, there is only a limited amount of longitudinal studies taking into account the severity of depression to the risk of T2DM. Moreover, no known study has considered depression with anxious distress, which is a recent specifier for depression in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), with the risk of T2DM. It has been known that depression with anxious symptoms is associated with poorer health outcomes. In this population-based cohort study, we aimed to assess the association between depression and anxious distress and the risk of T2DM and to assess the association of severity of depression and concomitant symptoms of anxious distress. (Anna Deleskog, 2019)

The idea of conducting this research is to find out that diabetic is increasing day by day in life So it is important to know more about effects of depression and anxiety in diabetic patients. Effects of depression and anxiety cause managing diabetes can be stressful and lead to symptoms of depression. Diabetes can cause complications and health problems that may make symptoms of depression worse. Depression can lead to harmful life decisions. These can include unhealthy eating, less exercise, smoking and weight gain. Many people may be suffering from symptoms of common mood disorders, such as depression and anxiety, without realizing that variable blood sugar could be the culprit. A growing body of evidence suggests a relationship between mood and blood-sugar, or glycemic, highs and lows. To aware about diabetic is very important.

### *Definition of Key Terms*

### DIABETICS

Diabetes is a chronic, metabolic disease characterized by elevated levels of blood glucose (or blood sugar), which leads over time to serious damage to the heart, blood vessels, eyes, kidneys and nerves. (WHO, 2013)

### DEPRESSION

Depression is a leading cause of disability around the world and contributes greatly to the global burden of disease. The effects of depression can be long-lasting or recurrent and can dramatically affect a person's ability to function and live a rewarding life. ( WHO,2008)

## ANXIETY

Anxiety is an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure. People with anxiety disorders usually have recurring intrusive thoughts or concerns. They may avoid certain situations out of worry. They may also have physical symptoms such as sweating, trembling, dizziness, or a rapid heartbeat. (APA, 2015)

## REVIEW OF LITERATURE

A literature review is an overview of the previously published works on a specific topic. The term can refer to a full scholarly paper or a section of a scholarly work such as a book, or an article. In this it includes study related to depression and anxiety in Diabetic patients. It also includes International and National studies. The purpose of a literature review is to gain an understanding of the existing research and debates relevant to a particular topic or area of study, and to present that knowledge in the form of a written report.

According to study, conducted by Saman, Zuberi, Ehsan U Syed, Junaid A Bhatti in 2001 examines that associations of depression with glycaemic control and compliance to self care activities in adult patients with type 2 Diabetes Mellitus. Sample includes 286 with male-female ratio of 1:2:1. Mean age was 52 years and in 64.7% of them, the duration of diabetic was more than 3 years. They also stated that depression was also associated with low compliance to self-care activities such as taking Dore as advised, dietary restrictions and foot care. They conducted the study at a tertiary- care hospital in Karachi. Hospital Anxiety Depression Scale (HADS) was used to measure depression. Associations of depressed status with poor glycaemic control and compliance to self-care activities were assessed by logistic regression analyses.

The study was conducted by Nabil Sulaiman, Aisha Hamdan. Hani Tamim, Dhafir A Mahmood, Doris Young in the period of January 2007 to June 2008. The aim of this study was to estimate the prevalence of psychological distress and its correlates in diabetic patients in the United Arab Emirates. Patients diagnosed with diabetes attending diabetes mini-clinics in the primary health care centres or hospitals of Sharjah were invited to participate in this cross-sectional study. Patients were interviewed using structured questionnaires to gather data on socio-demographics, lifestyle factors, diabetes complications, and medication usage. The K6 was administered as a screening tool for mental health concerns. Study includes hundred and forty-seven participants. The majority of participants were females (65.4%) and the mean age was 53.2. Twenty-four percent had diabetes complications, mainly in the form of retinopathy, peripheral vascular disease and peripheral neuropathy.

Another study was conducted by Mark Peyrot and Richard R. Rubin. The aim of study was to determine levels of depression and anxiety symptoms among with diabetes and identify factors associated with increased risk. This study administered self-report symptom inventories to patients at the beginning (n=634) and end (n = 578) of an outpatient diabetes education program. Subjects (n = 246) contacted by mail 6 months later completed the same instruments. Rates of disturbance for depression were higher than typical in the general population. Women and those with less education were at much higher risk. Only 13% of those followed for 6 months were disturbed at all three time-points.

According to the study conducted by M.M. Collins. P. Corcorant and I.J Perry, they estimated to identify the prevalence and major determinants of anxiety and depression symptoms in patients with diabetics. A cross-sectional study of 2049 people with types 1

and 2 diabetes, selected from patients experiencing three different models of care in Ireland: (i) traditional mixed care; (ii) hospital/general practitioner (GP) shared care; (iii) structured GP care. Anxiety and depression symptoms were assessed with the Hospital Anxiety and Depression Scale (HADS). Analyses were conducted primarily using logistic regression with adjustment for relevant confounders. The prevalence of anxiety and depression symptoms in patients with diabetes is considerably higher than in general population samples. These data serve as a benchmark for the prevalence of anxiety and depression symptoms in patients with diabetes.

The study was conducted by M. J Bair, E. J Brizendine, R. T. Ackermann, C. Shen, K. Kroenke and D.G Marrerot. The objective of study was to determine the prevalence of pain and its association with glycaemic control,mental health and physical functioning in patients with diabetes. Cross-sectional data from a multi-site, prospective cohort study of 11 689 participants with diabetes. We analysed the associations of pain severity and interference with glycated haemoglobin (HbA1c) measurements and Medical Outcomes. Study concluded that Moderate to extreme pain was present in 57.8% of diabetic patients. Pain was strongly associated with poorer mental health and physical functioning, but not worse glycaemic control. Recognizing the high prevalence of pain and its strong association with poorer health-related quality of life may be important to improve the comprehensive management of diabetes.

Study of Janet Thomas. Glenn Jones, Isabel Scarinel and Phillip Brankley was to determine whether type 2 diabetes contributes to the presence of depressive and anxiety disorder diagnoses in low-income adults with hypertension, asthma, and/or arthritis. Using a cross-sectional design, this study administered a structured diagnostic interview to low-income primary care patients diagnosed with type 2 diabetes, hypertension, arthritis, and asthma, as well as to those with no chronic illness (n 326), to determine the 12-month prevalence of depressive and anxiety disorders. A logistic regression (LR) model was used to assess whether a diagnosis of depression and/or anxiety was associated with type 2 diabetes after adjusting for known risk factors. Study result suggest a positive contribution of type 2 diabetes to increased rates of depressive and/or anxiety disorders in patients with hypertension, asthma, and/or arthritis and support prior research that type 2 diabetes may serve as an indicator of depression and anxiety in low-income adults treated in primary care clinics.

Another study by Anne Engum, Arnstein Mykletun, Kristain Midthjell, Are Holen, Alv A. Dahl was aimed that to investigate factors associated with depression in type 1 and type 2 diabetes and test whether these differ from factors associated with depression in the nondiabetic population. Study was conducted in an unselected population study comprising 60,869 individuals, potential sociodemographic, lifestyle, and clinical factors were investigated in participants with and without diabetes. The associations between hyperglycaemia and depression in types 1 and 2 diabetes were also studied. The levels of depression were self-rated by using the Hospital Anxiety and Depression Scale. It results that Type 2 diabetes without other chronic somatic diseases did not increase the risk of depression. Factors associated with depression in type 1 and type 2 diabetes were shared with the nondiabetic population.

Traditionally, the biological theory of depression argues that biological dysfunction in the body causes depression. Often you can hear that mental illness results from a 'chemical imbalance' in the brain. However, there's little evidence that biological factors cause

depression. The psychological theory of depression looks beyond biological correlates and focuses on cognitive and behavioural processes in depression. Both approaches have informed treatment approaches, the biological theory has led to the development of antidepressant medications, and the psychological theory has informed therapeutic treatment approaches like cognitive behavioural therapy.

Psychological theories of depression focus on cognition and behaviour in regulating mood. This approach stresses the influence of our past experiences (nurture) in shaping our thought patterns that can result in depressive symptoms. Past experiences can cause people to develop negative schemas – biased patterns of thinking about ourselves, others and the world around us, maintaining psychological distress. The psychological theories of depression are supported by the effectiveness of therapies like CBT, which aim to challenge negative schemas in treating depressive symptoms.

Biological theories of depression identify biological factors like genes, brain structure, and the function of neurotransmitters and hormones as the cause of depression. Biological theories stress the influence of nature in causing depression.

## METHODOLOGY

### *Aim*

To understand the relationship between depression and anxiety among diabetic patients and to assess the level of anxiety and depression in male and female.

### *Research Question*

Is there any possible relationship between depression and anxiety among diabetic patients and also to know possible gender differences?

### *Objectives*

The main objective of the study includes

- To understand the relationship between Anxiety and depression among diabetic patients
- To assess the level of anxiety and depression in male and female diabetic patients.

### *Hypothesis*

- There is no significant relationship between depression and anxiety among diabetic patients
- There is no significant gender difference of Anxiety among diabetic patients
- There is no significant gender difference of depression among diabetic patients.

### *Sample*

Present study was conducted in 60 participants aged between 18 – 80 year old. The study includes both males and females.

### *Inclusion Criteria*

- Participant should be a diabetic patient
- Age of participant should be between 18-80 year old.

### *Exclusion Criteria*

- People below or above the selected age group cannot participate in the same

- People who were diagnosed with normal range in the blood test for diabetics were also excluded in this study.

***Tools***

**1. Beck Depression Inventory**

The Beck Depression Inventory, created by Aaron T. Beck, is a 21-question multiple-choice self-report inventory, one of the most widely used psychometric tests for measuring the severity of depression.

*Reliability And Validity*

Richter (Cited by 1269)

The BDI has good reliability and validity. 12 The test-retest reliability of the BDI-II ranged from 0.73 to 0.92, which means that the scores are consistent over time. The internal consistency of the BDI-II was 0.9, which means that the items on the questionnaire relate to each other and measure the same construct.

**2. Hamilton Anxiety Scale**

The Hamilton Anxiety Rating Scale is a psychological questionnaire used by clinicians to rate the severity of a patient's anxiety. Anxiety can refer to things such as "a mental state...a drive...a response to a particular situation…a personality trait...and a psychiatric disorder."

*Validity and Reliability*

The Hamilton Anxiety Scale (HAM-A) was tested for reliability and validity in two different samples, one sample (n = 97) defined by anxiety disorders, the other sample (n = 101) defined by depressive disorders. The reliability and the concurrent validity of the HAM-A and its subscales proved to be sufficient. Internal validity tested by latent structure analysis was insufficient. The major problems with the HAM-A are that (1) anxiolytic and antidepressant effects cannot be clearly distinguished; (2) the subscale of somatic anxiety is strongly related to somatic side effects. The applicability of the HAM-A in anxiolytic treatment studies is therefore limited. More specific anxiety scales are needed.

***Ethical Issues***

No dignity was harmed during the data collection and analysed process of the participants. Participation in the study was voluntary and the participants were free to withdraw from the study at any time they felt uncomfortable. All the responses were anonymous and the responses collected were used only for educational and research purpose.

***Procedure For Data Collection***

The data for the study was collected through offline mode. scales were circulated among the participants through offline in hospital setting. Required information collected from Kerala using purposive method. The participant's were from both semi urban area and rural area. Study was conducted on diabetic patients. Screening test was administered by blood test with the help of certified medical professionals in Taluk Hospital Irinjalakuda. Those who diagnosed with diabetic was selected to participate in the study. Rapport were established initially, questionnaires were introduced. All the participants who take part in this research is from Kerala therefore mother tongue was used to debrief about the process. After the completion of data the participants were thanked and gave them the assurance about the confidentiality of their data regarding ethical issues.

***Data Analysis***

The collected data from the diabetic patients was analysed using the scoring norms of measurement scales that were employed obtaining data. The further analysis of finding the significant difference and the correlations of the variables was achieved with the help of the Statistical Package for the Social Sciences (SPSS) software tool.

T-test**:** this statistical analysis was used in comparison of the means of two variables to analyse their significant differences based on the assumptions that both variables possess the same mean.

Pearson correlation coefficient: Find out the significant relationship between anxiety and depression among diabetic patients.

***Scoring and Consolidation***

The two tools used for study is Beck Depression Inventory and Hamilton Anxiety Scale.

Beck Depression scale

The scale includes 21 questions. The 21-item self-administered. Survey is scored on a scale of 0–3 in a list of four statements arranged in increasing severity about a particular symptom of depression. depression is summed to give a single score for the Beck Depression Inventory-II (BDI-II).

**Hamilton Anxiety Scale**

The scale include 14 items. Each item is scored on a scale of 0 (not present) to 4 (severe), with a total score range of 0–56, where <17 indicates mild severity, 18-24 indicates mild to moderate and 25-30 indicates moderate to severity.

## RESULT AND DISCUSSION

***TABLE 1***

| **CORRELATION** | | | |
|---|---|---|---|
| | | **Anxiety** | **Depression** |
| Anxiety | Pearson C Sig (2tailed) | 1 | .803** |
| | N | 60 | 60 |
| Depression | Pearson C Sig (2tailed) | 0 | |
| | N | 60 | 60 |

*** Correlation is significant at the 0.01 level (2 tailed)*

Table indicates the correlations between Anxiety and depression in diabetic patients. This table reveals that Anxiety and depression are correlated. Correlation is significant at the 0.01 level (2 tailed).

***Table 2 Independent Sample T Test (Anxiety)***

| **Variable** | **Group** | **N** | **Mean Diff.** | **SD** | **t-value** | **Sig.** |
|---|---|---|---|---|---|---|
| Anxiety | Male | 30 | -3.25625 | 7.23497 | -1.092 | 0.28 |
| | Female | 30 | -3.25625 | 12.01977 | -1.219 | 0.228 |

Table 2 indicates the independent sample t test of Anxiety among diabetic patients Significant difference (2 tailed) is 0.28 which is greater than 0.05 reveals that there is no significant difference between male and female in Anxiety. So, it accept the hypothesis.

*Table 3 Independent Sample T Test (Depression)*

| Variable | Group | N | Mean Diff. | SD | t-value | Sig. |
|---|---|---|---|---|---|---|
| Depression | Male | 30 | -5.225 | 10.75517 | -1.602 | 0.115 |
| | Female | 30 | -5.225 | 11.84238 | -1.639 | 0.108 |

Table 3 indicates the independent sample t test of depression among diabetic patients. Significant difference (2 tailed) is 0.115 and 0.108 which is greater than 0.05 reveals that there is no significant difference between male and female in depression. So it accept the hypothesis.

## DISCUSSION

Diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively use the insulin it produces. Insulin is the hormone that regulates blood glucose. With diabetes, when your body doesn't make enough insulin or can't use it as well as it should. When there isn't enough insulin or cells stop responding to insulin, too much blood sugar stays in your bloodstream. Over time, that can cause serious healthy problems, such as heart disease, vision loss and kidney disease. The two variables we used in this study are depression and anxiety. Depression is a common and serious medical illness that negatively affects how you feel, the way you think and how you act. It's thought that alterations in brain chemistry tied to diabetes may be related to the development of depression. To make more clear, damage resulting from diabetic neuropathy or blocked blood vessels in the brain may contribute to the development of depression in people with diabetes. Anxiety is a feeling of fear, dread, and uneasiness. It might cause human to sweat, feel restless and tense, and have a rapid heartbeat. It can be a normal reaction to stress. For example, you might feel anxious when faced with a difficult problem at work, before taking a test, or before making an important decision. People with diabetes are 20% more likely to than those without diabetes to have anxiety at some point in their life. Managing a long-term condition like diabetes is a major source of anxiety for some. Studies show that therapy for anxiety usually works better than medicine, but sometimes both together works best. (Felix Torres, 2020)

Hypothesis of study states that there is no significant relationship between anxiety and depression among diabetic patients and also there is no significant gender differences between male and female diabetic patients. In accordance with the results obtained from the research conducted a statistical analysis has been conducted to find out the significant difference and relationship between depression and anxiety. The aim of this study was to determine the prevalence of depression and anxiety in diabetic patients. First table in result reveals the Correlation between Anxiety and depression among diabetic patients. They are correlated at the sig level of 0.01. Based on the study the null hypothesis was rejected. Some studies explain the correlation between anxiety and depression. Depression and anxiety are highly prevalent in patients with chronic disease, but remain undertreated despite significant negative consequences on patient health. A number of clinical groups have developed recommendations for depression screening practices in the chronic disease population. Study was conducted by D De Jean, M Gaicomini, M Vanstone and E Brundisini. The study concluded that the relationship between the chronic conditions and depression or anxiety can be experienced as independent or inter-related (with either one causing the other). The majority of papers find that patients tend to experience depression or anxiety as a consequence of being diagnosed with a chronic disease, some studies highlight the experience from anxiety or depression to chronic disease, and others describe a cyclical relationship between the two. Some patients with chronic disease sense no relationship

between their chronic disease and mental health conditions. Patients may be reluctant to acknowledge depression or anxiety as a separate condition. Clinicians' tendency to highlight the link between chronic disease and depression or anxiety can lead to the normalization of these experiences and make it more difficult for patients to recognize anxiety or depression as separate conditions. The overlapping physical symptoms of chronic disease and depression or anxiety also make formal diagnosis difficult More qualitative research is needed to specifically address screening for depression or anxiety, and the effect of depression or anxiety (and their treatments) on the chronic disease and its outcomes. *(Ontario health technology assessment series 13 (16), 1, 2013)*

Table 2 displays the independent sample t test of Anxiety among diabetic patients. Hypothesis states that there is no significant gender difference of Anxiety among diabetic patients. It reveals that the significant (2 tailed ) is greater than 0.05 which implies that there is no significant gender differences of Anxiety among diabetic patients. Therefore, based on the research finding the null hypothesis is accepted.

Table 3 represents the independent sample t test of depression among diabetic patients. Hypothesis states that there is no significant gender difference in depression among diabetic patients. It indicates that the 2 tailed sig is greater than 0.05 so there is no significant gender differences among diabetic patients. Therefore, based on the research finding the null hypothesis is accepted.

To conclude the findings diabetes diagnosis can be a life altering event. Whether it be type 1 diabetes where the body does not make any insulin at all or type 2 diabetes when the pancreas makes some insulin but not enough, it can mean changes to their lifestyle that you may not be ready for and can also be hard on relationships with friends or family. As human establish a new routine it is important to establish good habits in managing your mental health. Proper diabetes management requires awareness of your symptoms. Just human take insulin to ensure their blood glucose levels are where they should be, it's important to take measures to prevent mental health crises by being aware of how human are feeling mentally and emotionally. Just like taking care of your body, taking care of their mind is equally as important to living a healthy life. When left untreated, mental health conditions like depression and anxiety can make diabetes worse. Likewise, existing diabetes can make mental health conditions worse. A diabetes diagnosis can feel like not just a threat to health, it can also seem like a threat to a person's way of life, because managing diabetes means making changes to your day-to-day routine. Your doctor might instruct you to change your diet by eating certain kinds of foods, avoiding sugary beverages, or restricting alcohol intake which can be difficult for anyone regardless of a diabetes diagnosis. Added responsibilities like tracking blood glucose and insulin can be hard to remember at first, doctors' appointments can cause time away from work, and the costs of appropriate care may be burdensome. These changes can be emotionally draining, and you might start to notice that you are feeling a bit off or have very little energy left to carry out important tasks to managing your condition. One of the biggest challenges to treatment of mental health conditions for people with diabetes is low rates of detection. Up to 45 percent of mental health conditions and cases of severe psychological distress go undetected among patients being treated for diabetes. Diabetes treatment teams need to be aware of the mind-body connection and ensure whole person care. One way of doing this is by conducting regular screenings for mental health conditions during office visits. It is estimated that only around 1/3 of people with diabetes and mental health conditions receive a diagnosis and proper treatment. This may be because the signs and symptoms that people experience when their

blood sugar is too high or too low can be confused for depression or anxiety. People with diabetes also may face stigma in talking about their feelings of depression and tend not to talk about them at appointments. The American Diabetes Association standards of care recommend that treatment teams be complete with a mental health professional with expertise with the disease, and for people to be regularly screened. However, the reality is that few diabetes clinics provide mental health screening or integrate behavioural health services. That's where online screening can help. Mental health screens are a quick, easy way to figure out if what you are feeling could be a mental health condition. A diabetes diagnosis can cause prolonged stress which may possibly cause a rise in blood sugar. Stress can also make following your diabetes maintenance routine more difficult. Experts suggest looking for patterns; be aware of your stress level each time you log your blood sugar and see if a pattern emerges. If you notice a pattern, you can learn to spot your stress warning signs and take action to prevent stress and keep your blood sugar low. This may mean working with a professional to learn relaxation and coping techniques. Just as diabetes therapy must be reviewed and adjusted frequently in order to find a long-term solution to care, finding the right mental health treatment can take time and be a process of trial and error. Like with many other chronic conditions, the sooner you get help, the better.

The aim of study was to understand the significant relationship between anxiety and depression among diabetic patients and to assess the significant gender difference among diabetic patients. Hypothesis formulated as there is no significant relationship between anxiety and depression among diabetic patients. According to the study finding the null hypothesis is rejected. Second hypothesis states that there is no significant gender differences in Anxiety among diabetic patients. Based on study finding the null hypothesis is accepted. Third hypothesis states that there is no significant gender differences in depression among diabetic patients. Study proves that the null hypothesis is accepted.

## SUMMARY AND CONCLUSION

### *Conclusion*

The purpose of study was to understand the relationship between Anxiety and depression among diabetic patients. Data were collected through Beck depression inventory and Hamilton Anxiety scale. Here the study reveals that anxiety and depression are highly correlated at significant level of 0.01. It indicates that there was no significant difference in male and female. Study proves that there was relationship between anxiety and depression among diabetic patients.

### *Tenability of Hypothesis*

**Hypothesis Tenability**

| | |
|---|---|
| Hypothesis 1<br>There is no relationship between anxiety and depression among diabetic patients | Rejected |
| Hypothesis 2<br>There is no significant gender differences in Anxiety among diabetic patients. | Accepted |
| Hypothesis 3<br>There is no significant gender differences in depression among diabetic patients. | Accepted |

***Implication***

Psychological effects such as depression and anxiety have adverse effect on people, some of the effects includes negative thoughts, insomnia, increased or reduced hunger and loss of interest in activities once they used to love. Not being aware of the problems that they face and not seeking help on time can be fatal. Not knowing the underlying cause hinder the treatment process so through this study one of the reasons for depression and anxiety in women is understood.

***Limitations***

- The result of the current study can't be generalised since the study was exclusively conducted on residents of Kerala.
- The research was exclusively analysed quantitatively to find the anxiety and depression among diabetic patients.

***Suggestions For Further Study***

- The study mainly focused on the diabetic population in the hospital settings of it were extended out of the hospital setting it can be resulted in getting more accurate data (information).
- The data collected from the population ranges from the age group of 18-80 which is wide age group if it were focused to a particular age group information collected can be more specified

## REFERENCES

Bădescu, S. V., Tătaru, C., Kobylinska, L., Georgescu, E. L., Zahiu, D. M., Zăgrean, A. M., & Zăgrean, L. (2016). The association between diabetes mellitus and depression. Journal of medicine and life, 9(2), 120.

Bădescu, S. V., Tătaru, C., Kobylinska, L., Georgescu, E. L., Zahiu, D. M., Zăgrean, A. M., & Zăgrean, L. (2016). The association between diabetes mellitus and depression. *Journal of medicine and life*, *9*(2), 120.

Birhanu, A. M., Alemu, F. M., Ashenafie, T. D., Balcha, S. A., & Dachew, B. A. (2016). Depression in diabetic patients attending university of gondar hospital diabetic clinic, Northwest Ethiopia. Diabetes, Metabolic Syndrome and Obesity: Targets and Therapy, 9, 155.

Castro, R. (2014). Diabetes and depression: Coping with the two conditions. *Mayo clinic. Retrieved from www. mayoclinic. org*.

Clarke, D. M., & Currie, K. C. (2009). Depression, anxiety and their relationship with chronic diseases: a review of the epidemiology, risk and treatment evidence. Medical Journal of Australia, 190, S54-S60.

DeJean, D., Giacomini, M., Vanstone, M., & Brundisini, F. (2013). Patient experiences of depression and anxiety with chronic disease: a systematic review and qualitative meta-synthesis. *Ontario health technology assessment series*, *13*(16), 1.

Hermanns, N., Kulzer, B., Krichbaum, M., Kubiak, T., & Haak, T. (2006). How to screen for depression and emotional problems in patients with diabetes: comparison of screening characteristics of depression questionnaires, measurement of diabetes-specific emotional problems and standard clinical assessment. Diabetologia, 49(3), 469-477.

Stringaris, A. (2017). What is depression?. *Journal of Child Psychology and Psychiatry*, *58*(12), 1287-1289.

Talbot, F., & Nouwen, A. (2000). A review of the relationship between depression and diabetes in adults: is there a link?. *Diabetes care*, *23*(10), 1556-1562.

Woon, L. S. C., Sidi, H. B., Ravindran, A., Gosse, P. J., Mainland, R. L., Kaunismaa, E. S., ... & Leong Bin Abdullah, M. F. I. (2020). Depression, anxiety, and associated factors in patients with diabetes: evidence from the anxiety, depression, and personality traits in diabetes mellitus (ADAPT-DM) study. *BMC psychiatry*, *20*(1), 1-14.

World Health Organization. Department of Mental Health, Substance Abuse, World Health Organization, World Health Organization. Department of Mental Health, Substance Abuse. Mental Health, World Health Organization. Mental Health Evidence, & Research Team. (2005). *Mental health atlas 2005*. World Health Organization.

Young, A. S., Klap, R., Sherbourne, C. D., & Wells, K. B. (2001). The quality of care for depressive and anxiety disorders in the United States. *Archives of general psychiatry*, *58*(1), 55-61.

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***Conflict of Interest***

The author(s) declared no conflict of interest.

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