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Depression Screening Tool for Hysterectomy Patients

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Implementation of a Depression Screening Tool for Provider Use in Hysterectomy Patients

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Department of Nursing and Health Professionals: University of San Francisco

N749B: Prospectus Qualifying Project

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Abstract

Background: The prevalence of hysterectomies in the United States ranges from 5.1 to 5.8 per 1000 women (Harnod et al., 2018). A standardized screening tool for assessing depression preoperatively could mitigate the worsening of postoperative depressive symptoms in patients scheduled for a hysterectomy.

Local Problem: Currently, there is no standard of practice to routinely screen for depression in preoperative patients scheduled for hysterectomy surgeries. However, as with any surgical intervention, there are risks of long-term complications. Studies have identified that a hysterectomy may increase the risk of cardiovascular events, menopause, depression, and other outcomes (Madueke-Laveaux et al., 2022).

Methods: A fifteen-minute zoom course will be created for providers to utilize a depression screening tool preoperatively for patients scheduled for hysterectomies.

Proposed Interventions: Pre -and post-knowledge acquisition project for the preoperative medicine clinic providers.

Proposed Measures: Pre- and post-quiz for preoperative medicine providers.

Conclusions: Literature suggests the importance of performing a preoperative assessment and evaluating mental health diagnosis. Literature supports the need for pre-surgical mental health screening as it affects surgery outcomes. Although hysterectomy is a standard treatment for uterine ailments, its long-term risks are highlighted in the literature of cardiac disease, pelvic prolapse, premature menopause, depression, and other estrogenic declines.

Keywords: Screening tool, Hysterectomy, Preoperative depression assessment, depression

Introduction

Background

A Hysterectomy is a routine gynecological surgery performed to remove the uterus. There are lots of underlying causes that may result in a hysterectomy. The most common reasons for a hysterectomy include but are not limited to uterine myoma, endometriosis, uterine prolapse, genital cancers, and other benign conditions (Harnod et al., 2018). Undergoing a hysterectomy has potential adverse complications related to the surgery and psychological well-being associated with an increased risk of depression. The cause of depression may not only stem from the surgical procedure but other psychological factors such as hormone imbalances and surgical approaches, including oophorectomy or preservation of ovaries. The preoperative provider must include screening for depression in routine preoperative assessments. Detailed discussions of potential surgical outcomes are compulsory to afford the patient to make an informed decision to proceed with a hysterectomy.

Problem Description

The incidence of depression in women is twice that of men and more common in the African American community than in any other ethnic group (Wise et al., 2015). Depression is the second leading cause of premature mortality in the United States (Wise et al., 2015). The prevalence of hysterectomies in the United States ranges from 5.1 to 5.8 per 1000 women (Harnod et al., 2018). A standardized screening tool for assessing depression and anxiety preoperatively could mitigate the worsening of postoperative depressive symptoms in patients scheduled for a hysterectomy. Implementing a screening tool for preoperative providers is imperative to reduce the adverse effects of postoperative depression in patients undergoing hysterectomy surgery. Psychiatric patients are often not adequately managed in the preoperative

setting (McBride et al., 2021b). Patients with prior mental health diagnoses report that in their surgical experience, their mental health diagnosis was not acknowledged, recognized, or prioritized (McBride et al., 2021b). Few surgeons have been described as knowledgeable in caring for mental health patients (McBride et al., 2021b). Approximately three percent of the population is affected by severe mental illness and has significantly worse surgical outcomes (McBride et al., 2021b). The surgical population has a 41.5% prevalence of depression, anxiety, PTSD, and substance abuse disorder. Existing Evidence suggests that surgeons and clinicians still disengage from patients with mental illnesses. Psychiatric disturbances in surgical patients are common but underdiagnosed and are correlated with adverse postoperative outcomes. For example, depression and anxiety have greater mortality risk and adverse cardiac events after coronary bypass surgery (Lee et al., 2016).

Setting

This project will occur at a large hospital's outpatient preoperative medicine clinic. Preoperative providers utilized in the clinic include nurse practitioners, hospital-based physicians (HBS), anesthesiologists, and medical assistants (MA) as the support staff. As a result of COVID, the majority of providers have continued telehealth with some in-person visits for the HBS physicians. As a result, teaching will incorporate a live session to introduce the project and accompany pre-recorded zoom link for providers to watch at their convenience.

Project Aim

This project aims to develop, implement, and evaluate a screening tool and educate preoperative providers on the importance of utilizing and implementing depression screening tools for patients scheduled for hysterectomy surgeries. Depression has been shown to cause hormone dysregulation in patients with uterine fibroids (Wise et al., 2015). Preoperative

providers could help mitigate postoperative exacerbations of psychiatric symptoms by being proactive and knowledgeable in recognizing early signs of depressive symptoms. The provider knowledge acquisition could facilitate patient care by decreasing treatment delays and improving the efficiency and workflow in the healthcare system (Htay & Whitehead, 2021).

Available Knowledge

PICOT Question

The PICOT for this project seeks to answer whether preoperative screening for depression in patients scheduled for hysterectomy surgeries compared to no screening improved surgical outcomes in three months. The surgical outcomes vary from physiological symptoms related to the specific surgery's ordinary course of recovery to postoperative pain and exacerbation of psychiatric symptoms.

Search Methodology

The literature search started with the PICOT question utilizing the CINAHL database using the Boolean operator search term 'AND' to combine search terms and refine results while limiting publication dates from 2017 to 2022. Searching for mental health AND surgery produced 821 articles. PubMed database was utilized to determine publication dates to 2017-2022, complete and accessible text, using the Boolean operator 'AND' and the search phrase Mental health patients AND surgery AND screening. This search resulted in 1115 articles. PubMed database was utilized to search publication dates 2017-2022; Depression screening in surgical women health patients applying one filter of five-year publication dates resulted in 53 articles. PubMed database was also used to search depression and pre-surgical women, applying one filter of five-year resulting in 57 articles. PubMed database was also used to search depression and surgical hysterectomy, applying one filter of five-year publication dates resulting

in 34 articles. Article titles and abstracts were reviewed, and those relevant were saved for further review. The last database utilized was the APA/PsychInfo using the Boolean operator filter 'AND' and the key phrases preoperative mental health AND surgery AND outcomes. Publication dates were refined to 2018-2022, and the search produced 26 articles reviewed. Inclusion criteria included: English-language, published between 2015-2022. Excluded were abstracts not relevant to the identified topic and any duplicate studies. After a review of the abstracts, those included for the evidence appraisal utilizing the Johns Hopkins evidence appraisal tools (see Evaluation Table, Appendix B).

Review of Literature

Prevalence

According to the world health organization (WHO), depression is a common mental disorder characterized by feelings such as sadness, low self-worth, loss of interest or pleasure, guilt, disturbed sleep, and poor concentration. The WHO estimated that by 2020 depression would be the leading cause of disability. The literature has shown a strong association between chronic disorders and depression. There is a racial disparity not explained by the established risk factors. Despite this, the risk of depression and anxiety is higher with accompanying gynecological conditions such as polycystic ovary syndrome and endometriosis. The lifetime risk of uterine fibroid diagnosis via ultrasound is 80% in black women and 70% of white women, they experience associated symptoms that impact their quality of life (Chiuve et al., 2022). Depression is more prevalent in African Americans than in any other group, and they are less likely to adhere to antidepressants (Wise et al., 2022).

Chiuve et al. (2022) agree that depression and anxiety are prevalent among women with uterine fibroids but acknowledge the presence of a gap in research to support data on the rate of

mental health diagnoses in women with uterine fibroids. Wise et al. (2022) recognize that clinically, thirty percent of reproductive-aged women make up a large amount of gynecological morbidity and medical costs. African American women double the times of diagnoses compared to their white counterparts.

Several studies have concluded that patients who require surgical services are infrequently assessed for anxiety and depression and are not managed before their procedures. A population-based cohort study performed by Shen et al. (2017), investigated the risk of depression in patients with uterine fibroids in the Asian population. The overall depression incidence was 54% higher in the patients with uterine fibroids than those without uterine fibroids (Shen et al., 2017).

Screening

The project focuses on providing preoperative clinicians with training to optimize depression screening tools embedded in the preop questionnaire before their preop visit. Utilizing a depression screening tool will help identify patients needing additional support for managing their depression and care coordination to optimize surgical outcomes.

Several assessment tools were utilized in the various studies to determine preoperative anxiety/depression in general surgical patients and pre-surgical patients scheduled for hysterectomies. Zhang et al., (2021) used preoperative anxiety measurement tools in two categories: universal and specific anxiety scales. The universal anxiety scale included the state-trait anxiety inventory (STAI), the self-rating anxiety scale (SAS), and the Hamilton anxiety scale (HAMA) (Zhang et al., 2021). The limitation of using the STAI was low sensitivity and less assessment of preoperative anxiety specifically. The most common specific anxiety scale is the generalized anxiety disorder-7 scale (GAD-7) and the Amsterdam preoperative anxiety and

information scale (APAIS) (Zhang et al., 2021). The GAD is applied more universally and is restricted to the applicable population. The APAIS is utilized in China and has proven effective in assessing preoperative anxiety, but due to its origin of development, some cultural differences prevent global use (Zhang et al., 2021). Another study by Jayawardane et al., (2021) utilized the visual analog scale (VAS) and the hospital anxiety and depression scale (HADS). The VAS measured anxiety levels through a self-administered questionnaire similar to a pain scale marked as 0 (no anxiety) to 10 (maximum anxiety). The HADS is also a self-administered scale with seven questions scored out of 21, 0-7 (standard), 8-10 (borderline), and 11-21 (abnormal anxiety) (Jayawardane et al., 2021).

Mental health illness should be given the same attention as any other medical comorbidity and assessed pre-and postoperatively to optimize patient care. The literature review examined the importance of preoperative depression screening and assessment in women undergoing hysterectomies. One common theme in the literature was that patients that underwent hysterectomies would be a predisposing factor for increased risk of subsequent depression. The literature also revealed racial disparity among African American women compared to their Caucasian counterparts. The literature compared minimally invasive surgery (MIS) versus a more invasive abdominal/open approach.

Racial Disparity

Some studies have eluded the fact that there are racial disparities in the approach to hysterectomy surgeries. Su et al., (2022) conducted a study to assess racial differences in the likelihood of having a planned MIS hysterectomy. Their study was a prospective cohort study of participants undergoing hysterectomy at Henry Ford Health System over two years. Participants reported demographic information and insurance coverage. They were asked to complete a

validated questionnaire starting two weeks before the hysterectomy and up to six additional times in the year following the surgery. The clinical and operative data were collected. They concluded that black women were not less likely than white women to have planned an MIS hysterectomy after adjusting for important variables (Su et al., 2022). Some of the variables utilized in the study were demographic, pre-surgery interviews including (PHQ9 results, financial and pain level), and operative factors like (estimated blood loss, surgical indications, uterine weight, procedure duration, and hospital length of stay). There is no congruency between all studies regarding disparity, as different studies have varying inclusion and exclusion variables.

Long-Term Risks

There is limited research on the long-term effects of hysterectomy and the incidence of depression. Hysterectomy is one of the most common surgical procedures worldwide. Wilson et al. (2018) state that in developed countries, women will have had a hysterectomy by age 60. Of the women who had had a hysterectomy, 10 and 55% would have also had bilateral ovaries removed (Wilson et al., 2018). Their study investigated the association between depression and hysterectomy over 12 years. They also looked at whether the incidence decreased using exogenous hormones. The study was based in Australia, obtaining three cohorts of women born between 1972-1978, 1946-1950, and 1921-1926. The first Survey for all affiliates began in 1996 and every 2-3yrs subsequently. One of the study's surveys focused on isolating depressive symptoms utilizing the 10-item Centre for Epidemiologic Studies Depression Scale (CESD-10). The score ranges from 0 to 30, with scores of 10 or higher indicating individuals with significant levels of depressive symptoms (Wilson et al., (2018). This scale was administered a week before completing the Survey for the study. The results of the study showed that the number of women

experiencing depressive symptoms was higher in 2001 (survey 3) than in 2013 (survey 7) in all the hysterectomy/hormone therapy groups (Wilson et al., (2018). The only group with a steady decline in depressive symptoms over the study period had no history of hysterectomy and hormone therapy (Wilson et al., (2018). This study concluded that women with or without bilateral oophorectomy hysterectomy depressive risk were higher than women without a history of hysterectomy. In the case of hormone therapy, there was an increased risk of depression in women with no hysterectomy or who had a hysterectomy with ovarian preservation compared to their counterparts with non-hormone treatment (Wilson et al., (2018).

Another study in Olmstead County in Minnesota focused on the long-term risk of mental health conditions in women who underwent hysterectomy with bilateral ovarian conservation compared to age-matched women without hysterectomy. This study by Laughlin-Tommaso et al. (2021), comprised 2,094 women 18 years or older over a 23years period between January 1, 1980, and December 31, 2002. Before a hysterectomy, women with a prior diagnosis of depression were excluded from the study. Women who underwent hysterectomy with ovarian conservation also were shown to have a higher long-term risk of depression diagnosis compared to women who did not have a hysterectomy. The depression risk was significantly higher in women who had a hysterectomy younger age (Laughlin-Tommaso et al., 2021). The association of mental health outcomes with hysterectomy has been questioned. Studies assessing depressive symptoms in the immediate preoperative phase before hysterectomy showed general improvement and quality of life (Laughlin-Tommaso et al., 2021). Despite this, women with gynecological problems and undergoing hysterectomies overall have a lower quality of life than the general population.

Unilateral or Bilateral Oophorectomy

A study by Kim et al. (2021), wanted to explore further the relationship between oophorectomy and depression. The study reviewed records from a database in South Korea. It was a self-controlled case series design. Typically, depression co-occurs with physical illness. In this study, pain-related issues are an underlying trigger to poorer outcomes postoperatively. Clinicians must screen early, predict, and intervene in depression. The study prides itself on the first study to investigate the relationship between oophorectomy and depression risk utilizing a nationwide cohort of patients (Kim et al., 2021). The findings of the study showed increased risk in the initial stages. After oophorectomy, depression onset is immediately before and post oophorectomy. No difference was found in the risk pattern of depression amongst patients that underwent hysterectomy and oophorectomy, age, and hormone replacement therapy.

Rationale

Theoretical Framework

The transactional model of stress and coping aligns closely with this project as it is a framework for evaluating the process of stressful events. This model focuses on the impact of external stressors mediated by the patients' appraisal of stress or potential harms and threats. Stressful events of having a surgical procedure combined with pre-existing mental disorders such as anxiety or depression can be debilitating depending on the patient's ability to cope with stressors and ultimately affect treatment adherence and patient outcomes (Glantz et al., 2015).

Furthermore, this framework will help address and guide how providers assess patients' mental health status. It has several concepts that would provide a chronological way of including them in the assessment. The primary appraisal will assist in evaluating the stressor and its significance. The secondary review evaluates the coping mechanism or capability of the patient given the environmental stressors. Coping efforts have three components and varying strategies

to assess patients' coping abilities. Problem management, emotional regulation, and meaning-based coping are the three concepts of coping effects. Adaptation sets a coping strategy. Lastly, the dispositional coping styles include optimism, benefit finding, and information seeking (Glantz et al., 2015). Sanaeinasab et al. (2017) depicts how the transactional model can be useful in the education of providers. This educational program focuses on reducing stress levels and increasing healthy coping skills in women. Aligns closely with my project as my aim of the project is increasing awareness on the importance of screening for depression in hysterectomy patients. These patients are a vulnerable surgical patient population that have psychosocial aspects in making the decision that play a role in their treatment and recovery.

Methods

Context

Depression is a common mental health disorder that often coexists with other mental health disorders, such as anxiety, and is triggered by mood changes that can impair functional capacity. There is minimal value to the importance of screening in the preoperative setting. Due primarily to lack education and acknowledgment of the value of optimized surgical outcomes, depression screening has not been prioritized in the preoperative setting. Clinicians implementing the PHQ9 screening tool in their preoperative history and physicals for patients scheduled for hysterectomy surgery will assist in mitigating the risk of depression and improving surgical outcomes. As illustrated in Appendix A, the statement of determination gives an overview of the planned project and a summary of the starting point for initiating implementation.

Proposed Interventions

Current practice has no routine depression or anxiety screening tool embedded in preoperative assessment. Implementing the screening tool will bring awareness to this issue, educate the preop clinicians on its importance, patient education, and improve surgical outcomes. This project will obtain a baseline of the current data in the department's practice. Pre- and post-survey of the providers to determine the use of the screening tool and the influence of the course and patient care. The literature evaluation table, as seen in Appendix B, utilized the Johns Hopkins appraisal tools to determine the level of evidence in the literature.

Gantt Chart

Appendix C shows that the literature review for this project's foundation began at the program's inception in the fall of 2021. A Gantt chart determines the project's flow and timeline. Evidence-based classes were the groundwork for gaining a foundation and depth of synthesis and integrating the literature. The fall semester is a pivotal time for the project as I work closely with my program chair Dr. Radasa on my prospectus, laying the groundwork for introducing the project to my proposed implementation site and developing a strategy to present my plan and get official approval to perform the task. The communication plan, budget, and developing pre-assessment will take place in spring 2023, Summer 2023, collaborating with the risk dept, initiating pre-assessment for providers, and chart screening. Fall 2023 implementation, post-assessment, data analysis/evaluation, and project presentation.

SWOT Analysis

The SWOT analysis (Appendix D) helps to conceptualize the internal and external strengths and weaknesses. Establishing viability is essential; conducting a SWOT analysis in the early identification of hysterectomy patients that may have positive screening and early intervention and care collaboration amongst the clinicians in the mental health and preoperative

department will improve surgical outcomes, mitigate postoperative complications and optimize overall health. The screening tool will support the clinician to feel more empowered in helping their patients seek care for their depressive symptoms, which may otherwise go undiagnosed.

Budget Plan

The proposed budget (Appendix E) shows \$16,093.68 of estimated costs associated with the project. This project has a low financial impact compared to the possible costs of mental health treatment, readmissions, and long-term management of lingering symptoms with varying severity. The research and project proposal was estimated at eighty hours, costing \$6922.40. Screening tool kit development estimated at thirty hours to imbed into a chart, creative ways to minimize additional work on clinicians into their daily duties with patients. Stakeholder pitch of PowerPoint prep, video/team recording for ease and convenience of use without impacting department access and operational needs estimating sixteen hours and totaling \$1384.48. Final evaluation survey and data analysis estimating sixty hours totaling \$5191.80. Exact revenues are unpredictable, but it can be predicted with great certainty that the increased screening will increase awareness of the need for this screening and can break even on return on investment.

Work Breakdown Structure

Work breakdown structure (WBS) (Appendix F) illustrates the four phases of the project's progression and areas of work to be completed. It is necessary to identify the chronological steps required to ensure the execution of the project is seamless and focused on the task. The screening tool will assist with identifying possible depressive symptoms and aid in early intervention to mitigate post-complications and optimize postoperative outcomes.

Gap Analysis

The literature supports the need for mental health screening (Appendix G). Early screening and intervention of patients in general and specifically the importance of surgical hysterectomy patients screened for depression. One of the gaps in care in the preoperative setting is clinicians incorporating mental health into their routine history and physical. Literature has stated that the main reason for this gap is that most providers and clinicians feel ill-prepared to address or manage mental health issues. As a result, most clinicians do not routinely include mental health screenings in their history and physical. In the surgical realm, the literature has shown value in incorporating mental health screenings into the history and physicals as it optimizes surgical outcomes, decreases readmission rates, and decreases costs.

Proposed Analysis

The proposed software to be used for data analysis is Qualtrics. It has more data analysis variety embedded within the software, allowing a variety of result analyses. It also allowed me to utilize USF's preexisting resources without incurring additional costs for data analysis.

Ethical & Policy Considerations

This DNP knowledge acquisition pilot study did not require the approval of the Institutional Review Board (IRB) to protect human studies. The USF DNP faculty determined that this project meets guidelines for evidence-based change in practice as outlined with the DNP of Non-Research Determination (Appendix A). Approval for the project will be obtained from the partnering facility, Kaiser Antioch preoperative medicine clinic. There are no identifiable ethical issues or conflicts of interest identified. The American Nurses Association Code of Ethics provision 2.3 addressed the importance of collaboration of all health professions; nurses foster collaborative planning by providing safe, high-quality, patient-centered care (American Nurses Association, 2015). This can be done by early recognition, screening and educating providers

and patients. Recognizing that there may be nurses who may not be involved in direct patient care, they can collaborate with educators, administrators, policymakers, consultants, or researchers to provide high-quality care by influencing the direction of direct care providers. This exemplifies the foundations of the DNP project, and our code of ethics calls on us nurses in our interdependent roles to share responsibility for the outcomes of our nursing care and our primary commitment to the patient (American Nurses Association, 2015). This project aligns with the people for others and commitment to diversity values of USF. This project requires healthcare providers to assess and treat patients for their depression. The Jesuit values requires a moral and ethical duty to provide a voice or unable to advocate for themselves.

Implementation

This knowledge acquisition pilot project will be conducted via a recorded zoom educational video that will speak to the importance, the why of the project, its prevalence, and the importance of the screening will help with patient outcomes and overall surgical care. The recording will be emailed to preoperative medicine providers in the diablo service area. The screening tool will include a modified PHQ9, and/ or the AOQ questionnaire sent to patients before preop visits. The literature search is ongoing on additional tools administered or utilized by providers. The online training video will be distributed via an employer or personal email, depending on provider preference. Appendix H illustrates the work breakdown structure/communication plan. The pre-survey will be administered before providing access to the zoom training video.

Discussions

Limitations

Potential barriers to implementing project intervention will be getting provider buy-in on performing an additional task added to their routine workload. Engaging upper management will be pivotal as they will set the temperament for the providers to be more engaged. Continuous monitoring and reinforcement of needs and benefits to the patients, as well as enhanced practice and patients' surgical outcomes.

Conclusions

The literature review supports the need for improved screening and management of mental health illnesses in surgical patients. Improper management leads to poor outcomes of varying severity in terms of functional status, readmissions, increased length of hospital stay, and complications postoperatively. Since depression is underdiagnosed and improperly managed in hysterectomy patients, screening is essential to prevent adverse outcomes (Lee D. et al., 2016). Each mental health diagnosis should be acknowledged, documented, and prioritized so those patients can have a surgical experience like those without a mental health diagnosis (McBride et al., 2021b). Surgeons and other care providers, including advanced practice nurses, must become more engaged in all aspects of a patient to provide the best care possible and identify psychiatric patients' needs and risk factors for undergoing hysterectomy surgery.

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APPENDIX A



**Doctor of Nursing Practice
Statement of Non-Research Determination (SOD) Form**

The SOD should be completed in NURS 7005 and NURS 791E/P or NURS 749/A/E

General Information

Last Name: Mihedji **First Name:** Dede

CWID Number: 20668545 **Semester/Year:** Fall 2022

Course Name & Number: N749B qualifying project:Prospectus Development

Chairperson Name: _____ **Advisor Name:** _____
Second Reader Name: Dr. Juli Maxworthy Dr. Trinette Radasa

Project Description

- Title of Project:** Preoperative provider depression screening tool for patients scheduled for a hysterectomy

2. **Brief Description of Project** (*Clearly state the purpose of the project and the problem statement in 250 words or less*):

My project aims to determine if implementing a depression screening tool compared to no screening decreases adverse postoperative outcomes in patients scheduled for a hysterectomy. Identifying patients' mental health risks upstream will be helpful in the entire preoperative care trajectory. The overall depression incidence was 54% higher in patients with uterine fibroids than in those without (Shen et al, 2017). Should patients' mental health continue to be neglected, we risk preventable postoperative outcomes (Foye, Simpson, and Reynolds, 2020). Poor care delivery and lack of anticipatory guidance for optimal recovery can also occur if mental health needs are not addressed preoperatively.

3. **AIM Statement: What are you trying to accomplish?**

- Provides a clear, well-defined, and concise statement regarding the project's purpose and describes the specific aim in the IHI format: What?; How much?; For whom?; Where?; By when? The Aim Statement needs to follow the SMART guidelines: specific, measurable, achievable, realistic, and timely.
- To improve (your process) from (baseline)% to (target)%, by (timeframe), among (your specific population)

Complete the AIM statement by answering the following elements:

What? The project aims to implement and evaluate a mental health screening tool for preoperative medicine providers during preoperative assessment visits

How much improvement? Increase knowledge by 30% and use screening tools for preoperative patients scheduled for a hysterectomy. 50% of preoperative hysterectomy patients will be screened for preexisting depression before surgery by chart audits of expected patients in the preoperative clinic. 90% of preoperative patients receive an appropriate referral to mental health or other resources for preoperative depression.

For whom? Providers' practice, patient care, and overall care in the department

Where? Preoperative medicine clinic

By when? Completion is anticipated for December 2023

By December 2023, for hysterectomy patients seeking preoperative assessment, 30% of providers will utilize the depression screening tool in the preoperative medicine clinic

4. **Brief Description of Intervention** (150 words):

The focus is on patients seeking hysterectomy, coordinating care through their preoperative journey, and optimizing their postoperative outcomes. The creation of a tool kit to assist providers in identifying these patients and coordinating care amongst providers to address various needs of patients to ensure optimized postoperative recovery.

4a. How will this intervention be implemented?

- **Where will you implement the project?**

Preoperative medicine clinic

- **Attach a letter from the agency with the approval of your project.** N/A
- **Who is the focus of the intervention?** (Needs to match population [for whom?] in Aim statement.)

Providers in the preoperative medicine department

- **How will you inform stakeholders/participants about the project and the intervention?**

Lunch and learn via TEAMS presentation of the problem and data from the literature to support the plan to execute the intervention. TEAMS presentation will also be recorded and available to send to staff unable to attend the live session

5. Outcome measurements: How will you know that a change is an improvement?

- **Measurement over time is essential to QI. Measures can be the outcome, process, or balancing measures. Baseline or benchmark data are needed to show improvement.**

The Baseline of the current data in the department practice will be obtained via risk management. Pre and post-assessment of the providers to determine the use of the screening tool kit and the influence on the course and patient care

- **Align your measure with your problem statement and aim.**

The pre and post-survey to determine if implementing a depression & anxiety screening tool compared to no screening decreases

- **Try to define your measure as a numerator/denominator.**

The numerator is the providers' pre-and post-survey assessment, and the implementation of the screening tool kit will improve and optimize the postoperative outcomes. The denominator is the preoperative medicine providers utilizing the screening tool kit.

- **What is the reliability and validity of the measure? Provide any tools that you will use as appendices.**

The tool kit's reliability and validity will be measured over time, measuring consistent responses over time of the providers. For example, they are utilizing data analysis software to compute Cronbach's alpha. It is an average of correlations of answers provided.

- **Describe how you will protect participant confidentiality.**

Data collected will not include any personal or identifiable information. The pre and post-assessment will be launched on a platform, i.e. Qualtrics, survey monkey. Data results are anonymous



**DNP Statement of Determination
Evidence-Based Change of Practice Project Checklist***

The SOD should be completed in NURS 7005 and NURS 791E/P or NURS 749/A/E

Project Title:

Preoperative provider depression screening tool for patients scheduled for hysterectomy

Mark an "X" under "Yes" or "No" for each of the following statements:	Yes	No
The project aims to improve the process or delivery of care with established/ accepted standards or to implement evidence-based change. There is no intention of using the data for research purposes.	X	
The specific aim is to improve performance on a specific service or program and is a part of usual care . <u>All</u> participants will receive standard of care.	X	
The project is not designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case-control). The project does not follow a protocol that overrides clinical decision-making.	X	
The project involves the implementation of established and tested quality standards and systematic monitoring, assessment, or evaluation of the organization to ensure that existing quality standards are being met. The project does not develop paradigms or untested methods, or new untested standards.	X	
The project involves the implementation of care practices and interventions that are consensus-based or evidence-based. The project does not seek to test an intervention that is beyond current science and experience.	X	
The project is conducted by staff where the project will take place and involves team working at an agency that has an agreement with USF SONHP.	X	
The project has no funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	X	
The agency or clinical practice unit agrees that this project will be implemented to improve the process or delivery of care, i.e., not a personal research project dependent upon the voluntary participation of colleagues, students and/ or patients.	X	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: <i>"This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board."</i>	X	

Answer Key:

- If the answer to all of these items is "Yes", the project can be considered an evidence-based activity that does not meet the definition of research. IRB review is not required. Keep a copy of this checklist in your files.
- If the answer to these questions is "No", you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

To qualify as an Evidence-based Change in Practice Project rather than a Research Project, the criteria outlined in federal guidelines will be used: <http://answers.hhs.gov/ohrp/categories/1569>



DNP Statement of Determination

Evidence-Based Change of Practice Project Checklist Outcome

The SOD should be completed in NURS 7005 and NURS 791E/P or NURS 749/A/E

This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). **Student may proceed with implementation.**

This project involves research with human subjects and **must be submitted for IRB approval before project activity can commence.**

Comments:

Student Last Name: Mihedji

Student Dede

Student Signature: Rose Munnaji First Name: _____ Date: 9/4/2022

Chairperson Name: Dr. Trinette Radasa Chairperson Signature: _____ Date: _____

Second Reader Name: Dr. Juli Maxworthy Second Reader Signature: _____ Date: _____

DNP SOD Review Committee Member Name: _____

DNP SOD Review Committee Member Signature: _____ Date: _____

Appendix B
Evaluation Table

Citation	Design/ Method	Sample	Variables Studied	Measurement	Findings	Appraisal Worth to Practice
Chiueve, S., Huisingh, C., Petruski-Ivleva, N., Owens, C., Kuohung, W., & Wise, L. (2022). Uterine Fibroids and Incidence of Depression, Anxiety and self-directed Violence: A Cohort Study. <i>Journal of Epidemiol of Community Health</i> , 76, 92-99.	<p>Design: Cohort study</p> <p>Method: Optum clinical informatics commercial Insurance claims database</p>	N=313,754 were matched with 627,539 for comparison	<p>Independent: Diagnosis of uterine fibroids</p> <p>Dependent: Diagnosed depression, anxiety, and self-directed violence</p>	Measurement: Database review	Findings: Women diagnosed with uterine fibroids had a higher rate of depression, anxiety, and self-directed violence compared to women without uterine fibroids	<p>Strengths: Use of large database with a broad geographic coverage. All patients were enrolled in health and mental care services</p> <p>Limitations: Misclassification is likely with the study. Women seeking care for uterine fibroids have a greater risk for receiving a diagnosis of major depressive disorder (MDD)</p> <p>Worth to Practice: Level II B good quality</p>
Harnod, T., Chen, W., Wang, J. H., Lin, S. Z., & Ding, D. C. (2018). Hysterectomies Are Associated with an Increased Risk of	Design: Population Based cohort Study	N=7842	Independent: Type of	Measurement: Randomly selected	Results: Women who underwent	Strengths:

<p>Depression: A Population-Based Cohort Study. <i>Journal of clinical medicine</i>, 7(10), 366. https://doi.org/10.3390/jcm7100366</p>	<p>Method: Data was collected from a review of National Health Insurance Research Database of Taiwan</p>		<p>hysterectomy surgery Dependent: The risk of depression based on details of the hysterectomy surgery</p>	<p>patients from National Health insurance research database with IRB approval</p>	<p>hysterectomy and not oophorectomy had the second highest risk of depression</p>	<p>Large cohort of patients along with comparison cohort Limitations Unable to contact patients directly for additional information as their info was anonymized. Pathologies that prompted surgery were unknown Critical Appraisal Level III B good quality</p>
<p>Htay, M., and Whitehead, D. (2021) The effectiveness of the role of advanced nurse practitioners compared to physician-led or usual care: A systematic review. <i>International Journal of Nursing Studies Advances</i>, 3, 1-22.</p>	<p>Design: Systematic review of primary research evidence Method: The review was conducted through preferred reporting items for systematic review and meta-analysis</p>	<p>N=13</p>	<p>Independent: The effectiveness of the role of nurse practitioners Dependent: The effectiveness of physician-led</p>	<p>Measurement: Search methods included Cochrane collaborations criteria for producing credible reviews</p>	<p>Results: Positive effects related to service. Improved patient satisfaction and reduction in wait times and costs within</p>	<p>Strengths: APN enhance patient care, improved costs, efficiency and overall patient satisfaction and quality of care. Limitations: Limited to English language and may have excluded some important work that offer</p>

						<p>Critical Appraisal: Level V, B good quality</p>
<p>Jayawardane, M., Gankanda, W., & Gunathilake, M. (2021). Prevalence of preoperative anxiety and associated factors among a group of women undergoing gynecological surgeries at a single unit in a tertiary care hospital in Sri Lanka.</p>	<p>Design: Descriptive cross-sectional study</p> <p>Method: Utilizing preoperative anxiety tools/scales</p>	N=64	<p>Independent: Assessment of Preoperative anxiety</p> <p>Dependent: Preoperative anxiety scales and tools</p>	<p>Measurement: Non-probability sampling and criterions were met</p>	<p>Results: 40.6% of patients undergoing elective gynecological surgeries suffer from anxiety</p>	<p>Strengths: Comparison of different preoperative anxiety scales/tools</p> <p>Limitations: Decreased informed consenting for minor surgeries vs major surgeries. Limited sample size</p> <p>Critical Appraisal: Level III, B good quality</p>
<p>Kim, H., Kim, Y., Fava, M., Mischoulon, D., Myung-Hee, S., Dong-Yun, L., & Jeon, H. (2021). Increased Risk of Depression Before and After Unilateral or Bilateral Oophorectomy: A Self-Controlled Case Series Study Using Nationwide Cohort in South Korea. <i>Journal of affective disorders</i>, 47-54. https://doi.org/10.1016/j.jad.2021.02.003</p>	<p>Design: Nationwide cohort alternative epidemiologic cohort or case-control study</p> <p>Method:</p>	N=61,699	<p>Independent: Self-controlled case series</p> <p>Dependent:</p>	<p>Measurement: Investigation of incidence ratios and of depressive disorders before and</p>	<p>Results: Risk of depression increased before and after oophorectomy was no</p>	<p>Strengths: Large participant group, this was the first study to utilize the self - controlled case series (SCCS)</p>

	<p>Review of medical records database of south korea</p>		<p>Outcomes before & after hysterectomy</p>	<p>after hysterectomy</p>	<p>significant differences between unilateral and bilateral surgery.</p>	<p>Limitations: Data with detailed clinical information related to oophorectomy is lacking due to use of claims data</p> <p>Critical Appraisal: Level V, B good quality</p>
<p>Laughlin-Tommaso, S., Satish, A., Khan, Z., Smith, C., Rocca, W., & Stewart, E. (2020). Long-Term of <i>de novo</i> Mental Health Conditions after Hysterectomy with Ovarian Conservation: A Cohort Study. <i>Menopause</i> (27)1. 33-42.</p>	<p>Design: Cohort study</p> <p>Method: Using the Rochester epidemiology project (REP) records-linkage system</p>	<p>N=2,094</p>	<p>Independent: Patients who underwent hysterectomy with bilateral ovarian conservation</p> <p>Dependent: Long term risk of new mental health conditions</p>	<p>Measurement: Diagnostic codes were extracted from the REP database</p>	<p>Results: Results show that women with ovarian conservation had higher long-term risks of depression vs women without a hysterectomy</p>	<p>Strengths: They compared their findings with Similar studies conducted nationwide, and they had a large sample</p> <p>Limitations: Relying on the REP may have caused missing data from missing diagnosis</p> <p>Critical Appraisal: Level V, B good quality</p>

<p>Lee, D. S., Marsh, L., Garcia-Altieri, M. A., Chiu, L. W., & Awad, S. S. (2016). Active mental illnesses adversely affect surgical outcomes. <i>The American Surgeon</i>, 82(12),1238-1243.</p>	<p>Design: Quantitative</p> <p>Method: Review of records of patients undergoing elective surgery was retrospectively reviewed</p>	<p>N=183</p>	<p>Independent The four active mental illness of depression, PTSD, substance abuse, and anxiety</p> <p>Dependent: Postoperative outcomes</p>	<p>Measurement: Data on postoperative outcomes at 30days. Complications defined by VASQIP criteria, ED visits, readmissions, and length of stay</p>	<p>Results: In patients undergoing elective general surgery, depression, anxiety, PTSD, and substance abuse are associated with higher rates of readmission and ED visits</p>	<p>Strengths: Distinguishing the four different mental health disorders in their study to better understand high risk for postoperative complications</p> <p>Limitations: 98.4% of the study participants were reported to be male, unintentional</p> <p>Critical Appraisal: Level IV, B good quality</p>
<p>Madueke-Laveaux, O. S., Elsharoud, A., & Al-Hendy, A. (2021). What We Know About The Long-Term Risks of Hysterectomy for Benign Indication-A Systematic Review. <i>Journal of clinical medicine</i>, 10(22), 5335. https://doi.org/10.3390/jcm10225335</p>	<p>Design: Systematic review</p> <p>Method: relevant studies between 2005 and December 2020 were reviewed</p>	<p>N=30 studies</p>	<p>Independent: Hysterectomy may increase risk of certain sequelae</p> <p>Dependent: Long term studies that may reveal the</p>	<p>Measurement PRISMA guidelines along with inclusion and exclusion criteria for the studies selected</p>	<p>Results: Hysterectomy may increase risk of cardiovascular events, certain cancers, need for further surgery, depression, ovarian</p>	<p>Strengths: Compared studies worldwide</p> <p>Limitations: No formal method of combining study data utilizing statistical methods. Descriptive methods were used</p>

			consequences of a hysterectomy		failure and menopause and other outcomes	to summarize each study but not compared across studies Critical Appraisal: Level V, B good quality
McBride, K. E., Solomon, M. J., Lambert, T., O'Shannassy, S., Yates, C., Isbester, J., & Glozier, N. (2021b). Surgical experience for patients with serious mental illness: a qualitative study. <i>BMC Psychiatry</i> , 21(47), 1-9. https://doi.org/10.1186/s12888-021-03056-x	Design: Qualitative Method: Semi-structured audio recorded interviews	N=10 consenting participants	Independent: Surgical experience Dependent: Patients with serious mental illness	Measurement: Thematic analysis approach. Patients were recorded using digital recorder and/or manual notes to determine preoperative consultation to hospital discharge and follow up	Results: Perceived lack of mental illness health recognition. Focus on in hospital processes	Strengths: Great breakdown of different themes and patient perspectives on their surgical "journey" Limitations: Small sample size, the diagnosis of mental health was self-reported by the patients Critical Appraisal: Level III, B good quality
Shen, T., Yang, C., Huang, Y, Lin, C., & Sung, F. (2017). Risk of depression in Patients with uterine leiomyoma: A nationwide population-based cohort study. <i>Journal of affective</i>	Design: Population based retrospective cohort study	N=21,168 uterine leiomyoma (UL) and	Independent: Patients with uterine leiomyoma	Measurement: ICD9 codes obtained from patients aged	Results: Incidence of depression was higher in	Strengths: Utilizing nationwide population data to

<p>Disorders, 213, 126-130. https://doi.org/10.1016/j.jad.2017.02.020</p>	<p>Method: National health insurance research database of Taiwan</p>	<p>82,108 non-UL cases</p>	<p>Dependent: Patients with uterine leiomyoma with comorbidity of depression, hypertension and their age</p>	<p>20 and above with recent diagnosis of UL without depression between 2000-2010. Additional cohort criteria for comparison groups</p>	<p>UL cohort vs non-UL cohort. Risk was higher in patients with comorbidities of HTN and immune diseases</p>	<p>evaluate the risk of depression in patients with UL</p> <p>Limitations: This study used ICD 9 codes which may have variations as they were diagnosed by physicians</p> <p>Critical Appraisal: Level III, B good quality</p>
<p>Su, W., Coleman, C., Bossick, A., Lee-Griffith, M., & Wegienka, G. (2022). Racial differences in planned hysterectomy procedure route. <i>Journal of Women's Health</i> (31)1, 31-37. DOI:10.1089/jwh.2021.0132</p>	<p>Design: Prospective cohort study at Henry ford health</p> <p>Method: Patient Health questionnaire 2weeks prior to hysterectomy and six additional times in the year after hysterectomy</p>	<p>N=431</p>	<p>Independent: patients scheduled for hysterectomy being screened for depression</p> <p>Dependent: White and black women scheduled for hysterectomy</p>	<p>Measurements Patient health questionnaire (PHQ9) for depression</p>	<p>Results: 5.24% of white women were positive for depression 5.76% of black women were positive for depression</p>	<p>Strengths: Compared to other similar studies, the need to consider factors like uterine weight, surgical indications in analyzing racial differences</p> <p>Limitations: Data is limited to one large health care system which included multiple facilities that has a diverse population</p>

						<p>& socioeconomically.</p> <p>Critical Appraisal Tool & Rating: Evidence III, B good quality of evidence</p>
<p>Theunissen et al., 2017. Prevalence and predictors of depression and well being after hysterectomy: An observational study</p>	<p>Design: Prospective multicenter cohort study</p> <p>Method: Center for Epidemiological Center studies- depression scale (CES-D)</p>	<p>N=419</p>	<p>Independent: women undergoing hysterectomy for benign indication</p> <p>Dependent: risk and predictive factors for depression and well-being. Incidence of depression, well-being and feelings of femininity</p>	<p>Measurement: CES-D questionnaire one week prior to surgery and up to four visits post-operatively</p>	<p>Results: Hysterectomy slightly decreased depression. Depression & well-being at 3- and 12- months post hysterectomy corresponded to baseline pain not related to planned hysterectomy. Course of depression was affected by self-reported post-op infection</p>	<p>Strengths: utilization of extensive questionnaire packages allowing surgical predictions of depression</p> <p>Limitations: Depression was not clinically diagnosed. The use of hormonal treatment was only assessed at baseline and not at follow-up</p> <p>Critical Appraisal: Evidence level III, B good quality evidence</p>

<p>Wilson, L., Pamdeya, N., Byles, J., & Mishra, G. (2018). <u>Hysterectomy and Incidence of Depressive symptoms in midlife women: the australian longitudinal study on women's health. <i>Epidemiology and Psychiatric Sciences</i> (87), 381-392.</u></p>	<p>Design: Longitudinal study</p> <p>Method: 12year study on depressive symptomsin mid-aged Australian women</p>	<p>N=5336</p>	<p>Independent: Long term incidence depressive symptoms</p> <p>Dependent: Mid-aged women with hysterectomy</p>	<p>Measurement: CES-D over a 12year period and surveys</p>	<p>Results: Women with hysterectomy either with or without bilateral oophorectomy had increased risk of new onset of</p>	<p>Strengths: Large community-based</p> <p>Limitations: Self-reported hysterectomy and bilateral oophorectomy status</p> <p>Critical Appraisal: Level III, B good quality</p>
<p>Wise,L., Li, S., Palmer, J., &Rosenberg, L. (2015). Depressive Symptoms and Risk of Uterine Leiomyomata. <i>American Journal of Obstetrics & Gynecology</i> 212:617.e1-e10.</p>	<p>Design: Prospective cohort study</p> <p>Method: Center for epidemiologic studies depression scale (CES-D)</p>	<p>N=15,963</p>	<p>Independent: Depression</p> <p>Dependent: Diagnosis of Uterine leiomyoma and hormonal dysregulation</p>	<p>Measurement: CES-D Biennial follow-up Questionnaires 1999-2011</p>	<p>Results: Increased depressive symptoms are associated with uterine leiomyoma. Dysregulation of the pituitary-adrenal axis increases the risk of uterine leiomyoma</p>	<p>Strengths: Prospective design and focusing on African American women</p> <p>Limitations: All participants were not screened, 96% were self-reported UL for whom medical records were obtained</p> <p>Critical Appraisal:</p>

						Level II, A high quality
<p>Zhang, C., Liu, X., Hu, T., Zhang, F., Pan, L., Luo, Y., & Wang, Z. (2021). Development and psychometric validity of the perioperative anxiety scale-7 (PAS-7). <i>BMC Psychiatry</i>, 21(1), 358. https://doi.org/10.1186/s12888-021-03365-1</p>	<p>Design: case study on measurement tool</p> <p>Method: Perioperative anxiety scale</p>	<p>N=280</p>	<p>Independent: Patients scheduled for elective surgery</p> <p>Dependent: Perioperative anxiety scale-7 (PAS-7) realizedized anxiety disorder-7-scale (GAD-7)</p>	<p>Measurement: PAS-7 and GAD-7</p>	<p>Results: PAS-7 showed good reliability and validity</p>	<p>Strengths: Differentiating somatic anxiety in preoperative patients increased assessment and treatment and overall prognosis</p> <p>Limitations: All the participants were obtained from the same hospital and had general anesthesia which limits generalizability. The sample size was limited</p> <p>Critical Appraisal: Level IV, B good quality</p>

**Appendix D
SWOT Analysis**

Strengths, Weaknesses, Opportunities, and Threats Analysis

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Enhance the skill and knowledge of the providers caring for preoperative patients • Accessibility to records throughout the EPIC health system • Improve mental health patients' surgical outcomes • Accessibility to mental health services within the health plan • Chart audits 	<ul style="list-style-type: none"> • Poor staff engagement • Lack of adequate staffing • Inadequate time for thorough patient assessment • Inconsistent screening workflow in the preoperative medicine clinic
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Improve mental health awareness & screening • Collaboration of mental health services • Increase in patient satisfaction scores • Increase in member enrollment 	<ul style="list-style-type: none"> • Lack of provider education • Possible lack of support for the implementation of screening tools • Provider resistance to accepting and utilizing screening tool • Practice changes in mental health services

Adopted from: SWOT en.svg. (2020, November 5). *Wikimedia Commons, the free media repository*. Retrieved 23:09, August 13, 2021
 from https://commons.wikimedia.org/w/index.php?title=File:SWOT_en.svg&oldid=510267924.

**Appendix E
Budget Plan**

ACTIVITY	HOURS	RATE PER HOUR	COST	PROJECT TOTAL
Research and Project proposal	80	\$86.53	\$6,922.40	\$6,922.40
Screening tool kit development	30	\$86.53	\$2595.90	\$2595.90
Stakeholder Pitch	8	\$86.53	\$692.24	\$692.24
Zoom recording on Pitch	8	\$86.53	\$692.24	\$692.24
Evaluation, Survey, and , Data analysis	60	\$86.53	\$5,191.80	\$5,191.80
				\$16,093.68

APPENDIX F
Work Breakdown Structure

PHASE I (INITIATION)

Formulate PICO(T) question
Literature review to identify barriers to mental health screening in preoperative patients



PHASE II (PREPARATION)

Virtual presentation of project plan to the stakeholders and providers
Develop screening tool to be utilized during preoperative history and physical
Conduct pre-survey with providers



PHASE III (EXECUTION)

Implement screening tool
Performing chart audits to assess utilization



PHASE IV (FOLLOW-UP)

Conduct post survey evaluation of providers
Chart audits to assess utilization of screening tools
Evaluation of project process
Virtual presentation to project committee of results

**Appendix G
Gap Analysis**

<p>The area Consideration: Preoperative providers performing mental health screening on surgical patients</p>		
Desired State	Current State	Action Steps
Preoperative providers to be proficient in utilizing mental health screening tools for surgical patients	Lack of competency and utilization of mental health screening tools for preoperative medicine patients	Incorporate screening tools into the preoperative history and physical assessment

**Appendix H
Communication Matrix/Plan**

COMMUNICATION	PURPOSE	CHANNEL	FREQUENCY	TARGET AUDIENCE	RESPONSIBLE PARTY
Project Initiation	Introduction, relevance, & outcomes	Teams meeting and follow up email	Twice	Preoperative providers & stakeholders	Doctoral Student
Administer pre & post assessment	Baseline & comparison	Qualtrics or survey monkey link sent via email	Twice depending on the feedback of providers	Preoperative providers	Doctoral student & work colleague
Development of provider screening tool kit	Implementation of project	Zoom, teams meeting, and email	weekly	Preoperative providers	Doctoral student & advisor
Project team meetings	Review, assess, discuss, evaluate	Email, zoom, team meetings, email	weekly	All project team members	Doctoral student & advisor
Project support	Ongoing, support, feedback, ideas to pivot	Email, zoom, telephone, team meetings	Ongoing until project completion, as often as able	Doctoral student & advisor	Doctoral student & advisor