Optional Depression Screening in College Health

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Optional Depression Screening in College Health

A DNP Project

Presented to the Faculty of the
Department of Nursing
West Chester University
West Chester, Pennsylvania

In Partial Fulfillment of the Requirements for the
Degree of
Doctor of Nursing Practice

By
Brittany Schugsta, MSN, FNP-BC

May 2024

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Acknowledgements

I would like to acknowledge everyone who I have had the opportunity to cross paths with throughout my DNP journey. Because it has taken me so long to complete the program, I believe I have been a part of 3-4 different cohorts and have learned so much from the diversity of my experience.

I would not be authoring this paper today if it were not for Dr Jacquelyn Owens. She was always there to encourage and inspire me to keep going, even when the pandemic began, and I questioned my place in nursing. She provided calm reassurance and was more than patient with my last-minute tendencies. She always presents herself with a smile and kindness.

Judd Strauss and Dr Veda Maany are to be credited for offering me the utmost privilege of implementing this change in Student Health Services. They entrusted me to work with the staff and students, which was truly an honor. Their guidance and contributions to the project were incomparable. Judd, thank you for being so accommodating and easy-going with everything. Dr Maany, thank you for challenging me to think outside the box and for always believing in me. I admire your vast knowledge and ability to think complexly. You are a one-of-a-kind gem in medicine, there is no one like you.

Lastly, I would like to acknowledge my family. To my kids, I am so sorry for the many times I was “so busy” or “had to write a paper.” It is time for us to enjoy some free time and have fun! To my husband, Mark, thank you for always being there to help, especially in those late-night moments when I needed to submit something by midnight. Your computer skills, statistical knowledge, and eloquence are obvious in my work.
Dedication

This project is dedicated to all staff within Student Health Services that helped make it possible. Your dedication to caring for the students of WCU is admirable and never-ending.
Abstract

Many people living with depression are not receiving treatment. College students are a population particularly affected by depression, which has negative implications for future academic and personal success. U.S. organizations have recommended universal depression screening to identify those in need of treatment, to improve outcomes and minimize depression's effects. Primary care is a key access point for health services, including depression screening and management. Critics of depression screening cite concerns with the recommendation, specifically weak evidence of the overall benefits, potential for overdiagnosis, and overutilization of scarce primary care resources.

The project site is a large southeastern Pennsylvania public research university within the student health clinic. Staff feedback highlighted several problems with the depression screening process. This project utilized a retrospective pre- and post-implementation quality improvement design to analyze data and determine the effect of making depression screening optional.

In 2020, depression screening was embedded into the nursing triage process. By contrast, in 2024, patients were given the option to complete depression screening. A comparison was made between 2020 and 2024, looking at similar two-week periods. In 2020, of the 222 patients who were given the PHQ-2 by design, 9 (4%) completed the PHQ-9. In 2024, of the 183 patients who were offered depression screening, 78 (43%) opted to take the PHQ-2, and 14 (8%) took the PHQ-9. Results suggest that making depression screening optional in 2024 improved efficiency.
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Chapter 1

Introduction

Depression is a serious, pervasive health problem that has reached epidemic proportions in the United States. It causes tremendous emotional suffering and is a risk factor for suicide, the second leading cause of death in young adults (Centers for Disease Control and Prevention [CDC], 2023). College students are a population greatly affected by depression. The American College Health Association (ACHA) conducted a national research survey in 2019 and found that 45.1% of students reported feeling so depressed it was difficult to function. Mental health reasons accounted for 64% of students no longer attending college, as evidenced in a survey by the National Alliance on Mental Illness. Depression is a barrier to student success and can have lasting effects on a student’s trajectory.

Significance

There are fundamental reasons for the high prevalence of depression among college students. Beginning with the transition from childhood dependence to first-year student independence, college students are faced with a plethora of unique situations that can be particularly challenging to navigate: moving to a new location, living with unknown people, making new friends, and learning autonomously in a rigorous academic environment. Additionally, they are often exposed to alcohol, tobacco, drugs, intimate relationships, conflict, and other situations that can impact their health and well-being. Moreover, four key related influencing factors have been identified as likely to induce college students’ depression: biological factors, personality and psychological state, college experience, and lifestyle (Liu et al., 2022).

The personal, financial, and societal burden of depression is immense. Despite this, depression remains underrecognized and consequently undertreated. Over half of individuals
with depression do not actively seek or receive treatment (The State of Mental Health in America, n.d.). The COVID-19 pandemic further contributed to the worsening state of mental health in the US; services and resources were shifted to accommodate essential pandemic-related activities, reducing healthcare accessibility. The tremendous fear created by the unknown led to isolation and profound worry for many (Bueno-Notivol, et al., 2021).

Due to healthcare accessibility issues and shortages of mental health providers, primary care offers a key access point to treatment services for patients with depression. Furthermore, patients with depression often experience somatic symptoms and physical manifestations, which leads to higher primary care utilization rates (Tusa et al., 2019). The importance of depression recognition in primary care settings such as student health centers is also reflected in a 10-year longitudinal study revealing that 83% of individuals who died by suicide were seen in primary care within the previous year and had no mental health diagnosis in their records (Ahmedani, et al., 2014).

Universal depression screening in primary care has been recommended by the United States Preventive Task Force (USPSTF) as a solution to identify those living with depression and those who are not yet receiving treatment (Recommendation: Depression and Suicide Risk in Adults: Screening, 2023). However, the overall benefits of depression screening are controversial, with critics citing a lack of good quality evidence to support improved outcomes (Thombs & Ziegelstein, 2017).

**Background**

Valuable screening tests should have high accuracy in detecting potential problems, while minimizing unclear or ambiguous results. Screening tests are meant to detect health disorders or diseases in people who do not yet have any symptoms of disease (Screening Tests for Common Diseases, 2019). The symptoms of depression, however, are not usually concealed and can often
be easily recognized. This differs from traditional screening tests which rely solely on objective finding to uncover hidden signs of disease. There is no true, objective way to measure the degree of a mental state, as an imaging exam provides radiologic evidence, or a blood test provides laboratory results. The subjectiveness of depression screening responses can be further magnified by situational sadness related to acute illness. A common reason for presenting in primary care, being sick can influence the way a patient is feeling and responding. Both situational context and in-the-moment feelings weigh heavily on how honestly and directly a patient will answer depression screening. Using a patient answered survey as a screening test will require the utmost participant honesty, understanding, and voluntary acceptance to be valid.

This project focused on the weaknesses of the current depression screening recommendations and provided an alternative method to improve the practice in a university setting, by making depression screening optional. The study institution serves as a primary care access point for college students and is an integral component of campus health. Within the study institution, meetings with staff (directors, nursing, administrative) occurred to examine clinic flow, identify deficiencies, and propose ways to make positive, evidence-based changes. Considering the aforementioned mental health statistics of college students, depression screening was an important focus to all. The previous depression screening protocol was in line with the recommendations for universal screening. However, two major deficiencies in the process were identified by the staff:

1. Depression screening was often conducted on individuals already diagnosed with and treated for depression. Unable to simply disregard positive results on those found to have a current depression diagnosis after screening, nurses felt obligated to discuss all high scores with students, as they were clinically concerning at times. This resulted in time-consuming, resource-depleting conversations which would have no positive change on
patient outcomes. In fact, it had the potential to lead to negative outcomes by deterring attention and time away from the patient’s presenting problem. Unfortunately, even with treatment, some students live with baseline depressive symptoms. Treatment resistant depression affects about 30% of people diagnosed with depression (Ionescu, et al., 2015).

2. Depression screening was being administered to students who were acutely ill. Two reactions were frequently noted: Students would seem exasperated by the additional questioning. Students would exaggerate depression screening answers and imply, as they were answering the questions, that their symptoms were so bad they were contributing to their mental state.

**Clinical Questions**

1. In college students visiting a university health center, does optional depression screening improve the clinical usefulness of the PHQ-2, compared with universal screening of all?

2. In college students visiting a university health center, does optional depression screening improve the relevancy and efficiency of the process?

**Goals of Project**

The goal of this DNP project was to find a consistent, efficient, equitable way to provide clinically relevant depression screening to the college-age population and to minimize any risk associated with the process while providing individualized, quality care.

Incorporating evidence-based practice into the process of accomplishing this goal was essential. The three components of evidence-based practice include the best scientific evidence, clinical experience, and patient preferences. In addition, the utilization of the Donabedian’s Model of Healthcare Quality (DMHQ) was chosen as the theoretical underpinning to assist in the change process.

**Summary of Chapter**
It is inarguable that depression has a deleterious impact on those affected and that providing universal, equitable depression screening can reach the greatest number of people. Nevertheless, there is a possibility for risk. Additionally, a rigid approach to care does not account for unforeseen elements of individual clinical situations. By following generalized recommendations to standardize care, reliability can be obtained at the cost of validity (Donabedian, 1966). Healthcare providers should be attuned to the holistic needs of patients and understand the best ways to evaluate the mental health of this population. Revisiting the recommendations, guidelines, and benchmarks on depression screening from various organizations and evaluating the process of care through a methodical framework created an opportunity to revise previous practices, making them more person-centered, while remaining standardized, with the goal of increasing the validity of depression screening and the quality of care provided.
Chapter 2

Literature Review

Chapter two will include the recommendations for depression screening. The Patient Health Questionnaire-2 (PHQ-2) and Patient Health Questionnaire-9 (PHQ-9) will be discussed focusing on the validity and usefulness of them in screening (Appendices A and B). Depression treatment outcomes are included, as they are an important measure to justify screening. It will include an overview, definitions, search strategy, summary of research, and gaps in research.

Terms, Concepts, & Definitions

Major Depressive Disorder (MDD), as defined by the Diagnostic and Statistical Manual of Mental Disorders (5th Edition), is having at least two weeks of mild to severe persistent feelings of sadness or a lack of interest in everyday activities. The terms depression and MDD will be used interchangeably.

There are several brief tools for depression screening that are appropriate for use in primary care settings (Recommendation: Depression and Suicide Risk in Adults: Screening, 2023). The Patient Health Questionnaire-2 (PHQ-2) is commonly used due to ease of administration and reliability. The PHQ-2 was developed by a Pfizer pharmaceutical marketing team to streamline depression identification and treatment in busy primary care settings. It is an abbreviated form of the Patient Health Questionnaire-9 (PHQ-9), which serves as both a highly validated nine-item depression severity measure and a diagnostic instrument for major depressive disorder (MDD) (Kroenke, et al., 2003). In a 2020 systemic review and meta-analysis by Levis et al., the PHQ-2, with a standard cutoff of 2 or greater, identified 91% of participants with depression (sensitivity, 0.91). However, the specificity was lower at the same cutoff of 2 or greater, with 67% of participants identified without depression. Noting its lower specificity, the PHQ-2 has the potential to produce a high number of false positives and may
incorrectly identify depression in individuals when it is not present (Centers for Disease Control and Prevention [CDC], 2023), leading to overdiagnosis and overtreatment.

**Search Strategy**

The search for the literature for this project began in Spring 2023 and continued through Spring 2024. The search strategy was developed in consultation with a research librarian. The literature search was completed using CINAHL; the dates for inclusion were 2017-2024. The inclusion dates were expanded beyond the 5–7 year standard for landmark publications. Search terms included the major heading of *depression screening* and subject headings: *recommendations, outcomes, benefits, risks, college students, and primary care.* The subject headings were paired individually with the major heading using the term “and” which revealed the following:

- Depression screening = 2,330 results
- Depression screening AND recommendations = 163 results
- Depression screening AND outcomes = 711 results
- Depression screening AND benefits OR positive effects OR importance OR impact = 643 results
- Depression screening AND risks OR dangers OR hazard OR disadvantages = 1,006 results
- Depression screening AND college students OR university students OR undergraduate students OR young adults = 246 results
- Depression screening AND primary care = 372 results
- Combining all the terms using AND yielded 0 results
Search terms included the major heading of *depression screening* and subject headings: *USPSTF depression screening recommendations, depression in college age young adults, and depression treatment efficacy outcomes.*

**Depression Screening Recommendations**

The USPSTF 2023 statement recommends that adults (19 years or older, regardless of risk factors for depression), who do not have a diagnosed mental health disorder and are not showing recognizable signs or symptoms of depression or suicide risk, be screened for MDD when adequate systems are in place for diagnosis and treatment of depression with evidence-based care, or referred to a setting that can provide it.

Screening intervals are not defined by the USPSTF due to a lack of evidence; a pragmatic approach using clinical judgment is recommended (initially, yearly, as needed). Screening benefits were demonstrated by increased rates of depression remission and lower prevalence of depression after 6 months. No pattern of effects indicated that screening worsens any outcomes the interventions were intended to benefit. Adequate systems and knowledgeable clinical staff are needed to ensure thorough implementation of depression screening, recognizing the barriers that prevent follow up and the potential for treatment failures and harms (*Recommendation: Depression and Suicide Risk in Adults: Screening*, 2023).

Endorsing the USPSTF recommendation, the American College Health Association (ACHA) cites the statement in their Clinical Benchmarking Report for use in college health. ACHA is the principal leadership organization that strives to advance the health of college students and campus communities through advocacy, education, and research. ACHA stands at the forefront of issues that impact the health and wellness of college students, including depression. Slightly different from the USPSTF, the ACHA report specifies that patients screened for depression should not have an existing diagnosis of depression in their chart.
Acceptable depression screening documentation also includes an option for refusal to be screened (International & Inc., n.d.).

In the United Kingdom (UK), the National Screening Committee recommends against depression screening after the UK Quality and Outcomes Framework 2006-2013 study demonstrated that almost 1000 patients had to be screened for each new depression diagnosis and almost 700 for each new antidepressant prescription (Thombs et al., 2021). The Canadian Task Force on Preventive Health Care (CTFPHC) also recommends against routine screening for depression, retracting the previous guideline because there have not been any randomized controlled trials (RCTs) that have shown depression screening to be beneficial and because of the concern of false positive results and unnecessary treatment (Depression—clinician Algorithm and Faq – Canadian Task Force on Preventive Health Care, n.d.).

Gaps in Literature

Though the recommendations for universal depression screening are vast, there is little in the way of recommendations for the process to make it successful. As evidenced in this project, there is no clear guidance on the best way to conduct universal screening without doing a pre-assessment of one’s mental health history or current mental health status, which is impractical due to limited healthcare resources, so that people currently diagnosed with a mental health condition are not being screened. There is also little information that connects all the pieces of the depression screening program. The USPSTF (2023) identifies additional research needs and gaps that remain pertinent:

- Multiple deficits in the assessment and screening of suicidality
- The effect of depression screening and best type of tool to use for minority communities and other underrepresented groups
- Barriers to establishing adequate systems of care and how to address these barriers
• Screening intervals

• Examination of implementation programs to measure effectiveness and patient health outcomes

The effect of depression screening remains controversial. Some studies show positive results, but others have not. Whether care that incorporates depression screening is superior to care based on usual provider assessment and case identification is unclear. Many studies are weak or contradictory (Screening for Depression in Adults, n.d.).

Summary of Chapter

There is no congruence among agencies on the manner of performing depression screening in primary care. Due to no clear guidance on how to conduct universal depression screening by the USPSTF, and ACHA acknowledging patient refusal as an acceptable reason not to perform depression screening, this DNP project implemented optional depression screening to balance the benefits and weaknesses of screening recommendations.
Chapter 3

Methodology

Beginning with a spirit of inquiry, inherent to evidence-based practice, the study organization worked as a team to identify areas of practice that could be used for improvement. The research questions were developed and the search for answers using the available literature began. A plan was developed, implemented, and then the findings were analyzed for significance. Findings were presented at the study institution (Appendix C).

Design

This quality improvement (QI) project utilized a retrospective pre- and post-implementation quality improvement design to evaluate the effect of optional depression screening in college students. This design allowed comparison of pre-intervention data when depression screening was previously conducted without being optional. This allowed Depression Screening to be utilized similarly. The advantage was determining if there was a statistical change in the participation rates and PHQ-2 results once the new process was implemented. A retrospective pre-implementation review was completed within the electronic health record (EHR). The information obtained included the total number of students seen in Student Health Services (SHS), the number of students who completed the PHQ-2, and the number of students who completed the PHQ-9. The optional depression screening intervention was implemented within SHS in a 2-week cycle and data was analyzed and evaluated continuously. During and after the evaluation period, problems and barriers were identified and noted to make changes for any future use. The pre- and post-intervention data was analyzed to determine if implementing optional depression screening affects the participation in depression screening or the results.
Change Theory

Evidence-based practice attempts to improve the quality of healthcare. However, the definition of quality medical care can be difficult to define. Aside from the values and goals of the current medical system, quality is personal and can vary based on patient preferences. Another indicator of quality care is outcomes, but these can sometimes be difficult to measure, as in the case of depression screening. Donabedian’s Model for Healthcare Quality (DMHQ) describes this in detail and provides a way to elevate the quality of care by focusing on systems and processes of providing quality care. Therefore, DMHQ was utilized to guide this quality improvement project.

The DMHQ framework is composed of three concepts: structure, process, and outcome. *Structure* refers to the organizational and physical characteristics of where care occurs, including the qualifications of providers and administrative systems through which care takes place. Process is the actual care delivered, including diagnostics, treatments, surgical procedures, and what is done for the patient. Outcome describes recovery, morbidity, mortality, or survival (Donabedian, 1966). The structure and systems where healthcare workers practice can enhance or detract from the quality of care provided; policies and recommendations for practice included. DMHQ calls those who provide care in our current era to actively engage in leading and shaping the pursuit of high-quality care in their organizations (Ayanian & Markel, 2016). The available resources (time, money, and staff) are an important consideration when implementing the process of consistent, equitable care. DMHQ attests that quality measurement extends beyond the technical management of illness to incorporate many qualitative factors, including patient satisfaction (Donabedian, 1966).

Beginning with Donabedian’s defining question, “What goes on here?,” the application of DMHQ (Figure 1) looked at the structure: USPSTF Depression Screening recommendations,
staffing, electronic health record system (EHR), and referral capabilities. Secondly, it examined the process: procedures of implementing depression screening, interventions, and referral process. Lastly, it assessed the outcome: stakeholder’s willingness to change practice and patient outcomes.

Figure 1

Donabedian's Model for Healthcare Quality Applied

- **Structure:**
  - Staffing
  - Electronic Health Records
  - Depression Screening Recommendations

- **Process:**
  - Procedure of Implementing Depression Screening
  - Staff Interventions
  - Referral Process

- **Outcomes:**
  - Change in Practice

Setting

The setting for this practice improvement is a suburban university with an enrollment of over 17,000 students. Approximately 30% of the student body lives on campus in university-owned, -operated, or -affiliated housing. It is estimated that 70% of students live off-campus or commute (West Chester University, n.d.). The Student Health Services (SHS) functions to serve the health needs of the students and provides care to an average of 80–100 students per day. There is a counseling center on campus, which provides open triage hours daily for students and accommodates emergency situations.
Technology issues, student phone challenges (phone charging, Wi-Fi, etc.), and nursing or administrative staff willingness to initiate and follow the depression screening protocol are influences that could affect the implementation of this project. Working with the Medical Director throughout implementation provided access to the data dashboard built within the EHR that stores the PHQ-2 and data for analysis.

**Population/Sample**

This QI project utilized optional depression screening for all students receiving care in SHS seeing a physician or nurse practitioner. Inclusion criteria included all students aged 18 and older who visited SHS for care and completed the PHQ-2. No active recruitment was performed by the administrative or nursing staff or the PI. The sampling method used was convenience sampling. Subjects were included from the same month (February) pre-intervention 2020 versus post-intervention 2024. This method was chosen to help mitigate potential significant bias of the cyclical variations in mental health.

**Data Collection & Analysis**

The collection of data occurred within the Electronic Health Record (EHR), Point and Click. Visit tracking statistics and PHQ-2 results are stored within the EHR. This data was manually extracted for descriptive and statistical analysis. The EHR was used to gather, retain, and produce the student data needed for this project.

**Protection of Human Subjects/IRB**
Institutional Review Board (IRB) approval (Appendix D) was obtained from West Chester University. The Medical Director and Director of SHS accessed this information though a password-protected computer hard drive and provided de-identified visit data to the PI for analysis. Data that includes any identifying information or protected health information was not to be included in this project. No human subjects were enrolled for this project and consent was not needed, as this project is not identified as research.

Stakeholders

The stakeholders for this project within SHS were the leadership team, nursing staff, and administrative staff. The administrative and clinical team working in the Counseling Center were also involved in the referral portion of the process. Upon completion of this project, the results of the pre- and post-implementation comparison were disseminated via presentation to the stakeholders listed above.

Implementation

The implementation methods for this quality improvement project are listed below.

1. Meetings with SHS leadership and provider team to discuss the project and ask for feedback related to potential improvement opportunities.

2. Staff feedback was discussed with the Director of SHS, and practice improvement focus was identified as depression screening.

3. The PICOT question was developed, and a literature review was conducted to summarize depression screening recommendations and current weaknesses within them.

4. SWOT analysis (Figure 2) performed. Presented proposal to SHS staff.

5. IRB approval was obtained through WCU.
6. Retrospective data was obtained from the EHR on visit numbers and PHQ-2 results.

7. Data was analyzed using descriptive statistics and comparison tests.

**Figure 2: SWOT Analysis**

**Barriers and Facilitators**

Barriers occurred because of timing due to delay in IRB approval. Being an academic institution, delays happened due to winter break. Knowledge barriers of depression screening limitations and how depression screening affects student outcomes are widespread. The education interventions discussed in the next section were utilized to combat this.

**Education Intervention**
Education on depression screening was imperative to achieve buy-in for the re-implementation of this process. The education plan for the administrative and nursing staff in SHS included a face-to-face meeting, including a PowerPoint (Appendix C), to update everyone on the current recommended standard of care pertaining to depression screening, mental health statistics for the college age population, and the aims of depression screening. The concept of making depression screening optional was discussed and proposed as a potential improvement to the previously identified weaknesses in the depression screening process. The process students will follow in the EHR was reviewed by staff for awareness. The leadership team of SHS and the PI were the primary educators and facilitators.

**Budget**

The budget for this quality improvement project was minimal. The PI spent a small amount to provide staff with snacks during an educational session. The implementing institution incurred no direct cost during the implementation of this project.

**Summary of Chapter**

The methodology for this project was driven by the current depression screening recommendations, the identified weaknesses of the recommendations, and with the feedback of study institution’s experiences. Using a sound, systematic process, the research questions were identified, ethical implications were reviewed, a research design was selected, data was collected, and statistical analysis was performed.
Chapter 4

Results

This project used a retrospective pre- and post- implementation quality improvement design to evaluate the effect of using optional depression screening with college students visiting a university-based primary care clinic (Figure 3). Retrospective data was collected from February 20, 2020, to March 6, 2020. There were 222 students included in the pre-intervention group who completed depression screening using the PHQ-2. Post-implementation data was collected from February 22, 2024, to March 8, 2024. There were 183 students in the post-intervention group who were offered depression screening using the PHQ-2, only 78 students opted to complete it.

Table 1: Results Summary

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2024</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider Visits</td>
<td>337</td>
<td>398</td>
</tr>
<tr>
<td>Completed PHQ-2</td>
<td>222</td>
<td>78</td>
</tr>
<tr>
<td>Completed PHQ-9</td>
<td>9</td>
<td>14</td>
</tr>
</tbody>
</table>

It is also noteworthy that a Z-Test (Figure 4) for proportions determined that a statistically higher % percentage of patients required the PHQ-9 in 2024 compared to 2020 (18% vs 4%).

Table 2: Z Test
A significant finding is how efficient providers could be while maintaining a high ability to assess patients with depression. In its simplest form, efficiency is a measure of volume and time. For this study, “volume” was determined not just by the number of patients initially going through the PHQ-2 but also by subsequent percentage needing to receive the PHQ-9 and Follow Up Conversations. “Time” was determined using the mean of how long it takes for the nurse/provider to conduct each screening (PHQ-2, PHQ-9, and Follow Up Conversation).

Using this framework, results were compared from a two-week study in 2020 to another two-week study conducted in 2024. Two insights stand out: one regarding time and the other regarding the number of patients needing the final Follow Up Conversation. Overall results suggest it took approximately 9 hours to screen 222 patients in 2020, compared with
approximately 5 hours to screen 78 patients in 2024. Not surprisingly, screening fewer patients resulted in time saved during a two-week period. From this two-week time saved was extrapolated not only yearly savings (almost 70 hours) but also how many appointments these 70 hours of nurse/provider time could have saved.

**Table 3: Estimated Results in Time**

<table>
<thead>
<tr>
<th></th>
<th>2020 Measurements</th>
<th>2024 Measurements</th>
</tr>
</thead>
<tbody>
<tr>
<td># of PATIENTS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>completed PHQ-2</td>
<td>222</td>
<td>78</td>
</tr>
<tr>
<td>Time for Initial PHQ-2 Screening</td>
<td>444 minutes</td>
<td>156 minutes</td>
</tr>
<tr>
<td>% of Patients who needed PHQ-9</td>
<td>4%</td>
<td>18%</td>
</tr>
<tr>
<td>Time for PHQ-9 Depression Severity Screening</td>
<td>45 minutes</td>
<td>70 minutes</td>
</tr>
<tr>
<td>% of Patients with Follow Up Conversation</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Time for Follow Up Conversation</td>
<td>50 minutes</td>
<td>70 minutes</td>
</tr>
<tr>
<td>TOTAL minutes</td>
<td>539</td>
<td>296</td>
</tr>
<tr>
<td>TOTAL hours</td>
<td>9.0</td>
<td>4.9</td>
</tr>
</tbody>
</table>

**Table 4: Prospective Estimate of Time Saved**

<table>
<thead>
<tr>
<th>TIME SAVINGS</th>
<th>TOTAL hours SAVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.05</td>
<td>TOTAL hours SAVED (two-week period)</td>
</tr>
<tr>
<td>68.9</td>
<td>TOTAL hours SAVED (over 34 week yearly period)</td>
</tr>
</tbody>
</table>

For this amount of time saved, using 30 minute appointments or more with their provider, 137.7 more patients could have been seen and 275.4 patients could have spent 15 minutes

**Summary of Chapter**

In 2020, of the 222 patients who were given the PHQ-2 by design, 9 (4%) completed the PHQ-9. In 2024, of the 183 patients who were offered depression screening, 78 (43%) opted to take the PHQ-2 and 14 (8%) took the PHQ-9. A significantly fewer number of students completed depression screening in 2024, but more students completed the PHQ-9. This suggests that optional
depression screening improved the specificity and overall validity of the PHQ-2. Results also suggest that making depression screening optional in 2024 improved the process's efficiency.
Chapter 5

Discussion

A myriad of influencing factors leads to a high prevalence of depression among college students, which has a strong negative impact on individual health and academic success. The Covid-19 pandemic has exacerbated the severity of depression among college students and created numerous healthcare challenges (Liu, et al., 2022). Universal depression screening has been recommended by many US health agencies as a solution to identifying those in need of treatment, but has been argued against by many, due to a lack of good quality data, not justifying a population-wide standard practice (Mojtabai, 2017). Despite the widespread use of universal depression screening, mental health outcomes do not seem to be improving, as evidenced by the rising suicide rates (Centers for Disease Control and Prevention [CDC], 2023). It is imperative to make well-informed, thoughtful decisions to maximize healthcare efficiency and outcomes.

Review of the Problem

Depression screening in the study institution was previously completed by screening individuals already diagnosed with depression and people who were not interested in discussing their mental health, taking attention away from their presenting problem and affecting clinic flow. The COVID-19 pandemic diverted resources to essential pandemic-related responsibilities and depression screening was stopped. Redesigning the depression screening process after COVID allowed for an opportunity to measure the new process's efficiency, compared to the old process.

Limitations of the Project

Limitations of the project were identified. The biggest limitation of the project was time. Generalizing the efficacy of any change based on 12 days of data is not sufficient. Ideally, the optional depression screening process should be monitored for a longer time period and
compared to more time in the past. Monitoring students after depression screening and following them prospectively to evaluate long term outcomes is essential for best care, but not feasible: time, staff resources, and confidentiality preclude this. This project was for data collection and analysis only, which limited a true intervention measure, by including randomization and a control group.

**Implications for Nursing Practice, Education and Research**

The prevalence of depression in college students is staggering and disheartening. There are multiple complexities contributing to the statistics and a single, rigid recommendation will not be an adequate solution. Depression is a heterogeneous condition, not a simple chemical imbalance requiring simple pharmacological intervention (Moncrieff et al., 2022). Depression occurs in patients of great diversity: those with a history of violence, abuse, poverty, chronic disease, education, and wealth. No experience will be the same and the solution will vary greatly. However, primary care remains a key access point to healthcare for all, especially for mental health services. Primary care providers need to prioritize mental health but also address the multitude of concerns each patient has, while working under a strained healthcare system with limited resources. Providing optional depression screening appears to be a promising way to achieve both.

There are many issues intertwined within the current USPSTF recommendations. The available literature and numerous studies on depression screening are conflicting and inconclusive (Mojtabai, 2017). The USPSTF recommendations for universal depression screening will lead to an inflated number of false positives, harm from overtreatment, and deflection of health resources away from those who need them most (Vaswani et al., 2018). Patients are unaware of the risks involved with depression screening and many other screening tests (Hofmann, 2023). While true informed consent may be impossible and impractical for these
purposes, offering patients an option for participation provides an ethical compromise which promotes autonomous, comprehensive, patient-centered care.

Optional depression screening is a sustainable practice, which is simple, consistent, and easily reproducible. It can save hours of time while identifying an even higher percentage of individuals who may meet the criteria for depression compared to universal screening of all, as evidenced in this project by PHQ-9 completion. Optional care could also be expanded into other areas such as domestic violence, drug, and alcohol screenings, to customize care and optimize efficiency and relevancy. A foundational piece of evidence-based practice is individualized care and personal preferences. In the presence of conflicting research or lack of evidence, as with depression screening, clinical experience and patient preferences should be prioritized. Furthermore, in an era where health equity is of utmost importance, creating ways to give individuals the exact support they need is critical. Providing options to patients allows them to make decisions and be involved in the care they receive to facilitate the best outcomes.

**Summary of Chapter**

This QI Project implemented optional depression screening in a Student Health setting. Donabedian’s Model of Healthcare Quality provided the framework to guide the project. Future implications of this project are to further evaluate this process over a longer time frame and monitor the process of depression screening and application of interventions to positive screening results.
References


2 alone and in combination with the phq-9 for screening to detect major depression. *JAMA*, 323(22), 2290. https://doi.org/10.1001/jama.2020.6504


**Screening tests for common diseases.** (2019, August 14). Retrieved April 14, 2024, from https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/screening-tests-for-common-diseases


Appendix A

PHQ 2

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Several days</th>
<th>More than half the days</th>
<th>Nearly every day</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Little interest or pleasure in doing things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Feeling down, depressed, or hopeless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

_______  +  _____  +  _____  +  _____

= Total Score  __________
Appendix B  
PHQ 9

Subject Name ___________________________ Date_________________________

Since your hospitalization, how often have you been bothered by any of the following problems? Circle your response.

<table>
<thead>
<tr>
<th>Problem</th>
<th>Not at all</th>
<th>Some</th>
<th>Often</th>
<th>Nearly all of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Little interest or pleasure in doing things</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling down, depressed, or hopeless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Trouble falling or staying asleep, or sleeping too much</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling tired or having little energy</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Poor appetite or overeating</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Feeling bad about yourself – or that you are a failure or have let your family down</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Trouble concentrating on things, such as reading the newspaper or watching television</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>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</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Thoughts that you would be better off dead, or of hurting yourself</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

Total: ________________

*Adapted from the original PHQ-9 developed by Drs. Robert L. Spitzer, Janet B.W. Williams, Kurt Kroenke and colleagues.*
Appendix C
PowerPoint Education Slides

1. **WHAT IS A DNP?**
   - Nursing’s largest healthcare profession - almost 65% of all healthcare professionals are nurses. By number alone, nurses can greatly influence healthcare. Elevating the education of nurses improves the quality of care provided and strengthens nursing's credibility among other members of the healthcare team.
   - Doctor of Nursing Practice (DNP) is a clinical doctoral degree in contrast to the PhD which is a research-based doctoral degree.
   - Research to practice gaps exist due to communication issues between researchers and clinicians; lack of financing, and rarely focused findings non suitable for widespread dissemination. The goal of the DNP is to lessen the gap.

2. **THE LONG AND WINDING ROAD**
   - It takes an average of 11 years for research to become standard practice (Bals & Boren 2006).
   - Only 14% research becomes standard of care.

3. **5 CRUCIAL STEPS TO EBP**
   - What is the question? What is the patient trying to learn? What is your patient trying to prove? Answer the question.
   - Synthesize and integrate evidence from systematic reviews and clinical guidelines.
   - Develop a care plan based on the evidence found in Step 2. Apply the evidence to real patients in an evidence-based manner.
   - Implement the evidence. Monitor outcomes. Evaluate effectiveness. Make the necessary changes. Present your findings.
   - Evaluate outcomes. Assess the effectiveness of the intervention. Identify areas for improvement and make recommendations for future patients.

4. **EVIDENCE BASED PRACTICE (EBP)**
   - Bioterrorism, pandemic, and endemic health challenges and providing holistic, quality care not only on the ground but also through education.
   - Utilizing evidence-based practice in nursing to make evidence-based decisions for patients, and community by developing and disseminating evidence-based care.
   - Evidence-based nursing nurse - clinical nursing and program development through implementation and training.

5. **WEST CHESTER UNIVERSITY STUDENT HEALTH SERVICES (SHS) EXPERIENCE**
   - Department Diversity and Practice: The Department of Public Health and Social Welfare at West Chester University of Pennsylvania offers a Nursing Program.
   - Risk factors for public health risk factors for public health: Nurses play a crucial role in identifying and addressing risk factors.
   - Department Diversity: Nurturing and promoting the return of nurses.
   - Reflecting on the importance of providing education to nurses for improving implementation.
Informed Consent

CLINICAL QUESTION

- RQ2 is a format for developing
  a good clinical research question prior to starting each research. It is a mnemonic used to describe the four elements of a sound clinical question.

MENTAL HEALTH OF COLLEGE STUDENTS

- Defined the DSM-5 diagnoses, ADHD, and anxiety disorders as components of mental health issues for college students. ADHD is defined as a condition characterized by inattention, hyperactivity, and impulsivity. Anxiety disorders include specific phobias, social anxiety, and generalized anxiety disorder (GAD).

Mental Health of College Students, Fall 2023

Share of Adults Reporting Symptoms of Anxiety and/or Depressive Disorder, February 2023

- Males and females report similar levels of anxiety and depression. College students are more likely to report symptoms of anxiety and depression compared to the general population.
WHY? TENSION AND ADAPTATION - TIME OF TRANSITION TO INDEPENDENCE

A series of factors, including family, college, studies, and social interactions, are likely to induce college student’s depression:
1. Biological – Ethnic minorities, low family socioeconomic status, family dysfunction, separation childhood experiences, insufficient social or family support
2. Personality and Psychological state – Neuroticism, psychological illness, low self-efficacy, attitude
3. College experience – Poor academic performance, lack of financial support and resources, living situation, low satisfaction with school experience
4. Lifestyle – Physical activity, sleep, substance abuse, diet, network usage

USPSTF 2023 RECOMMENDATION

The United States Preventive Services Task Force (USPSTF) recommends that all adults 18 years of age and older who do not have a diagnosed mental health disorder or recognizable distress concerning depression receive screening for major depressive disorder to begin treatment in a timely manner. The depression (MDD) assessment should be conducted using either the Patient Health Questionnaire-9 (PHQ-9), the Primary Care Evaluation of Mental Disorders (PRIME-MD) Screening Test, or another brief depression (MDD) assessment that has been validated for adults (≥18 years). Screening should be conducted in primary care settings where depression (MDD) can be treated effectively and where adequate support is available. Adequate evidence that harm or pharmacotherapy is likely no greater than benefits.

WHY ARE OTHER COUNTRIES DOING?

AMERICAN COLLEGE HEALTH ASSOCIATION (ACHA) CLINICAL BENCHMARKING PROGRAM

REFERENCES

Appendix D
IRB Approval

IRB-FY2024-49 - Initial: Initial - Expedited
do-not-reply@cayuse.com <do-not-reply@cayuse.com>
Wed 11/29/2023 10:54 AM
To: Schugsta, Brittany <8575428@wcupa.edu>; Owens, Jacqualyn M. <jowens@wcupa.edu>

Nov 29, 2023 10:54:04 AM EST
To: Brittany Schugsta
School of Nursing, Nursing
Re: Expedited Review - Initial - IRB-FY2024-49 SHS Depression Screening

Dear Brittany Schugsta:

Thank you for your submitted application to the West Chester University Institutional Review Board. Since it was deemed expedited, it was required that two reviewers evaluated the submission. We have had the opportunity to review your application and have rendered the decision below for SHS Depression Screening.

Decision: Approved

Sincerely,
West Chester University Institutional Review Board

IORG#: IORG0004242
IRB#: IRB000005030
FWA#: FWA00014155