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Mental Health Wellness in the Latino Population: Improving PHQ-9 scores in Depressed Patients with Comorbid Type II Diabetes

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Mental Health Wellness in the Latino Population: Improving PHQ-9 scores in Depressed

Patients With Comorbid Type II Diabetes

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Abstract

Major depressive disorder is one of the most common mental health conditions. In the United

States, 8.1% of the population have symptoms of depression. Patients with diabetes are 2–3

times more likely to experience symptoms of depression compared to the general population.

Having these chronic conditions simultaneously can cause complications in both. The purpose of

this study was to improve depression scores for patients who have comorbid type II diabetes.

This project took place in a rural community with the Latino population. The nurse practitioner

led an evidence-based practice project implementing treatment of depression with medication

management, individual psychotherapy, and increase in physical activity. Patient Health

Questionnaire 9 (PHQ-9) scores and hemoglobin A1c results were collected at the start of

treatment and were monitored for improvement. After 3 months, results showed 80%

improvement in PHQ-9 scores and 55% improvement in hemoglobin A1c levels with the

treatment of depression and encouragement of self-care activities. Empowering patients with

self-care activities to improve their mental health should be included in the plan of care for

patients with depression and diabetes. Health care providers must educate how mental health can

also affect physical health. We all need to work cohesively towards removing the stigma of

mental health.

Keywords: Depression, diabetes, stigma, treatment, rural, PHQ9, HgbA1c, major

depression, type II diabetes

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Background

Major depressive disorder (MDD) is one of the most common mental health illnesses nationwide. Individuals who have depression suffer from persistent feelings of sadness and hopelessness and loss of interest in activities they once enjoyed (Truschel, 2022). In addition to emotional symptoms, physical symptoms can also be present in MDD. These symptoms can include fatigue, pain, and poor appetite (*Diagnostic and statistical manual of mental disorders: DSM-5,* 2017). The *Diagnostic and Statistical Manual of Mental Disorders* (*5th Edition*; DSM-5) criteria to diagnose depression include depressed mood, diminished interest in pleasure in all or almost all activities, significant weight loss or weight gain without trying, decreased or increased appetite, fatigue and reduction of physical movement observed by others, feelings of worthlessness or excessive guilt, diminished ability to think or concentrate, and recurrent thoughts of not wanting to live, recurrent suicide ideations without a specific plan, or suicide attempt (*Diagnostic and statistical manual of mental disorders: DSM-5,* 2017). Symptoms must be present most of the day or nearly every day for more than 2 weeks for diagnosis.

MDD is caused by the depletion of the neurotransmitters serotonin, norepinephrine, or dopamine in the central nervous system (National Institute of Health, 2022). The exact cause of MDD is unknown; however, risk factors include family history of depression, significant life events such as trauma, times of high stress, loss of a job or relationship, illness, or death of a loved one (National Institute of Health, 2022). According to the U.S. Centers of Disease Control and Prevention (CDC), 8.1% of people over the age of 18 have symptoms of depression. Of the

patients who visit their primary care providers, 10.6% of patients have symptoms of depression documented in their medical record.

Mental health continues to be stigmatized and is a worldwide health condition. Patients are often reluctant to discuss their mental health in fear of being treated differently or even worse, being told they just need to snap out of it. During the recent pandemic, more patients have reported symptoms of depression. This increase could be attributed to isolation or having to quarantine from their extended families (CDC, 2022). Patients with diabetes are 2–3 times more likely to experience symptoms of depression compared to the general population. Having both these chronic conditions simultaneously can cause complications if not treated. Dealing with a mental illness can be difficult to cope with alone, although when you add either a new diagnosis of diabetes or the existing diagnosis, this could make coping more challenging.

Research has found there is a correlation between diabetes and depression. Badescu et al. (2016) stated the prevalence of depression is much higher in patients who have a diagnosis of diabetes. It is important patients with diabetes are screened properly for symptoms of depression. If diabetic patients are identified as having any type of depression, treatment should begin immediately. Several symptoms that patients with depression suffer from could also affect their compliance to treatment plan for diabetes. Patients who are experiencing symptoms of depression are often seen by their primary care provider first, which makes it important to screen for depression in the primary care setting. Evidence shows treatment of depression can lower hemoglobin A1c (HgbA1c) levels (Devarajooh, 2017). Screening for depression in the primary care setting increases access to treatment.

Purpose

The purpose of this project was to improve depression scores for patients who have comorbid type II diabetes. Working in a rural community with a high population of Latino patients, there is a high incidence of type II diabetes. Many patients present to their primary care providers for their medical care have pronounced symptoms of depression. There is a lack of mental health providers nationwide and even more so within rural communities (Ali, 2020). Talking about mental health with patients in the primary care setting can help reduce the stigma that is associated with mental illness.

Methods

This project analyzed a collection of data from a rural private practice within a Latino community. A chart review was conducted using electronic medical records to identify patients who were being treated for both depression and type II diabetes. These patients were screened using the baseline patient health questionnaire (PHQ-9) scores as well as collecting HgbA1c levels.

During the next 3 months, patients' depressive symptoms were monitored and treatment for depressive symptoms were adjusted per guidelines. At each follow up visit, patients were also given reinforcement and encouraged to participate in self-care activities. These self-care activities included healthy eating, sleep hygiene, and physical activity. At the end of the 3-month period, PHQ-9 and HgbA1c levels were reassessed.

Ethical Considerations

This study was approved by the institutional review board of the University of San Diego, Hahn School of Nursing.

Results

Over the period the project was conducted, there were a total of 30 patients identified who were eligible to participate. The results show there were 20 patients who remained throughout the course of the project. The patients who were involved in the project were all Latino. The insurance carrier the patients had was managed care. The majority of patients were female and the median age was 45 years of age. At the end of the 3-month period results showed an 80% improvement in PHQ-9 scores (see Table 1) and a 55% improvement in HgbA1c levels (see Table 2) with the treatment of depression and encouragement of self-care activities.

Conclusion

This project shows medical providers should be routinely assessing for symptoms of depression in patients with diabetes and educate them about treatment options. Encouraging self-care activities such as healthy diet, exercise, and sleep hygiene can also be helpful to improve symptoms of depression. Patients in the primary care setting need to be routinely monitored for depressive symptoms, not only patients with diabetes. Empowering patients with self-care activities to improve their mental health should be included in the plan of care for patients with depression and diabetes. Healthcare providers must educate how mental health can also affect physical health. Lastly, we all need to work cohesively towards removing the stigma of mental health within our community.

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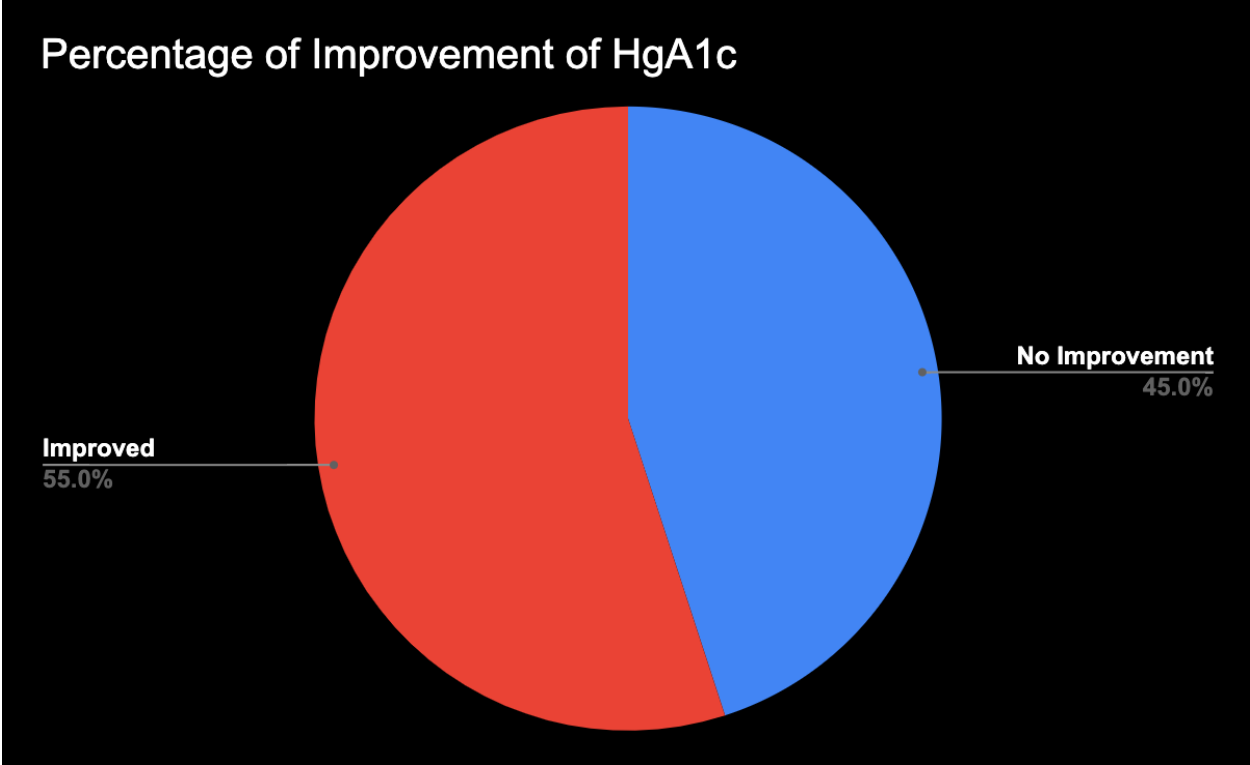
Appendix

Table 1

Percentage of improvement in PHQ-9

Table 2

Percentage of improvement in HgbA1c