

Southern Illinois University Edwardsville

SPARK

Doctor of Nursing Practice Projects

School of Nursing

Spring 5-6-2022

The Implementation of a Mental Health Screening Protocol in an Occupational Health Setting

Chandra A. Pierson-Rye
Southern Illinois University Edwardsville

Follow this and additional works at: <https://spark.siu.edu/dnpprojects>



Part of the [Nursing Commons](#)

Recommended Citation

Pierson-Rye, Chandra A., "The Implementation of a Mental Health Screening Protocol in an Occupational Health Setting" (2022). *Doctor of Nursing Practice Projects*. 212.

<https://spark.siu.edu/dnpprojects/212>

This DNP Project is brought to you for free and open access by the School of Nursing at SPARK. It has been accepted for inclusion in Doctor of Nursing Practice Projects by an authorized administrator of SPARK. For more information, please contact tdvorak@siue.edu.

Executive Summary

Introduction of the Problem

In the occupational health clinic where this quality improvement project was conducted, patients' psychological needs such as depression were not routinely assessed. This is not a unique problem, as historically in occupational health, there has been fear and concern that any referrals for psychological assessment or acknowledgement of mental health issues, such as depression or anxiety associated with a work-related injury could result in a costly workers' compensation claim for stress and/or mental anguish (Menzel, 2007). That does not negate the fact, that if depression is unassessed or unrecognized in the context of a work-related injury it can complicate and prolong the treatment for the work-related injury. One of the physicians in the department where this quality improvement project was conducted has always said, "you have to address what's going on in the patients mind, before you can address their physical complaint". His statement planted the seed for this quality improvement project.

Work-related injuries are disturbingly common and can occur regardless of what industry a person may work in, given that virtually every job in every industry has some degree of risk (Abdalla et al., 2017). It is estimated that approximately 317 million non-fatal occupational injuries and 321,000 fatal occupational injuries occur globally each year (Abdalla et al., 2017). This equates to approximately 151 workers sustaining an occupational injury every 15 seconds (Abdalla et al., 2017). Furthermore, the National Safety Council reports that in the United States, a worker is injured on the job every seven seconds, which equates to approximately 540 occupational injuries per hour, 12,900 occupational injuries per day, 90,400 occupational injuries per week, and over 7 million occupational injuries per year (Work Injury Source, 2020).

Work-related injuries affect people in every age group, race, ethnicity, gender, and socioeconomic class; and are not only a personal problem, but also an economic burden and public health issue with enormous implications for our society (National Safety Council, 2021). Work-related injuries have a multifocal etiology that includes not only physical stressors, but also psychosocial factors such as depression (Menzel, 2007). Mental health has been linked to injury outcomes and once an injury occurs, factors such as depression play a crucial role in determining whether pain transitions from acute to a chronic state, and if a disability develops (Asfaw & Souza, 2012; Menzel, 2007; Newcomb et al., 2016; Vanichkachorn et al., 2014). Because depression can have such a profound effect on all aspects of life, it is important to screen these patients to identify psychological needs early, to improve patient outcomes, and improve the patient's quality of care. While there are no specific recommendations on screening patients for depression in the occupational setting, the U.S. Preventative Task Force [USPTF] (2016), does recommend screening for depression in the general adult population (≥ 18 years old). Routine screening results in moderate benefits to the patient, when accurate diagnosis, effective treatment, and appropriate follow up is in place (USPTF, 2016).

Literature Review

There are implications in the literature that suggest that once an injury has occurred, psychosocial factors such as depression if left unaddressed can play a pivotal role in acute pain progressing to chronic pain and the development of disability (Chau et al., 2011; Menzel, 2007; Vanichkachorn et al., 2014). This is due to the complex and complicated relationship between pain and depression, that is highly reciprocal (Bair et al., 2003; Mayo Clinic, 2020). One theory that can be utilized to explain the phenomenon between pain and depression is the Biophysical Model of Pain. This model considers not only the physical aspects of an injury or disease, but

also the psychological and social aspects that can affect an injury or disease (Covic et al., 2003). Since pain is a significant complaint encountered by patients in various clinical settings, depression should be assessed in all healthcare settings, including occupational health (Michaelides & Pangiotis, 2019). If left untreated, at its worse pain and depression can lead to suicide.

There are many screening tools available that clinicians can utilize to assess and screen for depression, each one varies in their psychometric properties, psychometric evaluation, and generalizability (El-Den et al., 2018). It is essential for clinicians to ensure the depression screening tool used is reliable, valid, and precise to verify the results generated are clinically accurate (El-Den et al., 2018). For this quality improvement project, the PHQ – 9 will be utilized. It is a nine-question screening tool that is a brief self-administered questionnaire, that incorporates the *Diagnostic and Statistical Manual of Mental Health Disorders – 5th edition* (DSM – 5) criteria for depression (American Psychological Association [APA], 2013). The questions are based on symptoms over the past two-week period. The PHQ – 9 can be used to formulate a provisional diagnosis, as well as selecting and monitoring treatment (APA, 2020). The PHQ – 9 has a specificity that ranges from 91% to 94% and is the most extensively studied and most commonly used depression screening tool (Maurer et al., 2018).

Depression is one of the most common mental health disorders, with a high global presence, that affects more than 264 million people worldwide (Michaelides & Pangiotis, 2019; WHO, 2020a). Consequently, it is inevitable that employees with depression (both diagnosed and undiagnosed) will be encountered in the workforce (Asfaw & Souza, 2012; Chau et al., 2011; Michaelides & Panagiotis, 2019; WHO, 2020a). Research has shown that depression can complicate and prolong the treatment for a work-related injury, and if unrecognized and

untreated depression can send the injured worker into decompensation and chronic pain (Kelley, 2009). In the workforce, depression can be debilitating and can affect work performance, leading to absenteeism and presenteeism (Chau et al., 2011; Newcomb et al., 2016). Depression can also affect a person's cognitive abilities, including memory and executive functioning, leading to increased workplace hazards (Chau et al., 2011).

There is extensive literature to suggest that occupational injuries are often followed by depressive episodes, even in patients who do not have a prior diagnosis of depression (Asfaw & Souza, 2012). Screening for depression in the occupational setting, can lead to benefits such as early detection of depressive symptoms, which can lead to better treatment options, better outcomes, quicker recovery, and subsequent return-to-work at full-duty capacity (Newcomb et al., 2016; Reddy, 2010). Thus, screening for depression in the occupational setting, can significantly decrease costs to employers and healthcare systems, as well as improve the health of the injured employee, and improve the performance of the employee when they do return to work (Carolinas HealthCare System, 2017; Newcomb et al., 2016).

There were several barriers identified to screening patients for depression in occupational health, including that no recommendations or published research on the occupational outcomes of patients screened for depression at the point-of-care in an occupational healthcare setting (Maurer et al., 2018; Menzel, 2007; Newcomb et al., 2016). Other barriers to screening may include lack of resources, lack of trained professionals, and the stigmas associated with depression (Reddy, 2010). Additionally, most work compensation systems do not recognize depression as a work-related illness (Asfaw & Souza, 2012). This is despite depression being linked to a preceding occupational injury and being a known factor in influencing a worker's success in returning to work (Asfaw & Souza, 2012). One reason for this may be fear on the part

of the employers and insurance companies that any referrals for psychological assessment or acknowledgement of mental health concerns, such as depression and/or anxiety will result in a costly workers' compensation claim for stress or mental health related issues, such as depression and anxiety (Menzel, 2007).

Project Methods

This project was conducted in an outpatient occupational health clinic located in downstate Central Illinois from May 17, 2021, through August 26, 2021. The aim and main goal of this project was to test the feasibility of incorporating a mental health screening tool, the Patient Health Questionnaire – 9 (PHQ – 9), into this occupational health clinic to routinely assess the psychological needs of patients who have been involved in a work-related injury. The PHQ – 9 was implemented for all patients ≥ 18 years old seen for a new work-related injury and at subsequent follow-up visits during the pilot phase. Prior to the implementation of the PHQ – 9 the staff involved in direct patient care were educated and trained on the use of the PHQ – 9. Two separate educational sessions took place on May 13, and May 14, 2021, and in total 17 staff members were educated, 14 direct care staff members, and three administrative staff members. The staff was provided with a copy of the PHQ – 9 to review (see appendix 1), and a pamphlet that contained detailed information about the PHQ – 9 and parameters for the implementation phase of the project (see appendix 2). Throughout the implementation period four in-person follow ups were conducted to address questions or concerns identified by the staff. Also, four reminder emails were sent to the direct patient care staff during the implementation period.

Evaluation

The evaluation of this project was dual purpose, first data was collected on the total number of patients screened with the PHQ – 9 during the implementation phase and compared to

the number of patients screened immediately prior to the implementation period. Second, at the conclusion of the implementation period the clinic staff was surveyed utilizing a brief Qualtrics questionnaire (see appendix 3) to gain insight into the implementation and screening processes, to gain ideas for improvements, and to obtain the thoughts of the staff about the feasibility of continuing the project.

During the implementation period, the PHQ – 9 was utilized in 161 patient encounters (132 new injury visits and 29 follow up visits). The paper copies of the PHQ – 9 completed by the patients were scanned into their electronic medical record, and at the end of the implementation period, the use of the PHQ – 9 was tracked through the electronic medical record. Prior to this project, the department did not routinely assess the psychological needs of patients involved in work related injuries, and in the six months preceding the implementation, no patients were screened. During the implementation period there were several patients who screened positive for depression and received appropriate individualized care and follow up.

To evaluate the feasibility of this project among the direct care clinical staff, a Likert-scale questionnaire was administered at the completion of the implementation period. The questionnaire was developed and administered per Qualtrics, making the questionnaire easily accessible by either utilizing a weblink or quick response (QR) code, that was distributed by email, text message, and paper (see appendix 3 and 4). A response rate of 50 percent was achieved. The questionnaire results found that 100% of the staff members who completed the survey “strongly agreed” that the PHQ – 9 screening tool is useful. The questionnaire results found that 71.43% “strongly agreed” and 28.57% “somewhat agreed” that it would be feasible to continue using the PHQ – 9 screening tool in daily practice and that the PHQ – 9 was appropriate for the clinics patient population.

Overall, it appeared the staff liked utilizing the PHQ – 9 and felt it would be feasible to continue its use to assess the psychological needs of patients involved in a work-related injury. Some things the staff liked about utilizing the PHQ – 9 in their own words included “it is a good mental health tool”, “it increased the knowledge about the patients psychological state”, “it’s an objective measurement of subjective reports”, “it makes patients feel we care about them more than just as a patient”, and “it helps patients feel like their feelings are important”. Two suggestions were offered by the staff to help improve the PHQ – 9 screening process. The first suggestion was instead of having the nursing staff remember to give the PHQ – 9 form to the patients, “the forms should be put into the patients chart at the front desk”, with the other paperwork patients have to complete. The second suggestion was a “follow-up process/procedure is needed depending on high scores and at-risk patients”.

Additionally, the physician who leads this clinic location and is the collaborating provider to the nurse practitioners in this clinic location, did recognize early in the planning phase of implementation that it is very important to evaluate and assess the psychological needs of patients involved in work-related injuries. Although, the collection of implementation data for this project concluded on August 26, 2021, the PHQ – 9 is still being utilized for patients injured in work-related injuries in this downstate Central Illinois, outpatient occupational health clinic. In addition, the administrators and the physician in the department would like to expand the implementation of the PHQ – 9 to the two other locations within the department and they have requested a policy be created for the department with regards to screening patients with work-related injuries with the PHQ – 9.

During the post-implementation period there were three limitations identified, 1.) having a small sample size, 2.) not collecting specific data about the number of patients who screened

positive for depression, and 3.) not assigning the PHQ – 9 a standardized code or name prior to it being scanned into the patients' electronic medical record. During the implementation period there were a total of 598 patient encounters for new and follow up work-related injuries (204 new injuries and 394 follow-up visits), and a total of 161 (or 26.92%) of those patients were screened utilizing the PHQ – 9, which represents a small sample size. Several reasons were identified for this limitation including not having a standardized process in place for the nursing staff to easily identify which patients presenting for a follow up visit required the PHQ – 9, nursing staff forgetting to give the patients the PHQ – 9 (especially on days when the clinic was extremely busy) and having temporary and PRN staff working in the clinic to meet staffing needs periodically. Due to limitations of the IRB approval, specific patient information was not collected, this information could have added to the validity of this quality improvement project. To address this limitation, further IRB approval could be obtained to collect information on the specific number of patients who screened positive for depression and the interventions utilized. One additional limitation identified was not assigning the PHQ – 9 a code or standardized name before it was scanned into the patient's chart, which would have allowed for easier access to the implementation data. This oversight consequently resulted in the inability to run reports within the EMR to track the usage of the PHQ – 9 during the implementation period and the usage had to be manually counted.

Implications for Practice

The results of this quality improvement project are promising and suggests it would be feasible to continue utilizing the PHQ – 9 to assess the psychological needs of patients who have been injured in a work-related injury. It can also be implied that implementing the PHQ – 9 into this outpatient occupational health clinic has positively affected the patients', their outcomes, and

their satisfaction. However, further research is needed to determine the full extent of how utilizing the PHQ – 9 in occupational health can help the patients' outcomes. This quality improvement project did have a small sample size, to address this limitation this quality improvement project could be implemented over a longer period of time, at a larger clinical site, and/or in multiple clinic locations.

Additionally, specific patient information was not collected, due to the limitations of this projects IRB approval. To strengthen the projects findings and results full IRB approval could be obtained to collect information on the specific number of patients who screened positive for depression and the interventions utilized. Those patients could also be tracked over a period of time to see if the interventions utilized truly impacted their PHQ – 9 scores and/or the outcomes of their work-related injury. One potential outcome that could significantly impact nursing and healthcare as a whole, based on this quality improvement project is the treatment of chronic pain. More research is needed, but the potential to change the treatment of chronic pain is promising due to the theory that pain and depression follow the same descending pathways in the central nervous system (Pech et al., 2018; Sansone & Sansone, 2008; Stahl, 2013).

This knowledge allows for a greater understanding and more effective treatment of not only depression, but also pain (Bair et al., 2003). This knowledge, with further research, could also significantly help with the opioid epidemic. Treatment models that incorporate treatment for both pain and depression seem to be more efficient and can yield a more optimal patient outcome (Bair et al., 2003). One treatment that does incorporate treatment for both pain and depression simultaneously is utilizing antidepressants (such as Duloxetine, also known as Cymbalta). The exact way in which antidepressants work and are effective in the treatment of pain is not completely known, but multiple mechanisms are hypothesized to be involved (Sansone &

Sansone, 2008). Perhaps the most popular theory to explain why antidepressants are effective in treating pain is that antidepressants exert their effects on serotonin and norepinephrine, by the descending spinal pain pathway (Sansone & Sansone, 2008).

Conclusion

In conclusion, this quality improvement project was overall successful, and the results of this quality improvement project suggests it is feasible to continue utilizing the PHQ – 9 at this outpatient occupational health clinic and no additional cost will be associated with its use. The results also imply that implementing the PHQ – 9 into this outpatient occupational health clinic has positively affected the patients', their outcomes, and their satisfaction. Prior to this quality improvement project this downstate Central Illinois occupational health clinic did not routinely assess the psychological needs of its patients injured in work-related incidents. Additionally, the results of the literature review suggests that risk factors, such as depression may affect the progression of pain, determine whether a subsequent disability develops, and the length of time an employee is off work (Menzel, 2007).

As discussed in the evaluation section, although the collection of data for this project concluded on August 26, 2021, the PHQ – 9 is still being utilized for patients injured in work-related injuries in this downstate Central Illinois, outpatient occupational health clinic. With the support of the administrator's, the physician, and direct patient care staff members, the implementation of the PHQ – 9 will be expanded to the two other locations within the department and a policy will be developed for the department with regards to screening patients with work-related injuries with the PHQ – 9. The occupational health community, employers, and others involved in the care of injured workers should reasonably anticipate that their patients

may need mental health screenings such as the PHQ – 9 to assess their psychological needs, in order to improve their outcomes (Asfaw & Souza, 2012).