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Training Nurse Practitioners and Providers in Primary Care to Screen for Bipolar Disorder

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
the review committee have been made.

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Walden University
2024

Abstract

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by

Jane Iwebo

MS, Walden University, 2019

BS, Towson University, 2015

Project Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The global spotlight on mental illness has challenged healthcare providers to enhance their assessment and diagnosis of various mental health conditions like Bipolar Affective Disorder. Bipolar Affective Disorder (BPAD) is a serious mental illness characterized by severe mood swings ranging from depression to mania, often leading to high rates of suicide and disability. There is a significant gap of 8-10 years between the initial primary care visit and the diagnosis of BPAD leading to delayed treatment and worsening outcomes. The lack of use and/or knowledge of primary care providers on the use of assessment tools, such as the mood disorder questionnaire (MDQ), to identify patients with BPAD is crucial for promoting early diagnosis and initiating treatment. To address this issue, this educational project sought to educate staff in a private primary care practice about using the MDQ for bipolar disorder as a screening and diagnostic tool. The Analysis, Design, Development, Implementation, and Evaluation (ADDIE) model guided the staff education program, which incorporated a pretest/posttest design to assess staff knowledge before and after education. The Brigham Women's test of averages formula was used to calculate participants' learning gain between the pretest and posttest scores. Descriptive statistics were used to analyze the project data, which revealed a substantial learning gain between the pretest and the posttests and a 32.5% mean score increase. This project has the potential to improve BPAD diagnosis accuracy and reduce misdiagnoses, promote early detection, and timely treatment of BPAD, which can ultimately improve healthcare quality and reduce costs, which can positively impact social change.

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Dedication

My late husband George, whose unwavering support and strength allowed me to find the courage to take steps I once feared, and who stood by my side until his final moments.

My beloved children Ada, Kosi, Junior, and Kene, who lifted me up and provided the encouragement I needed to rebuild my life after the loss of my husband. You have taught me that life is still filled with purpose and worth living.

Acknowledgments

I would like to acknowledge Drs. Barrett and Wright for their immense contributions to this final project. Dr. Barrett has been an integral part of this project for over two years, even during the period when I took leave from school due to the loss of my husband. Her patience and understanding were invaluable during challenging times. Dr. Barrett provided guidance and support whenever I felt stuck or struggled to figure things out. Dr. Barrett's professionalism and unwavering support were evident throughout the project, even during difficult phases.

In addition, Dr. Wright provided significant support by being consistently available and responsive to my emails whenever assistance was needed. The combined efforts of the doctoral committee were instrumental in shaping the project's direction and ensuring its overall quality. Their collective knowledge and experience played a vital role in supporting the project's success and maintaining academic rigor.

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Section 1: Nature of the Project

Introduction

Bipolar affective disorder (BPAD) is a chronic mental illness characterized by severe mood swings encompassing both depressive and manic episodes. These mood fluctuations place individuals at a heightened risk of self-harm, suicide, and other comorbid conditions, often leading to disability (Hodgkinson et al., 2017). However, the diagnosis of bipolar disorder is often delayed, with studies indicating a significant gap between symptom onset and formal diagnosis. Cerimele et al. (2014) discovered a 10-year-interval, while Fritz et al. (2017) reported an average diagnostic conversion delay of 8.74 years.

One contributing factor to the delayed diagnosis of BPAD is the inadequate assessment by healthcare providers in primary care settings (Lublóy et al., 2020). Patients with BPAD frequently present to their primary doctors during depressive episodes and are often misdiagnosed with clinical depression during their initial visit. This misdiagnosis occurs partly due to the prevalence of depression screening and the coverage provided by the Centers for Medicare and Medicaid Services (CMS; Centers for Medicare & Medicaid Services, n.d.). As a result of increased screening for clinical depression, many patients receive a diagnosis of depression alone, overlooking the possibility of the presence of bipolar disorder. This oversight may be related to lack of proper assessment, leading to many patients receiving a diagnosis of depression alone, overlooking the presence of bipolar disorder.

Problem Statement

The lack of proper knowledge and assessment tools for BPAD leads to misdiagnosis and inadequate identification among patients seeking primary care (Brieler, etal,2022) This issue necessitates the expansion of screening measures beyond depression and the implementation of strategies that facilitate the accurate identification of BPAD. Many patients diagnosed with BPAD seek primary care and exhibit significant depression symptoms and may have a missed or delayed diagnosis or go undiagnosed, highlighting the diagnostic gap and the urgent need for improved education and training for healthcare professionals (McIntryre & Calabrese, 2019).

BPAD also imposes a substantial financial burden on individuals and society (Bessonova et al., 2020). Bipolar affective disorder typically emerges during young adulthood and affects approximately 1% of the population. Treating an individual with bipolar type I disorder incurs an estimated annual cost of $80,000, with the United States spending approximately $195 billion in 2018 on expenses related to BPAD (Bessonova et al., 2020). The economic impact underscores the importance of implementing effective measures to ensure timely diagnosis and appropriate management of bipolar disorder, which can be significant to nursing practice.

Purpose Statement

The purpose of this DNP project was to identify whether providing education about bipolar disorder screening to providers in an outpatient primary care practice can increase their knowledge of how to screen patients for BPAD. There is a significant practice gap in accurately identifying and diagnosing patients with BPAD in primary

care settings (Fritz et al., 2017), with a high misdiagnosis rate reported in previous studies (see Shen et al., 2018). In this project, I aimed to address this gap in practice by equipping nurse practitioners and other providers with the necessary education and training to improve their screening practices for bipolar disorder.

The project highlights the importance of nurse practitioners and providers in primary care who, if comfortable, have the necessary education to assess, diagnose, and initiate treatment for patients with BPAD. However, the project also highlights the need for providers to recognize and acknowledge their lack of knowledge in diagnosing bipolar disorder, emphasizing the need for training and support. By providing education on bipolar disorder screening, with this project I aimed to enhance the knowledge and skills of nurse practitioner and other providers, enabling them to accurately identify and manage bipolar disorder within the primary care setting, ultimately facilitating early diagnosis and intervention for patients and improving the overall quality of care and life.

In this project, I aimed to educate and train staff APNs and providers in a private primary care practice to increase their knowledge and improve their screening practices for bipolar disorder. This staff education project addressed the following practice focus question: Did providing education about BPAD screening to staff providers in a private primary care practice increase their knowledge of how to screen patients for bipolar disorder? By addressing the gap in practice of diagnosing and treating bipolar disorder, I sought to enhance participant knowledge that could improve diagnosing and treating BPAD that can positively impact care outcomes for patients in the primary care setting.

Nature of the Doctoral Project

In this doctoral project, I addressed the issue of inadequate screening practices by healthcare providers in identifying and diagnosing patients with BPAD in primary care settings. The project's primary focus was to provide education and training to nurse practitioners and other providers to improve their skills in identifying BPAD early on, initiating timely treatment, and making appropriate referrals to psychiatry. By enhancing the assessment and diagnosis of BPAD, patients' quality of care and life can be improved.

The Walden University Library offers access to high-quality, peer-reviewed journals and databases, which assisted me in developing this staff education initiative. The sources of evidence for this staff education project include full test evidence-based articles that incorporated all levels of evidence, including systematic reviews: The Walden University Library database, CINAHL Plus, MEDLINE, the Cochrane Database of Systematic review, Medline, ProQuest, and PUBMED. Key terms used in my search were: *bipolar disorder, bipolar affective disorder, assessment tool, primary care provider, outpatient practice, staff education,* and *provider teaching*. This staff educational project incorporated a pretest/ posttest approach. Evidence for this project was organized using the John Hopkins Evidence Based Grading Scale. Data from this project were analyzed using descriptive statistics.

Significance

The significance of this project includes providing education about BPAD screening to current stakeholders, which include staff APNs and other providers. In this

project, I aimed to increase provider knowledge and understanding of initiating screening and how to screen patients for BPAD effectively. By participating in this staff educational program where I aimed to fill the gap in practice to address the current inadequate screening practices, APNs and other providers can be better equipped to identify and diagnose patients with BPAD accurately.

Bipolar Affective Disorder creates a significant financial burden on individuals and the healthcare system (Bessonova et al., 2020). Early detection of BPAD is crucial for initiating timely treatment and improving patient outcomes. When nurse practitioners and other providers have the necessary skills to identify BPAD early on, they can promptly intervene and provide appropriate referrals to psychiatry. A 10-year study focusing on early detection and intervention for patients, adolescents, and young adults with BPAD by Martini et al. (2021) indicated that early diagnosis and treatment of people with risk factors or symptoms of BPAD may prevent long-term consequences and improve illness course. This early intervention can improve the quality of care and life for patients with bipolar disorder which could contribute to nursing practice.

By improving screening practices to promote early detection, this project can potentially reduce the economic burden associated with untreated or misdiagnosed BPAD. Timely intervention and appropriate treatment can help prevent hospitalizations, emergency department visits, and other costly interventions. Research suggests that the annual cost of treating an individual with bipolar type I disorder is approximately $80,000 (e.g., Huang et al., 2022). Jann, 2014 also reported that 2009 direct and indirect treatment costs for people with bipolar disorder cost the United States $150 billion (about

$460 per person in the United States), indicating that delayed treatment has adverse clinical and healthcare cost consequences. Improved screening practices for BPAD can lead to more accurate diagnoses, reduced stigma associated with mental health conditions, improve access to timely treatment and contribute to a more inclusive and supportive society for people living with bipolar disorder. This project has the potential to transfer to other primary care settings that provide care for individuals diagnosed with BPAD. This staff educational project can promote mental health awareness and access to appropriate care, improve patient outcomes, reduce the financial burden of BPAD, and lead to positive social change.

Summary

Evidence-based and quality improvement projects in nursing help to address clinical issues that may negatively impact patients' health outcomes (Mathieson et al., 2019). This doctoral project addressed the issue of inadequate screening practices in primary care settings for identifying and diagnosing patients with BPAD. The project goal was to educate nurse practitioners and other providers to enhance their skills in early identification, timely treatment initiation, and appropriate referrals to psychiatry for patients diagnosed with BAPD. The significance of the project lies in improving the knowledge and screening practices of APN and other providers, leading to more accurate diagnoses, timely treatment, and improved access to care for individuals with BPAD.

This project has the potential to reduce the economic burden associated with untreated or misdiagnosed BPAD and contribute to a more inclusive and supportive society for individuals diagnosed with bipolar disorder. Section 2 focuses on the

concepts, models, and theories, the relevance to nursing practice, and my role as the DNP student and project leader.

Section 2: Background and Context

Introduction

Bipolar affective disorder (BPAD) is a persistent mental illness characterized by recurrent mood swings and is often misdiagnosed as other forms of mental disorders, particularly depression (Hodgkinson et al., 2017). Shen and colleagues (2018) reported that misdiagnoses of BPAD can be as high as 69%, with only approximately 20% receiving an accurate diagnosis within the first year of symptom presentation. Misdiagnosis can result in inappropriate treatment and management, potentially leading to adverse reactions, exacerbation of the illness, prolonged suffering, poor treatment outcomes, and even suicide. This DNP staff education project sought to address the following practice focused question: Did providing education about bipolar disorder screening to staff providers in a private primary care practice increase their knowledge of how to screen patients for bipolar disorder? This educational initiative addressed the training needs of nurses and healthcare providers in outpatient practice settings.

Concepts, Models, and Theories

This staff education project incorporated three models to support the development of the educational program. The analyze, design, develop, implement, and evaluate (ADDIE) model was used as the conceptual framework to support the development of the educational program content. The Mood Disorder Questionnaire (MDQ) was incorporated as the assessment tool to aid in the diagnosing of BAPD. The Johns Hopkins Evidence-Based Practice model (JEBP) was employed to grade the evidence for the DNP project.

The ADDIE model was chosen for the DNP staff education project because the five steps of the model align with the development of educational programs. The ADDIE model is a structured instructional design framework consisting of five stages: Analysis, Planning, Construction, Execution, and Assessment (Aydin et al., 2023). The ADDIE model has demonstrated effectiveness as the guiding framework in developing and delivering training modules across various settings, with high reliability and validity (AB et al., 2020).

There are several assessment tools available for identifying the symptoms of BPAD. The MDQ is the assessment tool chosen for this staff education project. This tool was selected because it has been in existence since the year 2000, the simplicity of the rating scale, and because providers and patients are more likely to be familiar with this tool. Wang et al. (2020) found that the MDQ remains a relevant screening instrument for detecting bipolar disorder. Additionally, recent cross-sectional research studies have indicated MDQ's effectiveness in identifying BPAD (Konuk et al., 2022). The MDQ is reflected in Appendix A.

Finally, the use of the JEBP model ensured that the project incorporated the highest available evidence to support both the design and delivery of the educational content. The JEBP model classifies evidence into five levels: Level I (actual experiment), Level II (quasi-experiment), and Level III (non-experiment), Level IV expert opinion such as clinical guidelines; Level V (based on experience and non- research evidence) (Dang et al., 2022). The highest available evidence was used for designing the educational program aimed at improving the diagnosis of BPAD.

Definition of Terms

Advanced Practice Nurse: is a specialized nurse with advanced skills and knowledge obtained through graduate education, typically holding at least a master's degree (Wheeler et al., 2022).

Bipolar Affective Disorder: is a mood disorder type of mental illness that presents with a range of mood alterations, including depression, hypomania, and mania. (Bessonova et al, 2020).

Doctor of Nursing Practice (DNP): is a nurse prepared at the doctoral degree level, able to perform in nursing leadership, research, and medical specialties as providers (ANCC, 2023).

Health Care Provider: is an individual licensed to provide healthcare in the form of diagnosis, treatment, and medical advice, advise on preventive or curative measures, conduct research to change improve concepts (National Institute of Health, n.d.).

Mood disorder questionnaire (MDQ): is an assessment mood related questionnaire for evaluating mood disorder (Konuk et al., 2022).

Physician Assistant: is a medical professional within a doctor's practice, specializes in diagnosing and treating patients. Typically holding a graduate degree, they receive extensive training to fulfill these medical responsibilities (Mayo Clinic College of Medicine and Science, 2023).

Relevance to Nursing Practice

Healthcare providers in outpatient primary care practices must be proficient in identifying patients with BPAD and initiating appropriate treatment during their initial visit, especially as patients with BPAD often present with symptoms of depression and are frequently misdiagnosed (Lublóy et al., 2020). Education and educational initiatives play a crucial role in current healthcare trends. Therefore, implementing an educational program is highly relevant in ensuring that healthcare providers in primary care settings possess up-to-date knowledge regarding using tools such as the MDQ for identifying BPAD.

This DNP project can be significant in understanding how quality of healthcare could be improved, with a specific focus on educating APNs to empower them in addressing the health in individuals with BPAD. This education equips providers with the ability to recognize symptoms early, make timely diagnoses, and refer patients to psychiatric care during their initial visits, which aligns with the importance of early detection for enhancing the course of the illness and long-term outcomes as emphasized by Martini et al. (2018). Enhancing the assessment and diagnosis of BPAD necessitates comprehensive education and training for nurse practitioners, enabling them to play a pivotal role in delivering high-quality care and improving patients' overall quality of life.

The effort to narrow the disparity in mental health including BPAD have progressed since the inception of the Mental Health Parity Act in 1996, this act made it illegal to impose annual or lifetime monetary caps on mental health treatment benefits different from medical and surgical benefits. This same act was expanded in 2008 as the

Paul Wellstone and Pete Domenici Mental Health Parity into Addiction Equity Act. The expansion encompassed a wider range of financial and treatment support, including those related to substance use disorder services (Mulvaney-Day et al., 2019). Most currently with the Affordable Care Act, also known as Obamacare, started in 2010, mental illness has been designated as an essential component of healthcare. This change required insurance companies to provide coverage for mental health services, as outlined by the U.S. Department of Health and Human Services (2023).

Numerous diagnostic tools have been created to address the current gap in the early detection of BPAD, alongside the Mood Disorder Questionnaire (MDQ). These tools include the Bipolar Prodrome Symptom Scale, the Semi structured Interview for bipolar at-risk states, and Bipolar at-risk. As stated by Martini and colleagues in their 2021 article, there remains a need for expanded research that prioritizes targeted interventions to bridge the gap in early diagnosis and treatment for BPAD (Martini et al., 2021). The DNP Project sought to find out if providing education about bipolar disorder screening to staff providers in a private primary care practice will increase their knowledge of how to screen patients for bipolar disorder? The educational initiative developed within this project will effectively address the requirement for training health providers within the psychiatric outpatient clinic.

According to Shen and colleagues (2018), there is a high prevalence of misdiagnosis rates of BPAD, mostly as depression in outpatient clinics. This article is relevant to my project because it presents findings that highlight the significantly elevated rate of misdiagnosis among bipolar patients by outpatient providers, with a common

misdiagnosis being depression and validates need for proper education to improve the status quo.

Brieler et al. (2022) described that misdiagnosis of bipolar disorder in primary care setting is common because patients are more likely to reach out to their provider when they are in the depressive stage than manic phase. The patient will likely be diagnosed with clinical depression if the PCP is not familiar with how to assess for BPAD using the scales. The article further explains the need to educate primary care providers about assessment of patients with BPAD.

Martini et al. (2021) indicated that the burden of BPAD is significant, ranking among the top 10 diseases causing disability globally. The relevance of educating providers to identify BPAD early is highlighted by Martini and colleagues' nine-year research on patients with BPAD identified the potential for early detection, particularly among young individuals; however, due to the high likelihood of misdiagnosis, proper education on using diagnostic tools is crucial.

Bessonova et al. (2020) discussed the economic burden of bipolar disorder in the United States and conclude that early diagnosis and treatment can improve illness outcomes and reduce the overall cost of treating BPAD. These authors also identified the substantial economic burdens associated with treating BPAD and the resulting lower costs with early intervention and proper management (Bessonova et al., 2020). I used this article to support the purpose of the DNP staff education project and its relevance to the profession.

In this cohort study, Lublóy et al. (2020) identified an average delay of 6.46 years in the age at which individuals were first diagnosed with bipolar disorder. For most patients in the study, this initial diagnosis occurred at the age of 43.59 years. The diagnostic delay was shorter when bipolar disorder was diagnosed by non-specialist mental health professionals. This study holds significance in confirming the delay in diagnosing bipolar disorder and underscores the importance of educating outpatient healthcare providers to effectively identify and diagnose this condition.

Daveney et al. (2019) shared that ensuring providers are comfortable using questionnaires, especially in patients with depression, can reduce misdiagnosis and treatment delays. In a systematic review they found that proper assessment skills are necessary due to unrecognized symptoms of BPAD in patients with depression in primary care settings. This article supports the project in the need for educating the APN's and other providers. Konuk et al, (2022) emphasized the role of modern diagnostic criteria, such as those found in the Diagnostic and Statistical Manual (DSM-III) and subsequent editions, in providing a standardized framework for diagnosing bipolar disorder based on the presence of episodic mood disturbances.

Wang et al. (2020) on the Influence of Current Mood States on Screening Accuracy of the Mood Disorder Questionnaire evaluated whether the current mood states of patients with bipolar disorder influence the screening accuracy of the Mood Disorder Questionnaire (MDQ). The study indicates that the screening accuracy of MDQ is not influenced by the current mood states of the subjects. The results from this study are important for my project because they support the validity of the screening accuracy of

the MDQ. Furthermore, the study reports that the accuracy of the MDQ among clinical samples has been confirmed in many previous validation studies and meta-analyses.

Maurer et al. (2022) authored Understanding the Influence and Impact of Stakeholder Engagement in Patient-centered Outcomes Research: A Qualitative Study. This authors emphasized the significance of incorporating various stakeholders into a research project. They emphasized that partners could serve different purposes at various points in the research process. For instance, clinicians might be particularly effective in data collection, while patients play a crucial role in discussions about study design and in spreading the research findings. This article supports the use of the project team and stakeholders in the DNP project.

Nordick et al. (2019) authored Evaluating Leadership Competency in DNP Clinical Practice. This is Randomized Control Trial, level one evidence (RTC) study centered on the evaluation of leadership competency within the context of Doctor of Nursing Practice (DNP) clinical practice. The research was focused on assessing the effectiveness of leadership training for DNP students in a controlled experimental setting. The authors discovered that using a descriptive and experiential leadership narrative as an evaluation method is an effective strategy for promoting DNP student leadership development in both direct patient care and system-focused settings. The DNP assumes a leadership status in this project and functions to analyze the need of the facility, design, develop, implement, and evaluate the education material.

Aydin et al. (2023) described using the ADDIE Model to develop a Rusnani Concept Mapping Guideline for nursing students.: The researcher employed the ADDIE

model to create and evaluate a mobile application designed for guiding breast cancer patients through post-surgery care with step-by-step instructions. This has relevance to the DNP project as it demonstrates the successful utilization of the ADDIE model to evaluate patient education project.

Local Background and Context

To provide evidence-based care for patients with BPAD, providers in primary care settings must possess knowledge of the presenting symptoms and the ability to differentiate them from clinical depression, using assessment scales such as the MDQ. The primary focus of this staff education project was to provide education and training to nurse practitioners to enhance their ability to identify BPAD early using assessment tools like the MDQ, initiate timely treatment, and make appropriate referrals to psychiatry. Previously, providers at the setting identified challenges with misdiagnosing patients with depression and other mental illnesses.

Providers in the project setting needed to gain knowledge on the proper and consistent use of diagnostic rating scales/questionnaires. The MDQ was employed in this project, and cross-sectional research studies have indicated its effectiveness in identifying BPAD (Konuk et al., 2022). Nurse practitioners and providers will report increased confidence in using the MDQ and initiating first diagnoses of BPAD, resulting in timely treatment and referrals to psychiatry. This DNP project has the potential to enhance providers' understanding of the benefits of using assessment tools like the MDQ for screening and diagnosing BPAD.

The DNP staff education project was conducted at a primary care physician outpatient practice located in the Northeastern section of the United States. The practice consists of 10 licensed providers, including five nurse practitioners, two physician assistants, and three physicians, who see a combined average of 100 patients daily Given the clinic's proximity to the target population and the availability of healthcare providers, it is well-positioned to address the inadequate competency in assessing bipolar disorder. Considering the characteristics of this setting, it is viable to conduct the teaching project in this facility. The medical director and the two managers supported the development and delivery of this staff educational program project.

State & Federal Regulations

In the state of Maryland, there are no specific regulations pertaining to bipolar disorder. However, the field of mental health, in general, has undergone significant transformations since the 20th century. In 1949, notable changes took place, including the dissolution of the Board of Mental Hygiene and the separate governing boards for state mental hospitals (Maryland State Archives, 2023). The responsibility for the custody, care, and treatment of individuals with mental illness was transferred to the Department of Mental Hygiene. In 1969, the Department of Mental Hygiene was incorporated into the Department of Health and Mental Hygiene, which later was restructured as the Mental Hygiene Administration, by July 2008 (Maryland State Archives, 2023).

On the federal level, the mental Health Parity Act was established in 1996, this act made it illegal to impose annual or lifetime monetary caps on mental health treatment benefits different from medical and surgical benefits. This same act was expanded in

2008 as the Paul Wellstone and Pete Domenici Mental Health Parity into Addiction Equity Act. The expansion encompassed a wider range of financial and treatment support, including those related to substance use disorder services (Mulvaney-Day et al., 2019) since the implementation of the Affordable Care Act, also known as Obamacare, in 2010, mental illness has been designated as an essential component of healthcare. This change required insurance companies to provide coverage for mental health services, as outlined by the U.S. Department of Health and Human Services (2023).

Role of the DNP Student

As a DNP student leading this project, I played a critical leadership role in analyzing, planning, developing, executing, and analyzing the project with the support of the team members. The DNP experience has been transformative for me, as it has allowed me to assume leadership roles (Nordick, 2019). My role began with discussing a clinical issue with the clinical leaders within the current practice center and ensuring that buy-in and approval from clinical leaders and key organizational members for the project's topic was obtained. Once the topic was approved for its potential to enhance practice quality, I moved forward with solidifying the project focus and formulated the practice focused question, which was reviewed and approved by the facility leader and the clinical director.

In my day-to-day practice as a psychiatric nurse practitioner, I encountered patients with BPAD who were initially misdiagnosed with depression. My insight into this practice gap was heightened by the burden that the patient and their family face through their life struggles with the disease process. This burden fueled my motivation to

conduct this project. With the appropriate diagnosis I have seen a remarkable turnaround of symptoms, with proper disease treatment and management. My goal is to promote education on proper diagnosing using available tools to reduce patient suffering and improve quality of care. Potential bias in the education project is that I may unintentionally focus on information that supports the use of the mood disorder questionnaire for diagnosing bipolar disorder and disregarding other overlooking contrary evidence. This Bias can be addressed by providing evidence-based resources on the efficacy of the MDQ identifying the strengths and weaknesses of MDQ. The providers will also be engaged to share their views.

Role of the Project Team

The success of this project also relied on the project team. According to Rosen (2018), a team's strength directly correlates with the efficiency and excellence of the work produced. The key members of my project team were the medical director, serving as both an internal medicine physician and my project mentor. The medical director was crucial in steering the team selection process and assessing and approving project topics. Throughout the project's implementation and dissemination phases, the medical director was active as my mentor to ensure continued guidance and support. The individual serving as the clinical team leader and education director who possesses a master's degree in nursing leadership will take responsibility for reviewing and endorsing educational materials and actively participating in coordinating training sessions for the subjects. The office secretary will serve as the team member and will hold a crucial role in organizing meeting schedules and fulfilling various auxiliary needs, including printing documents.

Summary

The staff educational project was conducted in an urban outpatient medical clinic with a high population of low-income and homeless individuals. The conceptual frameworks that were used to guide this project are the ADDIE instructional design model and the Johns Hopkins Evidence-Based Practice model for grading evidence. The project's relevance to nursing practice includes emphasizing the importance of early BPAD diagnosis in primary care settings. The providers, through education, learned about the burden of BPAD and the need for proper use of diagnostic tools such as the MDQ in practice. This project incorporated evidence from various studies to support the project's objectives, recommendations, and strategies for improving providers' assessment skills. Section three of the project focuses on reviewing the sources of evidence and analyzing and synthesizing the quality of evidence.

Section 3: Collection and Analysis of Evidence

Introduction

The lack of proper knowledge and assessment tools for BPAD leads to misdiagnosis and inadequate identification among patients seeking primary care (Bieler, et al., 2022). This issue necessities the expansion of screening measures beyond depression and the implementation of strategies that facilitate the accurate identification of BPAD. The DNP project was focused on educating and training staff APNs and other providers in a private primary care practice to increase their knowledge and to ultimately improve their screening practices for bipolar disorder. This staff education project addressed the following practice focus question: Did providing education about bipolar disorder screening to staff providers in a private primary care practice increase their knowledge of how to screen patients for bipolar disorder?

Previously, providers at the project setting identified challenges with misdiagnosing patients with depression and other mental illnesses. Providers in the project setting lack the knowledge on the proper and consistent use of diagnostic rating scales to support diagnosing bipolar disorder. The MDQ will be used in this project, and cross-sectional research studies have indicated its effectiveness in identifying BPAD (Konuk et al., 2022). The DNP staff education project occurred at a primary care physician outpatient practice located in the Northeastern section of the United States. The practice consists of 10 licensed providers, including five nurse practitioners, two physician assistants, and three physicians, with an average of 100 patients daily. The proximity of the clinic and the availability of healthcare providers, in this setting,

indicates that it is viable to carry out the teaching project in this facility. The medical director and the two managers support the development and delivery of this staff educational program project.

Practice-Focused Question

The diagnosis of bipolar disorder is often delayed, with studies indicating a significant gap between symptom onset and formal diagnosis. Cerimele et al. (2014) discovered a ten-year interval, while Fritz et al. (2017) reported an average diagnostic conversion delay of 8.74 years. Fritz identified a significant practice gap in accurately identifying and diagnosing patients with BPAD in primary care settings with high misdiagnosis rates.

In this DNP project, I sought to identify whether providing education about bipolar disorder screening to staff advanced practice nurses (APNs) in an outpatient primary care practice can increase their knowledge of how to screen patients for BPAD. This project was focused on addressing this gap in practice by equipping nurse practitioners and other providers with the necessary education and training to improve their screening practices for bipolar disorder. The staff education project addressed the following practice focus question: Did providing education about bipolar disorder screening to staff providers in a private primary care practice increase their knowledge of how to screen patients for bipolar disorder?

Source of Evidence

The review of current relevant evidence is necessary to properly address the DNP practice-focused question. High-quality, systematic reviews are commonly regarded as

offering the most rigorous evidence when compared to other sources of evidence. Systematic reviews incorporate outcomes of different studies identified through thorough and systematic literature searches (Canberra University, 2023). The Walden University Library offers access to high-quality peer-reviewed evidence through various databases and journals that will be used to develop this staff education project.

The source of evidence will include full text evidence-based articles from different levels of evidence that will be graded using the JHEB model. The Walden Library provides access to many vital journals and research databases that include CINAHL Plus, MEDLINE, the Cochrane Database of Systematic review, Medline, ProQuest, and PUBMED. Twenty-six articles were ultimately selected for this project. Key search terms included: *bipolar disorder, bipolar affective disorder, assessment tool, primary care provider, outpatient practice, staff education,* and *provider teaching*. Searching the databases is an ongoing process. My search in CINAHL Plus for full text articles produced 13,662 articles; Of the 13,662 articles 4,220 were within the last 5 years; 25 of the articles were relevant to the project topic and 20 were selected for the project. Medline with full text produced 12,294 that were in the last 5 years. Eleven selected articles to support this staff education program. The evidence selected were graded using the JHEBM and reflect the following: There are five Level 1 articles, no Level 2 articles, there are three Level 3 articles, there are four Level 4 articles, and no Level 5 articles.

Evidence Generated for the Doctoral Project

The educational program will be developed with current evidence-based literature. The program objectives will be developed using the collected literature. The ADDIE model is the framework that will be used to guide the educational program. The program objectives will be developed based on current literature and will align to the ADDIE model, the systematic approach for instructional design framework. The instructional objectives that are aligned with the ADDIE model will be used to develop the educational program curriculum. This ADDIE-based teaching plan will help providers enhance their skills in assessing and diagnosing bipolar disorder with the hope of improving care outcomes and providing continuous care improvement. The alignment of the instructional objectives with the ADDIE model is reflected in table 1.

Table 1

ADDIE Model Alignment with Educational Program Learning Objectives

ADDIE Model	Educational Program Objectives
I Analysis Identify learning needs and context	1. Assess providers' knowledge about the mood disorder questionnaire, how to use it and what it's used for. 2. Assess Providers understanding about the prevalence and impact of bipolar disorder in patient populations. 3. Assess providers' understanding about the significance of early diagnosis and treatment of bipolar disorder. 4. Assess Providers' knowledge about specific symptoms that differentiate bipolar disorder from clinical depression. 5. Add 1 or 2 objectives about the MDQ scale
II. D-Design	1. Develop instructional strategies. 2. Develop power point 3. Schedule training
Development Create teaching materials and resources	1. Develop a comprehensive educational presentation that covers the diagnostic criteria, symptoms, and epidemiology of bipolar disorder 2. Create a resource package including assessment tools, case studies, and reference materials to support the educational program. 3. Develop assessment posttest to measure knowledge acquisition and retention.
Implementation Execute the teaching plan	1. Deliver the educational program for providers, incorporating interactive discussions, case studies, and literature. 2. Discuss access to online resources and materials
Evaluation Assess the effectiveness of the plan.	1. Collect feedback from participants regarding the training – Opportunity for Q& A. 2. Evaluate participants' knowledge acquisition through post-training assessments, posttest. 3. Analyze feedback and identify areas of improvement 4. Make necessary adjustments to the teaching plan based on evaluation results. 5. Administer program evaluation.

Participants

Participants for the DNP education project was invited to participate in the program on a voluntary basis, and they were informed that they can leave the project without penalty at any time. There were 10 potential participants who included APNs, PAs, and physicians currently practicing at the outpatient primary care clinic. Participants were informed that confidentiality would be maintained, and that participant names would not be used in the project. Participants were given unique identifiers to align the project data collection tools to the associated participant. Participants were also informed that completion of the pretest/posttest would serve as their consent to participate in the staff educational program.

Procedures

I developed a power point presentation that included the curriculum for the staff educational program. The content for the educational PowerPoint was reviewed with the staff education director as well as the medical director prior to presentation. I collaborated with the administrative assistant to schedule training dates for the program. The staff educational program lasted 90 minutes total from pretest to completion of program evaluation. The program was conducted face to face in one session. The program included an introduction, the pretest, program content delivery, a question-and-answer period, a posttest, and a program evaluation.

Protections

Permission and approval to conduct this staff education project at the project site was obtained from the facility administrator. Safeguarding the confidentiality and privacy

of participant information is a critical aspect of any project; therefore, participant confidentiality was maintained. This project did not include any patients involving human subjects. Prior to conducting this project, the project proposal was reviewed by Walden University's' Institutional Review Board (IRB) as a staff education quality improvement initiative with IRB # 03-22-24-0737058. Instructions from the Walden IRB was followed to ensure the ethical aspects of this project were maintained. All program data were stored in a password protected laptop and will be maintained for 5 years, according to Walden's IRB approval guidelines.

Analysis and Synthesis

The project data was collected upon completion of the program. The data included the pretest, posttest, and the program evaluation. The matching unique identifiers for the pretest and the posttest were organized to assure the participant documents aligned with the respective participant. The collected data were analyzed using descriptive statistics.

Summary

Section 3 focused on addressing the primary objective of the project to determine whether providing education on screening for bipolar disorder to APNs and other healthcare providers in a primary care setting improves their knowledge on screening for bipolar disorder. The collection and analysis of evidence for the DNP project highlighted educating healthcare providers, including APNs, on the assessment and diagnosis of bipolar disorder. Emphasis on the importance of a systematic approach as outlined by Kiani et al. (2022) was reflected in this section. The ADDIE model served as a systematic framework to assist with the instructional design teaching plan for the educational

program. The educational program objectives aligned with the components of the ADDIE model. The project data was collected from the participant pretest, posttest, and the program evaluation. The comprehensive teaching plan aimed to enhance healthcare providers' expertise in screening and ultimately diagnosing bipolar disorder. The project data was analyzed using descriptive statistics.

Section 4: Findings and Recommendations

Introduction

The training program was intended to educate providers in the outpatient clinic to use the MDQ to identify and evaluate patients with mood disorders. The project data were collected and analyzed using descriptive statistics. The project data included the results from the pretest, posttest, and the program evaluation. Ten clinic staff were invited to participate in the staff educational program. Of the 10 invited staff, eight were providers that included physicians, nurse practitioners and a physician assistant. The clinic administrator and staff educator (clinic manager) who are not direct clinical personnel were also invited to participate for a total of ten participants.

All participants completed the pretest, however two of the nurse practitioners left before the training was delivered due to time constraint and did not elect to continue with training even when I attempted to contact them for rescheduling. Hence, the two nurse practitioners did not complete the posttest and program evaluation. I analyzed the pretest results and posttest result as displayed on Table 2. Analysis of the project data revealed a marked increase in provider knowledge between the pretest and the posttest on their use of MDQ to identify and diagnose BPAD.

Table 2

Participants' Pretest, Posttest, and Learning Gains

Participant	Pretest	Posttest	% Learning gain
Participant A	50	90	80
Participant B	60	80	50
Participant C	40	80	67
Participant D	30	60	43
Participant E	60	90	75
Participant F	70	100	100
Participant G	50	90	80
Participant H	60	90	75

The Brigham Women's test of averages formula (Post-learning Score minus Pre-learning Score / Maximum Score minus Pre-learning Score) X 100 was used to calculate the percentage of learning gain between the pretest and posttest assessment scores for all participants. The result of the calculation reflects an increase in scores from pretest to posttest, which reflected each participant's learning gain. Table 1 displays the participant scores and their corresponding learning gains. This analysis results underscore the impact of educating providers in outpatient clinics on utilizing MOQ for BPAD assessment. The educational program enhanced providers' knowledge of BPAD assessment and diagnosis using the MDQ and has the potential to reduce misdiagnosis rates, addresses delayed diagnoses, and ultimately elevates the overall quality of mental healthcare for patients. Analysis of the project data also revealed a substantial gain in the mean and median scores between the pretest and the posttest. The mean, median, and mode results are reflected in Table 2.

Table 3

Pre-and Posttest Scores

Statistics	Pretest score	Posttest score
Mean	52.5	85
Median	55	90
Mode	60	90
Standard deviation	12.31	11.8
p - value		<0.0005

I used a t-distribution table to calculate the "*p*-value to identify if there was a significant change. The p-value corresponding to a t-value of 7.8511 with 7 degrees of freedom ($df = 7$) is *p*-value is < 0.0005. A *p*-value that is less than or equal to 0.5 reflects statistical significance and the null hypothesis is then rejected.

The program evaluation was provided to the participants (P) at the end of the program. Participants were asked to identify their responses to the program evaluation using a Likert scale ranging from strongly agree to not strongly disagree. All eight participants reported *strongly agree* on the first three questions:

1. "The Program met the identified program objectives,"

2. "The speaker was clear,"

.3). "The speaker was knowledgeable on the topic."

Five of the participants also reported (P)-*strongly agree* and three (P)- *agree*; on Question 4 "this program increased my knowledge about the Mood Disorder Scale" and how to use it to screen for bipolar disorder and on Question 6, "I will use the knowledge

gained from this educational program to improve my screening of patients for bipolar disorder." Six providers reported *strongly agree* on Question 5, "I am more confident about my ability to screen for bipolar disorder," while the two nonclinical staff reported *disagree*.

Recommendations

Based on the project findings, training provided in the use of assessment tools like the MDQ significantly enhances their knowledge on how to use the tool in client assessments for BPAD. This training can empower providers to effectively use the MDQ with their patients, particularly those with BPAD who often present with depression symptoms rather than mania, leading to potential oversight of crucial aspects of their illness and misdiagnosis. Healthcare facilities should actively encourage the utilization of the MDQ and other available tools for identifying such patients to improve diagnostic accuracy.

Providers identified time constraints as a major hurdle in incorporating additional assessment tools into their already busy schedules. To address this time issue, it is recommended to extend training to dedicated nurses and non-clinical staff who can administer assessment tools, thereby alleviating the burden on providers. In addition, integrating the MDQ into electronic patient documents sent out before visit dates allows patients to complete self-assessments ahead of time, optimizing clinic visits and workflow efficiency.

Contributions of the Doctoral Team

The project teams' contribution enhanced the success of this project. The medical director, who served as both an internal medicine physician and my project mentor was crucial in assisting me to develop and approve the project content and guide the team members. The clinical team leader /education director reviewed and endorsed the educational materials and actively participated in coordinating training sessions. The clinic's secretary organized the meeting schedules and fulfilled other ancillary needs. Throughout the project's implementation and dissemination phases, the medical director and the other team members provided guidance and support, which were invaluable to the success of this project.

Strengths and Limitations of the Project

Several strengths and limitations were identified throughout the development and implementation of this project and recognizing these aspects can be crucial for improving future educational endeavors.

Strengths

Collaboration with facility leaders, particularly the medical director and education director who also serves as the facility manager, significantly influenced providers' positive response to the education program, marking one of the project's strengths. Facility management's assistance in identifying instances of misdiagnosis due to providers' inadequate use of the MDQ tool for BPAD identification and diagnosis also stood out as a strength. While providers displayed awareness of the tool and some possessed good knowledge of BPAD and MDQ, they were not actively implementing this

knowledge. However, the strength lies in providers acknowledging their lack of proper knowledge and expressing their eagerness to learn more. Another strength of the project was employing a pretest/posttest evaluation to measure the impact of staff education on screening tool usage. This method allowed for data collection before and after the educational intervention, enhancing the project's validity through evidence-based measures.

Limitations

Despite the project strengths, there were some limitations identified. Time constraints among providers affected the complete participation of two individuals who completed the pretest but could not continue due to the time constraints. In addition, the small sample size of only 10 providers limited the project's generalizability, highlighting the need for a larger participant pool. Future projects should consider incorporating larger participant numbers, possibly through mandatory training regulations, to encourage greater participation in crucial health education projects that can enhance staff access to evidence-based training.

Section 5: Dissemination Plan

Dissemination is the process of communicating the outcomes of a project to relevant stakeholders (Elwy et al., 2022). Dissemination enables interested stakeholders to assess the results of staff education interventions and make informed decisions based on the findings. The results of this staff education program will be shared with the management of the outpatient clinic, facility stakeholders, managers, and providers. In addition, with the support of the medical director, who has access to larger provider groups in the area, the potential exists to share the results of this project to other outpatient provider clinics in the area and region.

Analysis of Self

As a DNP student, I took a leadership role in this project. My role included formulating and collaborating with the team, which included frequent meetings with the medical director, and education director who is also the facilitator manager. As a psychiatric provider in this practice, I see firsthand the impact of misdiagnosis, the patient suffering, the impact to family and relationship, and the morbidity that is related to poor treatment planning and ultimately the urgence to make a change that will bridge the gap in practice. In my day-to-day practice as a psychiatric nurse practitioner, I encountered patients with BPAD who were initially misdiagnosed with depression. My experience with this project has been transformative, as it has allowed me to assume leadership roles that lead to the development of an intervention that can lead to practice change.

My insight into this practice gap was heightened by the burden that patients and their families face through their life struggles with the BPAD disease process. This burden fueled my motivation and resilience to initiate and complete this project despite the challenges faced during the process. With appropriate diagnosis, I have seen remarkable turnaround of symptoms, with proper treatment and management. I want to continue my goal of promoting education on proper diagnosing using available tools to reduce patient suffering and improve quality of care.

Summary

The purpose of this staff education project was to address the identified gap of the lack of provider knowledge on how to use the MDQ to evaluate and diagnose patient suffering from BPAD. Hence the educational program was developed to increase staff knowledge using current evidence-based information for the literature collected. and answering the practice focused question of; Did providing education about bipolar disorder screening to staff providers in a private primary care practice increase their knowledge of how to screen patients for bipolar disorder?

The ADDIE model guided the staff education program for primary care providers in the targeted outpatient psychiatric clinic. A pretest/posttest design assessed knowledge before and after education, showing a learning gain for providers in attendance. Outpatient primary care facilities could use this educational program to evaluate and increase provider knowledge about using the MDQ screening tool to assist in closing the gaps in identifying BPAD patients, reducing misdiagnoses, reducing the number of years to proper diagnoses and treatment, which could ultimately optimize care, improve the

quality of healthcare, and reduce the cost of care for all who are impacted, which ultimately, can positively impact social change.

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Appendix A: Mood Disorder Questionnaire

Name: _____ Date: _____

Instructions: Check (☑) the answer that best applies to you.
Please answer each question as best you can.

	Yes	No
1. Has there ever been a period of time when you were not your usual self and...		
...you felt so good or so hyper that other people thought you were not your normal self or you were so hyper that you got into trouble?	◯	◯
...you were so irritable that you shouted at people or started fights or arguments?	◯	◯
...you felt much more self-confident than usual?	◯	◯
...you got much less sleep than usual and found you didn't really miss it?	◯	◯
...you were much more talkative or spoke faster than usual?	◯	◯
...thoughts raced through your head or you couldn't slow your mind down?	◯	◯
...you were so easily distracted by things around you that you had trouble concentrating or staying on track?	◯	◯
...you had much more energy than usual?	◯	◯
...you were much more active or did many more things than usual?	◯	◯
...you were much more social or outgoing than usual, for example, you telephoned friends in the middle of the night?	◯	◯
...you were much more interested in sex than usual?	◯	◯
...you did things that were unusual for you or that other people might have thought were excessive, foolish, or risky?	◯	◯
...spending money got you or your family in trouble?	◯	◯
2. If you checked YES to more than one of the above, have several of these ever happened during the same period of time? *Please check 1 response only.*	◯	◯
3. How much of a problem did any of these cause you — like being able to work; having family, money, or legal troubles; getting into arguments or fights? *Please check 1 response only.* ◯ No problem ◯ Minor problem ◯ Moderate problem ◯ Serious problem		
4. Have any of your blood relatives (ie, children, siblings, parents, grandparents, aunts, uncles) had manic-depressive illness or bipolar disorder?	◯	◯
5. Has a health professional ever told you that you have manic-depressive illness or bipolar disorder?	◯	◯

This questionnaire should be used as a starting point. It is not a substitute for a full medical evaluation. Bipolar disorder is a complex illness, and **an accurate, thorough diagnosis can only be made through a personal evaluation by your doctor.**

Adapted from Hirschfeld R, Williams J, Spitzer RL, et al. Development and validation of a screening instrument for bipolar spectrum disorder: the Mood Disorder Questionnaire. *Am J Psychiatry.* 2000;157:1873-1875.

This instrument is designed for screening purposes only and is not to be used as a diagnostic tool.

How to Use

The questionnaire takes less than 5 minutes to complete. Patients simply check the yes or no boxes in response to the questions. The last question pertains to the patient's level of functional impairment. The physician, nurse, or medical staff assistant then scores the completed questionnaire.

How to Score

Further medical assessment for bipolar disorder is clearly warranted if patient:

- Answers *Yes* to 7 or more of the events in question #1

AND

- Answers *Yes* to question #2

AND

- Answers *Moderate problem* or *Serious problem* to question #3

Appendix B: Pretest/Posttest

Program Title: Advanced Practice Provider Education on the Use of the Mood Disorder Questionnaire: A Staff Educational Program

Thank you for agreeing to participate in this educational program. Your completion of this pretest/posttest will serve as your consent to participate in the project. All participant information collected is anonymous; therefore, please do not write your name on this document. A unique identifier (UI) will be provided to ensure that the pretest you complete can be aligned with your posttest.

UI: _____ **Date: _____**

1. **What is the primary purpose of the Mood Disorder Questionnaire in outpatient clinics?**
   a) To diagnose depressive mood
   b) To assess for presence of other mood symptoms in person with depression
   c) To diagnose schizophrenia
   d) To evaluate mental health

2. **Name three common mood disorders that the Mood Disorder Questionnaire aims to identify.**
   a) schizophrenia, depression, bipolar disorder
   b) Bipolar disorder, depression, Seasonal Affective disorder
   c) ADHD, anxiety, insomnia
   d) Allergies, obesity, ADHD

3. **How is the Mood Disorder Questionnaire typically administered to patients in an outpatient setting?**
   a) physician assessment
   b) Through a physical examination
   c) Via a written questionnaire or interview
   d)complete by family member

4. **What are the key advantages of using the Mood Disorder Questionnaire as a screening tool in outpatient clinics?**
   a) Measures mood by grading accurately
   b) Quick and easy to administer
   c) accurate diagnosis for depression
   d) Screens for infectious diseases

5. **Explain the significance of early detection of mood disorders using tools like the Mood Disorder Questionnaire in outpatient care.**
   a) Early detection will cure the disease
   b) Helps prevent complications and improves outcomes
   c) Delays treatment for better accuracy
   d) Not relevant to overall health

6. **What role does patient self-reporting play in the effectiveness of the Mood Disorder Questionnaire in outpatient settings?**
   a) Self reporting protects patient privacy act
   b) Enhances accuracy by capturing patient experiences
   c) Delays diagnosis
   d) Irrelevant to the screening process

7. **Describe two potential challenges in implementing the Mood Disorder Questionnaire in diverse outpatient populations.**
   a) Limited access to healthcare and language barriers
   b) Language barrier and high screening costs
   c) High patient engagement and easy accessibility
   d) No challenges; it works universally

8. **How might healthcare professionals use the results of the Mood Disorder Questionnaire to inform treatment plans in outpatient clinics?**
   a) Document results and provide standard medical care
   b) Implement interventions based on identified mood disorders
   c) Rely solely on medication without considering results
   d) Disregard patient preferences

9. **Discuss the importance of routine screening for mood disorders in outpatient care and its impact on patient outcomes.**
   a) Not important; it doesn't affect patient outcomes
   b) Enhances early detection, leading to improved outcomes
   c) To diagnose kleptomania, and family history of substance use disorder
   d) To reduce unnecessary stress to patients and provider

10. **Can you identify one practical recommendation for improving the successful integration of the Mood Disorder Questionnaire into routine outpatient clinical practice?**
    a) Avoid integrating it into routine practice
    b) Conduct training for healthcare staff on proper administration

c) Use the questionnaire for specific age groups
d) Implement it only when a visiting psychiatric provider is on site

Appendix C: Program Evaluation

Program Title: Advanced Practice Provider Education on the Use of the Mood Disorder Questionnaire: A Staff Educational Program

Directions: Please complete the program evaluation for the educational program. Select one of the following: *Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree*

Please provide a response for the following items:	***Strongly Agree***	***Agree***	***Neutral***	***Disagree***	***Strongly Disagree***
1. The Program met the identified program objectives					
2. The speaker was clear					
3. The speaker was knowledgeable on the topic					
4. This program increased my knowledge about the Mood Disorder Scale and how to use it to screen for bipolar disorder					
5. I am more confident about my ability to screen for bipolar disorder					
6. I will use the knowledge gained from this educational program to improve my screening of patients for bipolar disorder.					

7. Please provide any additional comments about this program:

_____

_____

8. Please add any topics that you would like to see be included in future educational programs:

_____

_____