Doctor of Nursing Practice at The University of Texas at El Paso

"UTILIZING PHQ9 TO STANDARIZE HEALTHCARE ASSESSMENTS"
8TH ANNUAL DNP PROJECT SYMPOSIUM- MAY 13, 2020

COHORT VIII

Angela Wooley, MSN, APRN, FNP-BC

- Chairperson Hector R. Morales, DNP, APRN, PMH/CS-BC

UTEP | 500 W. UNIVERSITY AVE. EL PASO, TEXAS 79968

Utilizing PHQ-9 to Standardize Healthcare Assessments

Angela M. Wooley, APRN, MSN, FNP-BC

Dr. Hector Morales

DNP Scholarly Project

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Abstract

Depression is a serious condition that if left untreated can lead to life threatening situations. Healthcare providers are responsible for recognizing and assessing those individuals dealing with depression. Screening tools have been shown to be beneficial in assisting healthcare providers to identify those individuals meeting the depression criterion. The PHQ-9 is a self-administered screening tool that has shown to be reliable and valid in screening individuals for depression in most healthcare settings. The PHQ-9 was utilized in this project and, as shown by evidence-based practice, can assist clinicians in assessing for depression and provide valuable information regarding the severity of an individual's depression. Prior to my DNP project, my healthcare assessments were performed without knowing the level of depression severity secondary to individuals were screened based on my professional experience only. I worked with the general adult population ages 18-99+ in a psychiatric hospital and utilized the PHQ-9 screening tool, which resulted in 62 patients being screened. All patients yielded positive outcomes with minimal to severe depression severity scores. Utilizing the PHQ-9 improved my overall healthcare assessment by providing concise and tangible evidence of depression severity screening results.

Keywords: depression, PHQ-9, severity, evidence-based, screening tools

Utilizing PHQ9 to Standardize Healthcare Assessments

Introduction

Depression is becoming an increasing societal concern with the number of suicide rates rising in recent years, and a vast majority of these numbers have been contributed to mental health conditions. Clinical depression is defined as a mental health disorder characterized by persistently depressed mood or loss of interest in activities causing significant impairment in daily life. Depression affects an estimated one in 15 adults (6.7%) in any given year, and one in six people (16.6%) will experience depression at some time in their life (Parekh, 2017). The possible causes of depression are linked to a combination of biological, psychological and social sources of distress. Depression has been ranked as the leading cause of disability and premature death among people aged 18 to 44 worldwide and is expected to be the second leading cause of disability for people of all ages by 2020 (DeJesus et al, 1999). Symptoms of depression may include change in appetite, sleep behavioral changes, decreased libido, fatigue, loss of interest in activities, feeling worthless, decreased concentration, depressed mood or thoughts of suicide, which symptoms last for more than 2 weeks.

There are medical conditions that can contribute to depressive symptoms, so it is important for a clinician to rule out medical condition such as abnormal thyroid levels, brain tumors, or vitamin deficiencies. Endocrine and reproductive system disorders (Anxiety and Depression Association of America, 2020) are commonly associated with depressive symptoms. For example, people with low levels of the thyroid hormone (hypothyroidism) often experience fatigue, weight gain, irritability, memory loss, and low mood (Anxiety and Depression

Association of America, 2020). Clinicians should stress the importance of regular checkups to detect abnormalities and provide early intervention.

Suicide. Suicide has been increasing at alarming rates and providers are at the forefront for screening for depression. As reported by the National Institute of Mental Health (NIMH, 2020), "Suicide was the second leading cause of death among individuals between the ages of 10 and 34, and the fourth leading cause of death among individuals between the ages of 35 and 54." Some of these individuals may encounter a healthcare professional at some time in their struggle with depression, and it is important for clinicians to recognize, assess, and treat individuals who are positive for depressive symptoms. In 1996, suicide was the ninth leading cause of death among all persons in the United States. Adults aged greater than or equal to 65 years accounted for 13% of the U.S. population in 1996, yet nearly one fifth of U.S. suicides (Centers for Disease Control and Prevention, 2018). According to the New Mexico Department of Health, (2018), 491 New Mexicans died by suicide, an age-adjusted rate of 23.2 deaths/100,000 residents in 2017. New Mexico's rate has consistently been more than 50% higher than the U.S. rate, and its overall rate increased to 28.2% from 2009-2017 (New Mexico Department of Health, 2018).

An individual may experience mental disorders that can be in relation to or contribute to suicide secondary to underlying depression such as alcohol abuse, substance abuse, sleep disturbance, or anxiety disorders. Over 50% of all people who die by suicide suffer from major depression. This figure rises to over 75% when alcoholics who are depressed are included (American Foundation for Suicide Prevention, 2020). Suicidologists regularly state that suicide is not caused by a single factor; however, suicide prevention is often oriented toward mental health conditions alone with regard to downstream identification of suicidal persons, treatment of mental health conditions, and prevention of reattempts (Stone et al, 2018). Suicide is associated

with having a mental illness and/or substance use diagnosis, psychosocial trauma or conflict, recent loss, family history of suicide and personal history of suicide attempt (New Mexico Department of Health, 2018).

Anxiety disorders. The Anxiety and Depression Association of America (ADAA) reported that in the United States, around one in five people with anxiety or a mood disorder such as depression also have an alcohol or substance use disorder (Leonard, 2019). Clinicians need to ensure substance abuse is not an issue when treating patients with depression. Depression can trigger these disorders and substance abuse can bring about depression and anxiety.

Sleep disturbance (insomnia). According to the National Sleep Foundation, people with insomnia are 10 times more likely to have depression than those without the condition (Leonard, 2019). It is important for clinicians to ensure their patients are receiving adequate amounts of rest. The relationship between sleep and depressive illness is complex – depression may cause sleep problems and sleep problems may cause or contribute to depressive disorders (National Sleep Foundation, 2020). It is important for clinicians to determine whether insomnia is secondary to depression or whether the insomnia is the primary cause of the depression. Evidence suggests that people with insomnia have a ten-fold risk of developing depression compared with those who sleep well. Depressed individuals may suffer from a range of insomnia symptoms, including difficulty falling asleep (sleep onset insomnia), difficulty staying asleep (sleep maintenance insomnia), unrefreshing sleep, and daytime sleepiness (National Sleep Foundation, 2020).

Substance Abuse or Misuse Disorder. Multiple individuals admit to the psychiatric unit with ETOH abuse and drug addictions. The focus of care usually turns to alcoholism or the drug being abused, and if any underlying depression exists, it may not be addressed. It is important to

understand the significance of co-occurrence of depression and alcohol use disorders since this may explain why majority of cases relapse after treatment for alcohol dependence (Kurla et al, 2012). Screening for depression in these individuals take priority because, if there is untreated depression, the patient may be re-hospitalized for the same diagnosis of alcohol abuse. Co-occurring disorders require coordinated treatment for both conditions, as alcohol can worsen depressive symptoms (National Alliance and Mental Illness [NAMI], 2017). Multiple studies have been conducted to show strong correlation between alcohol use and depression with a high incidence of recurring and relapse in untreated depression. There are two possible explanations for the association between alcohol use disorders and major depression; firstly, it may be that both disorders have common underlying genetic and environmental factors that jointly increase the risk of both disorders (Kurla et al, 2012).

Mental Health Illness. Individuals who are not being treated for their mental illnesses and those who have combined substance misuse disorders affect our society by placing more financial burden onto the nation (**See Figure 1**). Depression and anxiety have a significant economic impact; the estimated cost to the global economy is US$ 1 trillion per year in lost productivity (World Health Organization, 2020). Without proper treatment, these individuals may get involved in criminal activity that directly affects our communities. Depressive disorders are still underrecognized in medical settings despite major associated disability and costs (Manea et al, 2012). Before deciding on treatment, the clinician must carefully evaluate those with scores indicative of depression for coexisting situational issues such as suicidal thoughts; substance use; medical illnesses presenting with anergy, insomnia, or anorexia; or comorbid psychiatric condition (DeJesus, 2007).

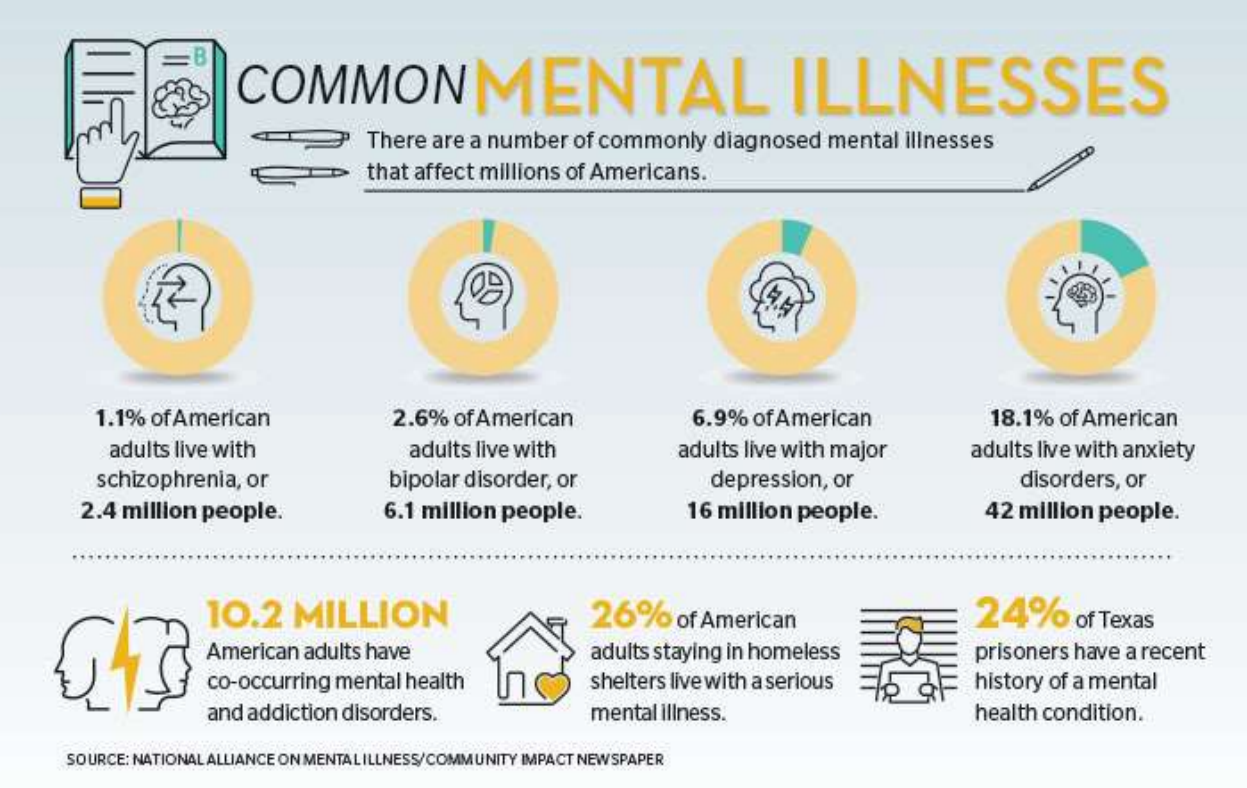


Figure 1. Common Mental Illnesses (Community Impact Newspaper, 2017).

Depression screening. The United States Preventive Services Task Force (USPSTF, 2020) is an independent, volunteer panel of national experts in disease prevention and evidence-based medicine. Healthcare providers should provide assessment screenings for depression. The USPSTF recommends routine screen to ensure an adequate treatment plan for individuals suffering from mental and substance abuse disorders. The Task Force recommends screening for depression in the general adult population, including pregnant and postpartum women (USPSTF, 2020). Screening allows early intervention and helps decrease relapse in other mental disorders such as major depression, persistent depression, and alcohol and substance abuse. Several evidence-based tools are available to assist clinicians in screening for depression. The USPSTF found convincing evidence that treatment of adults and older adults with depression identified through screening in primary care settings with antidepressants, psychotherapy, or both

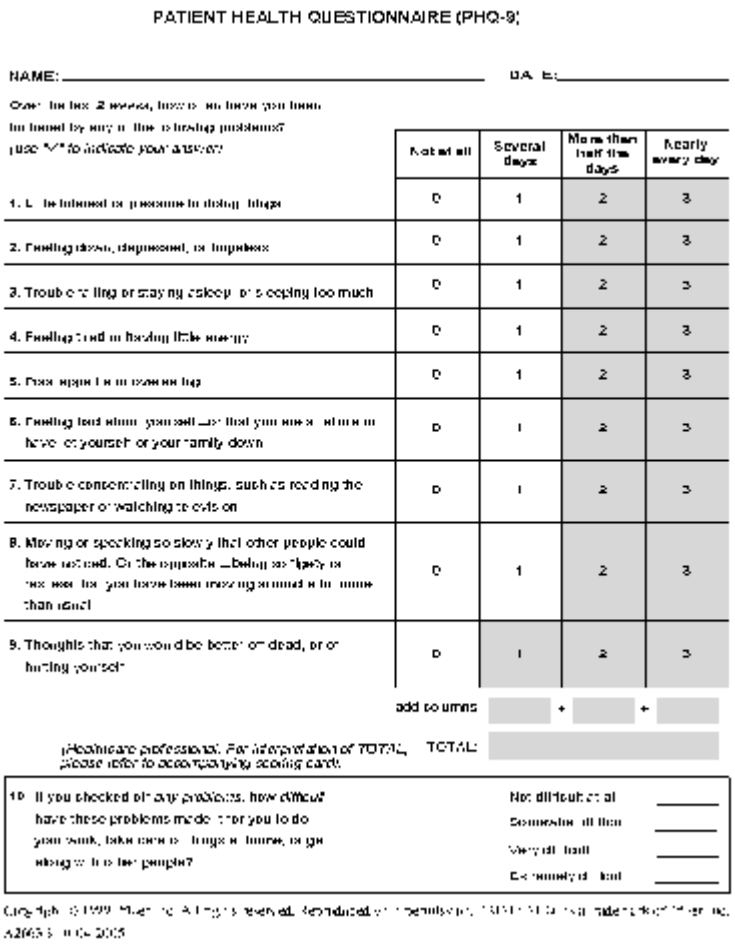
decreases clinical morbidity (USPSTF, 2020). The USPSTF does not determine which screening tool to utilize and states there are several tools to choose from for depression screening purposes.

Accuracy in assessing. In a psychiatric hospital setting, it is important to ensure the accuracy of depression screening when performing a medical history and physical examination. Providers are required to screen thoroughly when completing an initial assessment and to ensure depression is addressed during the visit. All positive screening results should lead to additional assessment that considers severity of depression and comorbid psychological problems (eg, anxiety, panic attacks, or substance abuse), alternate diagnoses, and medical conditions (Sui, 2016). Currently in this psychiatric population, I am not following recommended guidelines, which the USPSTF states clinicians are recommended to assess the general adult population for depression. The USPSTF recognizes that clinical decisions involve more considerations than evidence alone. Clinicians should understand the evidence but individualize decision making to the specific patient or situation (Sui, 2016). Utilizing the PHQ-9, provides tangible evidence of an assessment and meets recommended criterion of assessing adult patients. The USPSTF recommends screening in all adults regardless of risk factors. However, a number of factors are associated with an increased risk of depression (USPSTF, 2020).

Improving Healthcare Assessment. In order to improve the overall health assessment, it is important to apply a depression screening tool when screening adult patients between the ages of 18-99+ to determine depression status. After I reviewed several depression tools, the Patient Health Questionaire-9 (PHQ-9) was found to be a frequently utilized screening tool for depression amongst adults secondary to its reliability and validity. In using the PHQ-9 in the psychiatric setting, the correlating results will lead the assessor to determine whether treating for depression in patients with substance abuse, anxiety disorders, or sleep disorders is warranted.

Depression is among the most treatable of psychiatric illnesses. Between 80% and 90% of people with depression respond positively to treatment, and almost all patients gain some relief from their symptoms. However, depression first has to be recognized (National Association for Suicide Prevention, 2020).

PHQ-9 history. The Patient Health Questionnaire-9 (PHQ-9) was developed as a self-administered, diagnostic screening instrument used by healthcare professionals for assessing and monitoring depression severity (Spitzer et al, 2014). The PHQ-9 tool was created as a quick method to screen for major depression. It is also one of many tools that concentrate on multiple mental health symptoms associated with depression and other mental health disorders. PHQ-9 consists of the nine diagnostic criteria items of DSM-IV major depressive episode. Therefore, it has good logical validity for the DSM-IV diagnosis of major depressive episode (Inoue et al, 2012). The PHQ-9 (**See Figure 2**) is one version of the Patient Health Questionnaire family of brief, diagnostic measures for five common types of mental disorders: depression, anxiety, somatoform, alcohol, and eating (Spitzer et al, 2014). While the PHQ-9 is a screening tool, the questions within it align with the American Psychiatric Association's (APA), *Diagnostic and Statistical Manual of Mental Disorders Fifth Edition* (DSM-V) criteria for major depressive disorder. It can guide the provider to an accurate depression severity and can be used as a meaningful tool for follow up monitoring of symptoms at subsequent visits (Spitzer et al, 2014). The PHQ-9 is specific for adult patients in any clinical setting. Although one might argue that such a brief self-report screening test is not necessary for specialist psychiatrists, various self-administered questionnaires are often used before a psychiatric interview, even in clinics specializing in psychiatric treatment (Inoue, 2012).



PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME: _____ DATE: _____

Over the last 2 weeks, how often have you been bothered by any of the following problems? (use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3
	add columns		+	+
(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card).		TOTAL:		

10. If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all _____
Somewhat difficult _____
Very difficult _____
Extremely difficult _____

Figure 2. PHQ-9 questionnaire, (USPSTF, 2020).

Description of the Problem

In order to determine if any issues existed in the psychiatric population, the doctoral program at The University of Texas required documentation of all work performed within a 10-day work period. My project focus site was at the Peak Behavior Center in Santa Teresa, New Mexico. There were several areas of concern that could be identified as a quality improvement initiative. After careful review of the 10-day reflective practice data collection process, three PICOT questions related to clinical concerns were formulated for a possible quality improvement project. These questions were discussed with the program's chair, and one question was selected

for the quality improvement (QI) process. QI is a systematic, formal approach to the analysis of practice performance and efforts to improve performance. The majority of the patients within this population were adults between the ages of 18-99+ and recognized to have different mental health condition including schizophrenia, bipolar disorder, alcohol abuse, major depression disorder, substance abuse, and psychosis.

Observed concerns. The depression screening being done by myself as a provider during the initial encounter with newly admitted patients included questions asked based on professional experience. There were patients admitted to this setting with multiple diagnoses including major depressive disorder, alcohol abuse, unspecified psychosis, schizophrenia, and bipolar depression without an assessment screening documented within their previous or existing medical record. Initial depression screening of patients should be done upon initial face-to-face assessment by myself as a clinician. This discovery led me to concerns of not following current clinical guideline recommendations of assessing general adult patients for depression. Previously, during the assessment process, I would elicit questions from the patient while performing the medical and history examination regarding depression. These questions would be random without any constructive or organizational pattern. Based on the patient response, I could determine if the patient exhibited depressive behavior. This method did not provide a documented assessment validating depression severity. Those individuals scoring 10 or higher are considered to have major depressive disorder. The PHQ-9 was found to have acceptable diagnostic properties for detecting major depressive disorder for cut-off scores between 8 and 11 (Manea, 2012). The PICO question selected was as follows:

P-Adult population ages 18-99 admitted to psychiatric facility with depression symptoms

I-utilize PHQ9 assessment screening tool

C-assessment based on professional experience only

O-Determination of level of depression severity

T-within 2 hours

The USPSTF concludes with at least moderate certainty that there is a moderate net benefit to screening for depression in adults, including older adults, who receive care in clinical practices that have adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up after screening (USPSTF, 2020). Screening tools become part of a patient's permanent record and provides documentation that an initial assessment was completed upon a patient's admission. After thorough reflection and review with the program's chair, a conclusion was made to incorporate the PHQ-9 screening tool into the initial admission medical history and physical examination to determine if the depression score correlates with the current severity being exhibited.

Evidence-based articles were selected regarding the accuracy and validity of the Patient Health Questionnaire-9 (PHQ-9) in screening adults for depression in a healthcare setting. The PHQ9 was determined to be a quick, reliable tool that would provide a screening assessment from the medical clinician to support initial depression status by identifying the severity upon admission. The inability to provide an initial depression assessment can lead to an unfavorable treatment plan in the care of a patient. The Patient Health Questionnaire-9 (PHQ-9) was developed in 1999 as a self-report version of the Primary Care Evaluation of Mental Disorders (PRIME-MD), which was designed for criteria-based diagnosis of several mental disorders that are commonly encountered in primary care (Inoue et al, 2012). Implementing an initial depression screening would ensure all patients are screened on admission and the severity of the depression will be identified and treated accordingly.

Literature Review

The purpose of researching literature was to determine if the PHQ-9 provided efficacy as a depression assessment tool and whether it was reliable to determine depression severity. This serves as a guide in the process of the literature research. An electronic search was conducted through UTEP library under nursing which lead to academic EBSCO and CINAHL databases. CINAHL yielded 20 articles and EBSCO yielded 10 articles regarding the PHQ-9. There were three main articles selected and utilized in this project. The articles chosen were systematic reviews and meta-analysis.

The consensus of the literature reviewed reports the PHQ-9 is a reliable and valid tool that can be utilized to assist in the diagnosis of depression in different healthcare settings. The literature did not provide much guidance on improving depression assessment in the psychiatric setting. However, the literature did provide insight on how the PHQ9 is beneficial when utilized on initial assessment and subsequent visits. The validity for screening against the DSMIV diagnosis of major depression, reliability, and feasibility of PHQ-9 is regarded as excellent (Inoue et al, 2012).

The aim of all the studies was to determine the accuracy of the PHQ-9 in diagnosing major depressive disorder and to determine if an individual requires medical treatment. The literature discussed how the PHQ-9 results would give a score which would correlate with the severity of the depression the patient is exhibiting. Scoring the PHQ-9 is a relatively straightforward process. In scoring, the clinician reviews the responses and applies a diagnostic algorithm provided at the bottom of the questionnaire (Spitzer et al, 2014). (**See Figure 3**). This acts as a simple guideline as to whether medical intervention is required, an order for mental health referral is recommended, or whether the current treatment plan requires adjustment.

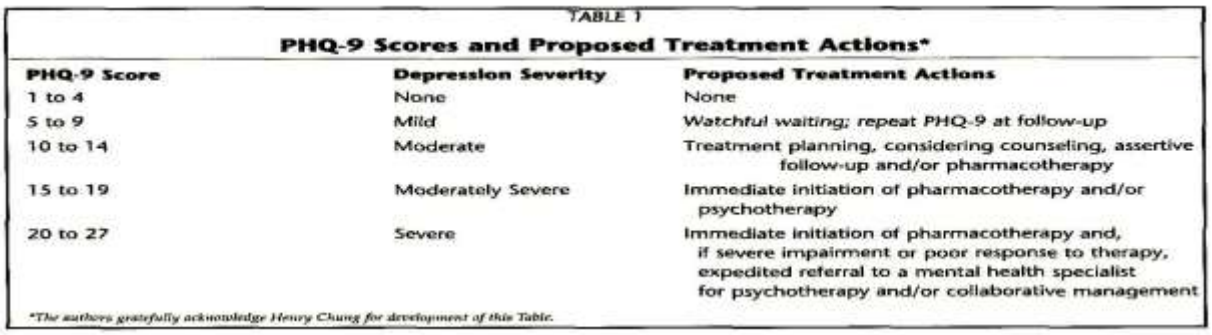


TABLE 1

PHQ-9 Scores and Proposed Treatment Actions*

PHQ-9 Score	Depression Severity	Proposed Treatment Actions
1 to 4	None	None
5 to 9	Mild	Watchful waiting; repeat PHQ-9 at follow-up
10 to 14	Moderate	Treatment planning, considering counseling, assertive follow-up and/or pharmacotherapy
15 to 19	Moderately Severe	Immediate initiation of pharmacotherapy and/or psychotherapy
20 to 27	Severe	Immediate initiation of pharmacotherapy and, if severe impairment or poor response to therapy, expedited referral to a mental health specialist for psychotherapy and/or collaborative management

*The authors gratefully acknowledge Henry Chung for development of this Table.

Figure 3. PHQ-9 algorithm **(USPSTF, 2020).**

Based on the findings in the literature, the PHQ-9 would be a quick and concise way to assess all adult patients for depression and standardize the health assessment of the population. The PHQ-9 provides capability of meeting clinical guideline recommendations by assessing all adult patients to determine if they meet criteria for depression. Once the PHQ-9 is completed, it provides a score at the end of the questionnaire with a correlation of depression severity, which reflects what depression severity level patients are experiencing at that given time.

Keywords: depression screening, psychiatric facility screening tool, validity PHQ-9, systematic reviews, meta-analysis, research articles

Project Design

The QI project was located at Peak Behavioral Center in Santa Teresa, New Mexico. This facility serves both pediatric and adult populations that have been diagnosed with mental health conditions. The pediatric population was excluded in this project because a separate clinician provides care to that population. The QI project would primarily focus on the three units housing the adult patients.

After reviewing and concluding from the research and 10-day reflective findings, the facility Chief Executive Officer (CEO) at the Peak Behavioral Center was approached with my proposed project of assessing the adult population for depression with the initial history and physical

examinations. The CEO was informed that the depression assessment would be performed on adults between the ages of 18-99+ in the psychiatric setting by utilizing the PHQ-9 depression assessment screening tool. The CEO was informed that the project's purpose would be to provide evidence of a depression screening being performed on admission and would also serve as a form of communication between providers concerning the depression status. The CEO felt the proposed project was a great clinical observation and gave permission to proceed with the project. At that point, a collaborative agreement letter was signed by the CEO approving the QI project to be initiated at my facility site. The next step was to send the QI application describing the QI project to the institutional review board (IRB) for The University of Texas-El Paso. The IRB is an administrative body established to protect the rights and welfare of human research subjects recruited to participate in research activities conducted under the auspices of the institution with which it is affiliated. The IRB reviewed the QI proposal and returned a letter stating my project was "Not Research".

Lean Six Sigma Model. The lean six sigma model, also referred to as the DMAIC, a translational framework model, was utilized as a guide throughout the project. DMAIC is a shortened phrase to describe the purpose of the framework, which stands for define, measure, analyze, improve, and control. The lean six sigma model was developed in the early 1980's by the founders of Motorola, William B. Smith and Robert S. Galvin, and was created to solve issues that were occurring at their company. The founders overall purpose was to improve their overall process, reduce defects, and improve customer satisfaction. The Lean Six Sigma Model (**See Figure 4**) outlined the key components of what needed to be addressed in the project.

Figure 4. Lean Six Sigma Framework **(goleansixsigma.com, n.d.).**

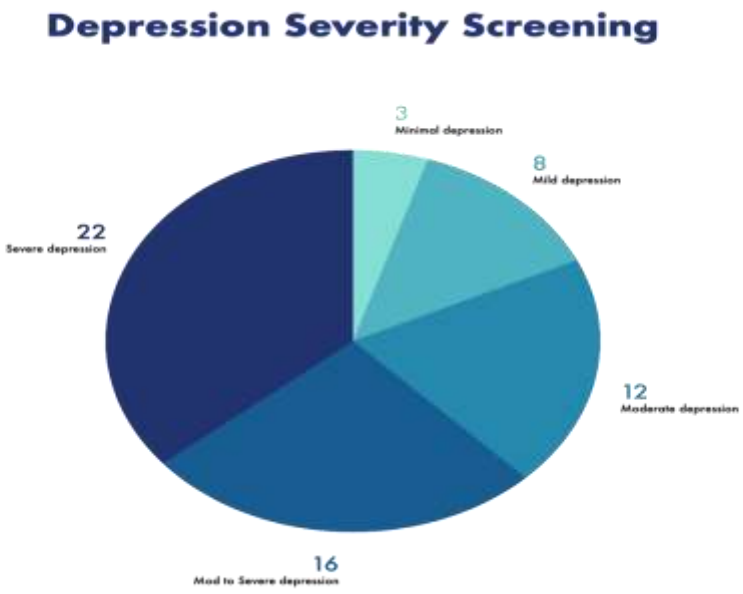
- **Define:** Patients were not being screened for depression upon admission.
- **Measure**: Clinician was basing depression symptoms on professional experience only
- **Analyze**: There was no depression assessment screening tool being utilized by myself, as a clinician, performing medical history and physical examination.
- **Improve:** The Patient Health Questionaire-9 (PHQ-9) would be utilized to screen patients upon initial assessment and prior to discharge. This would provide tangible evidence of an initial depression assessment being done on admission and re-screening the patient would provide whether current treatment plan was effective. The PHQ9 would also serve as a communication tool between myself and other providers concerning the patient's depression status.
- **Control:** Implementing and utilizing the PHQ-9 would standardize my healthcare assessment and improve patient care outcomes by ensuring patients are receiving appropriate treatment tailored to the individual patient and ensuring clinical guidelines are being met per USPSTF recommendations.

Budget. There is no financial cost to performing the QI project. The PHQ-9 is available online to any provider at no cost.

Findings and Outcomes

The QI project, utilizing the PHQ-9 depression screening tool provides tangible evidence on whether depression symptoms are exhibited in this patient population, a score correlating with severity of depression, and improves my overall healthcare assessment in this psychiatric setting. A total of 61 patients were given a depression screening during the assessment period between January 30, 2020 – March 1, 2020. The overall goal was to provide a depression score with severity, which would standardize the medical healthcare assessment. The overall objective for this project were met and the evidence-based research supported the findings of this QI project. Representation of severity results are below (**See Figure 5**).

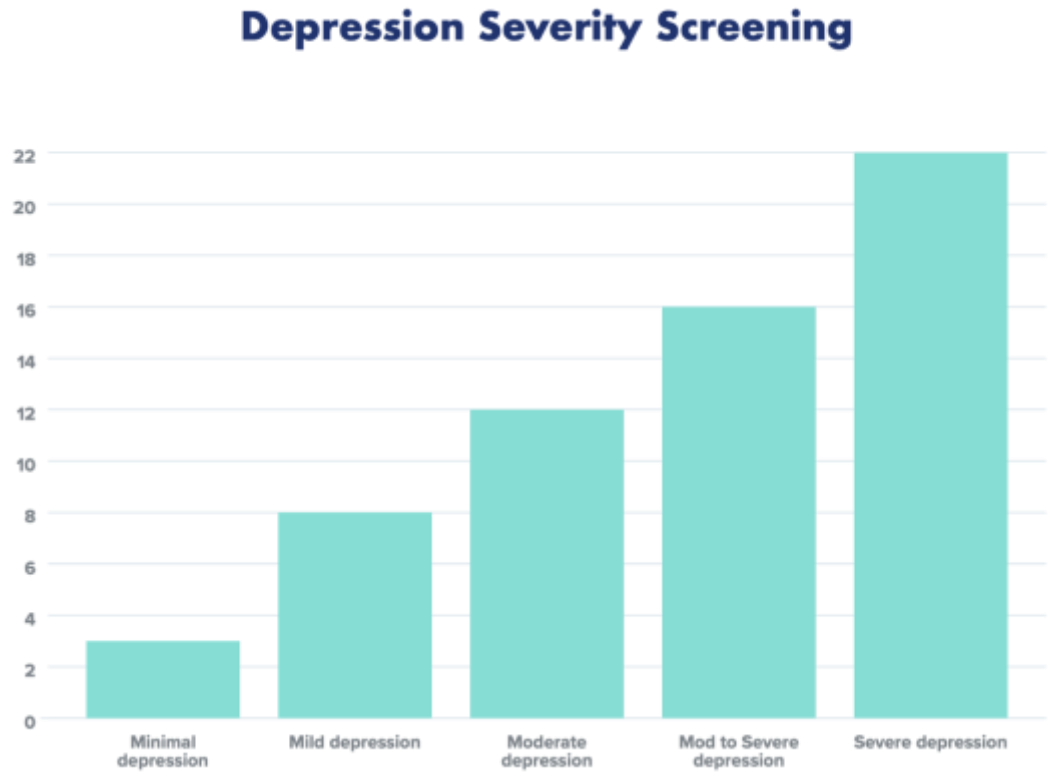
Figure 5.



<u>61 Total Patients Screened</u>

Minimal depression score of 0-4→ <u>3</u>
Mild Depression score of 5-9→ <u>8</u>
Moderate depression score of 10-14**→**<u>12</u>
Moderate to severe depression sore of 15-19→<u>16</u>
Severe depression score of 20-27→<u>22</u>

Appendix E(a).



Based on the patients screened within the project dates, every patient had some form of depression regardless of admission diagnosis. In order to note changes in the severity of the individual's depression over time, the PHQ-9 may be completed at regular intervals as clinically indicated, depending on the stability of the individual's symptoms and treatment status. This provides evidence of a depression screening on admission and documented level of depression severity on each patient. Utilizing the PHQ-9 provides positive patient outcome by ensuring the patient is not being discharged back to his or her environment without adequate treatment. Consistently high scores on a particular domain may indicate significant and problematic areas for the individual that might warrant further assessment, treatment, and follow-up (APA, 2020). The provider's clinical judgment should guide their decision in treatment plan and overall goal of

treatment. This also provides clinicians with concrete evidence of treatment plan effectiveness upon discharge.

Evaluation

In evaluating the process, utilizing the PHQ-9 during initial healthcare assessment has improved the standard of assessing the patients within this population for depression. If any challenges arise within the new way of assessing, the QI project can be revised by utilizing the QI translational or PDSA model. The PDSA QI model allows for the project to be re-addressed with any failure or concerns with the current way of performing a healthcare assessment. The implementation of change can occur at any of the level of the PDSA model (**See Figure 6**).

Plan: Improve overall healthcare assessment by implementing the PHQ-9 depression screening tool, which will provide tangible evidence of depression screening and provide depression severity of the patient.

Do: Perform PHQ-9 screen with all new admissions and re-screen prior to discharge to ensure current treatment plan is effective.

Study: Analyze current data collected to determine whether project goals are being met.

Act: Determine whether changes required. If not continue, next cycle.

Conclusions

The PHQ-9 has proven to be a reliable and valid tool to assess patients in any healthcare setting. It provides tangible evidence of assessing for depression. Brevity coupled with its construct and criterion validity makes the PHQ-9 an attractive, dual-purpose instrument for making diagnoses and assessing severity of depressive disorders (Kroenke, 2001). I am now able to provide a professional way of assessing my patients resulting in improved healthcare assessments and meeting clinical recommendations outlined by the USPSTF.

Discussions

Implications for Nursing: Depression as we know can have a fatal outcome without early detection and intervention with the appropriate treatment plan. It is important as a clinician that standard clinical guidelines are met, but also ensures patients are receiving appropriate treatment that is individualized to their needs. Due to the positive correlation of untreated depression and suicide, it is important that clinicians recognize signs of depression. Early detection of depression symptoms can decrease morbidity rates and early intervention, hopefully, can improve an individual's depression symptoms to avoid another statistical suicide. Treating an individual for depression may allow them to become an active member of society and improve their overall health.

DNP project applied to Essentials

I. Scientific Underpinnings to practice.

This DNP project provided implementation of a new system in screening all adult patients regardless of admission diagnosis for depression with the underpinning of evidence-based practice. It also ensures that medical providers are following clinical guidelines and recommendations of the USPSTF.

II. Organizational and Systems Leadership For Quality Improvement and System Thinking.

The DNP project allowed for taking the leadership initiative in care delivery and health care for this population regarding patient overall safety. It also allowed for monitoring and analyzing for budget cost constraints to ensure improved healthcare outcomes are priority for the patients.

III. Clinical scholarship And Analytical Method For Evidence-Based Practice.

The DNP program allowed the leader's QI project design to be directed in a format that required evidence-based literature that supported improved healthcare outcomes with application into nursing practice.

IV. Technology and Information for the Improvement and Transformation of Patient-Centered Health Care.

The DNP project allowed for the leader to evaluate overall health outcomes of care, care systems, and quality improvement to ensure execution of the project was in the best interest of the patient population. The leader was also directed in analyzing current system and system failures in order to implement change using evidence-base practice into nursing.

V. Healthy Care Policy For Advocacy in Health Care.

The DNP project allowed for leader to educate others on using evidence-based practice into nursing and its importance. It also allowed the leader to advocate the best health policies for the population.

VI. Interprofessional Collaboration For Improving Patient And Population Health Outcomes.

The DNP project allowed for the leader to present effective evidence-based guidelines to ensure best healthcare outcomes.

VII. Clinical Prevention & Population Health for Improving The Nation's Health.

This DNP project is crucial for nation's overall health and financial outcomes in relation to the influx of patient's affected by depression. Individuals with depression are able to be productive citizens of society, which directly can cause national financial burden to our healthcare systems.

VIII. Advanced Nursing Practice for Improving the Delivery of Patient Care.

This DNP project allows for development of effective healthcare system at the local level that can influence overall health of our nation. It promotes effective communication, guidance, and support amongst nursing professionals in achieving proficient outcomes.

Implications to Nursing Practice. Other Family Nurse Practitioners may want to follow this guideline as an approach in improving their healthcare assessment when assessing patients for depression. I am able to have this way of assessing for depression in any healthcare setting for future reference.

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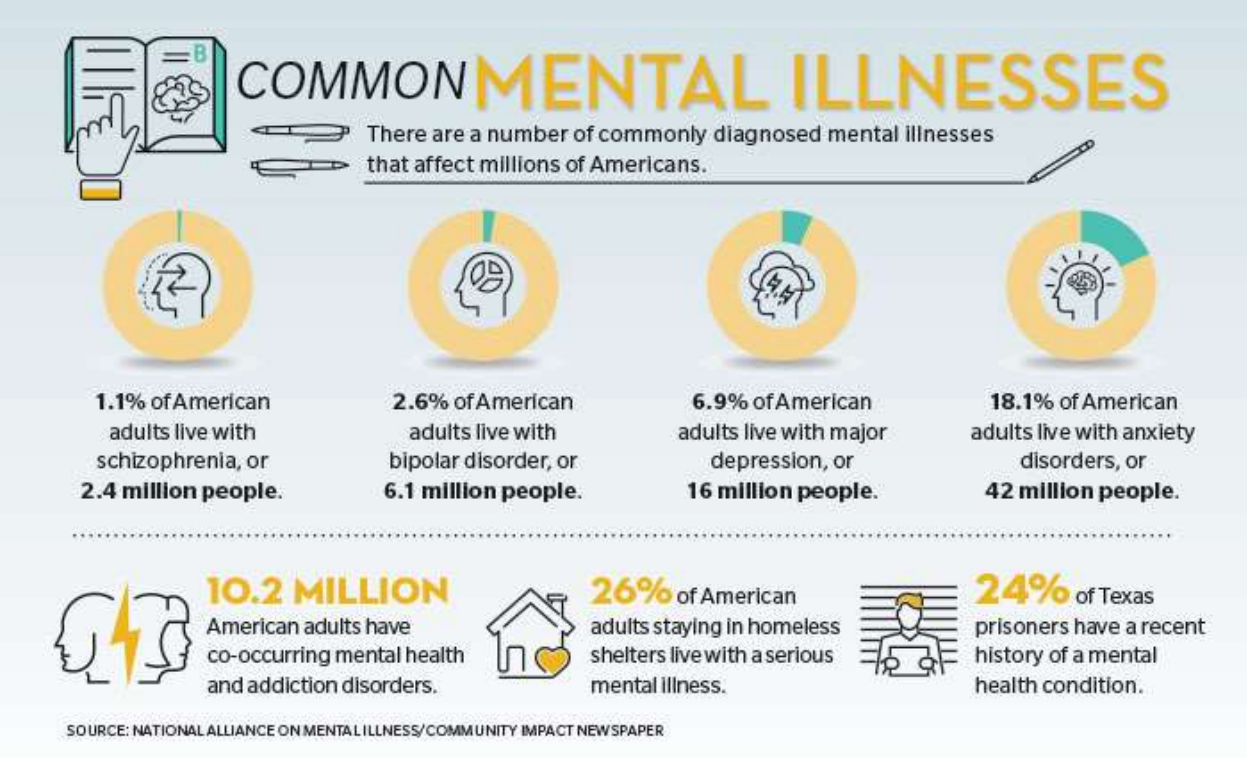
Appendices

Appendix A:



Appendix B.

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

NAME:_____ DATE:_____

Over the last 2 weeks, how often have you been bothered by any of the following problems? *(use "√" to indicate your answer)*	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite—being so figety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3
	add columns			
(Healthcare professional: For interpretation of TOTAL, please refer to accompanying scoring card).		TOTAL:		

10. If you checked off *any problems*, how *difficult* have these problems made it for you to do your work, take care of things at home, or get along with other people?	
	Not difficult at all _____
	Somewhat difficult _____
	Very difficult _____
	Extremely difficult _____

Appendix C.

PHQ-9 Patient Depression Questionnaire

For initial diagnosis:

1. Patient completes PHQ-9 Quick Depression Assessment.
2. If there are at least 4 ✓s in the shaded section (including Questions #1 and #2), consider a depressive disorder. Add score to determine severity.

Consider Major Depressive Disorder
- if there are at least 5 ✓s in the shaded section (one of which corresponds to Question #1 or #2)

Consider Other Depressive Disorder
- if there are 2-4 ✓s in the shaded section (one of which corresponds to Question #1 or #2)

Note: Since the questionnaire relies on patient self-report, all responses should be verified by the clinician, and a definitive diagnosis is made on clinical grounds taking into account how well the patient understood the questionnaire, as well as other relevant information from the patient.
Diagnoses of Major Depressive Disorder or Other Depressive Disorder also require impairment of social, occupational, or other important areas of functioning (Question #10) and ruling out normal bereavement, a history of a Manic Episode (Bipolar Disorder), and a physical disorder, medication, or other drug as the biological cause of the depressive symptoms.

To monitor severity over time for newly diagnosed patients or patients in current treatment for depression:

1. Patients may complete questionnaires at baseline and at regular intervals (eg, every 2 weeks) at home and bring them in at their next appointment for scoring or they may complete the questionnaire during each scheduled appointment.
2. Add up ✓s by column. For every ✓: Several days = 1 More than half the days = 2 Nearly every day = 3
3. Add together column scores to get a TOTAL score.
4. Refer to the accompanying **PHQ-9 Scoring Box** to interpret the TOTAL score.
5. Results may be included in patient files to assist you in setting up a treatment goal, determining degree of response, as well as guiding treatment intervention.

Scoring: add up all checked boxes on PHQ-9

For every ✓ Not at all = 0; Several days = 1;
More than half the days = 2; Nearly every day = 3

Interpretation of Total Score

Total Score	Depression Severity
1-4	Minimal depression
5-9	Mild depression
10-14	Moderate depression
15-19	Moderately severe depression
20-27	Severe depression

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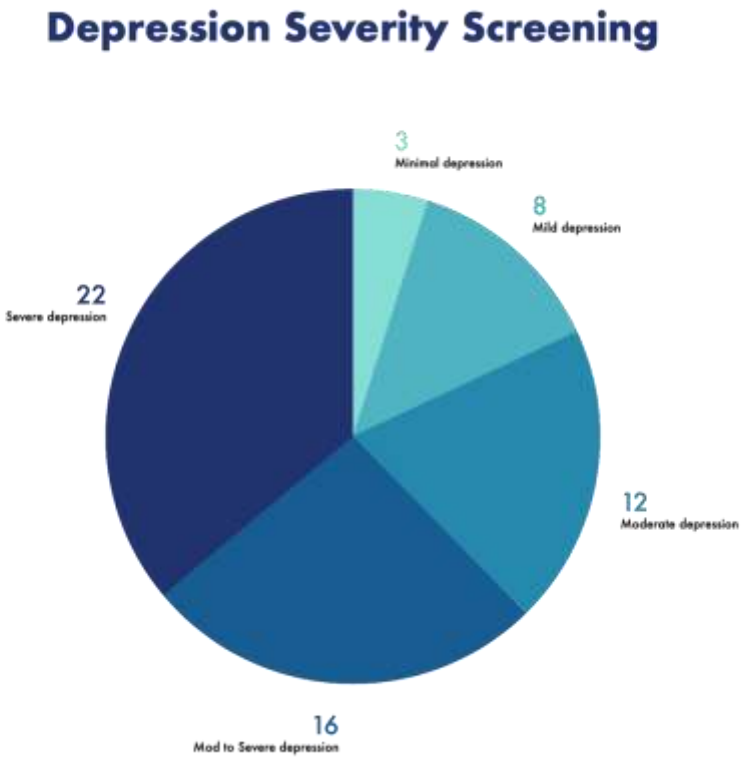
Appendix D.


Lean Six Sigma
DMAIC
D
Define
Define the problem.
M
Measure
Quantify the problem.
A
Analyze
Identify the cause of the problem.
I
Improve
Implement and verify the solution.
C
Control
Maintain the solution.

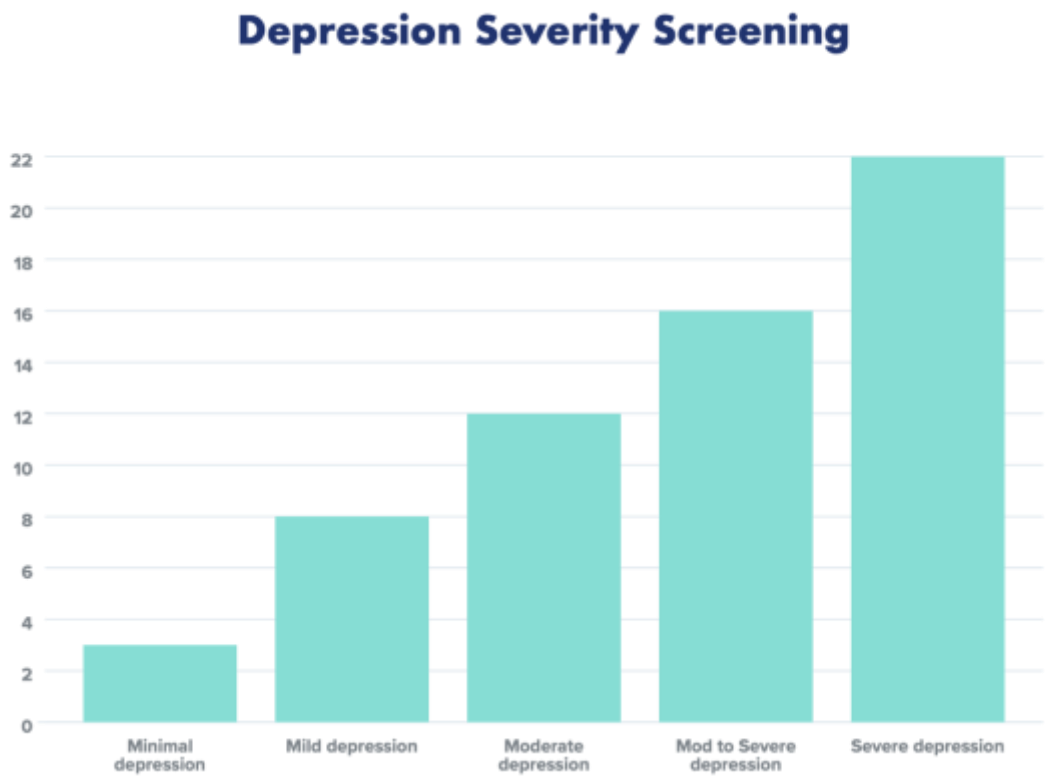
Appendix E. (Figure 1)



61 Total Patients Screened

Minimal depression score of 0-4→3
Mild Depression score of 5-9→8
Moderate depression score of 10-14**→**12
Moderate to severe depression sore of 15-19→16
Severe depression score of 20-27→22

Appendix E(a).


Depression Severity Screening
22
20
18
16
14
12
10
8
6
4
2
0
Minimal depression
Mild depression
Moderate depression
Mod to Severe depression
Severe depression

Appendix F.

Appendix G.

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