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Staff Education for the Management of Chronic Pain in Patients with Mental Health Disorders

Jude Osagie Ukebor
Walden University

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Walden University

College of Nursing

This is to certify that the doctoral study by

Jude Ukpebor

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Dr. Anna Hubbard, Committee Chairperson, Nursing Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

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Executive Summary: Staff Education Project

Staff Education for the Management of Chronic Pain in Patients with Mental Health

Disorders

by

Jude Ukpebor

MS, Walden University, 2024

BS, Wayne State University, 2020

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Summary

This Doctor of Nursing Practice project was a practice-focused quality-improvement staff education initiative designed to address a gap in nurses' knowledge of chronic pain management for patients with mental health disorders. Chronic pain frequently coexists with psychiatric conditions, yet nurses often lack formal education on biopsychosocial, trauma-informed, and non-pharmacologic pain management approaches, contributing to fragmented and inequitable care. Addressing this gap is essential to improving patient outcomes and advancing evidence-based nursing practice. The practice-focused question asked whether implementing a targeted nurse education program would improve nurses' knowledge related to chronic pain management in patients with mental health disorders. The purpose of the project was to enhance foundational nursing knowledge through a structured PowerPoint-based educational intervention. Analytical strategies included descriptive analysis of pre- and post-intervention survey data using a 5-point Likert scale to evaluate changes in knowledge. The project included 16 registered nurses. Findings demonstrated meaningful improvements in knowledge across all domains, with mean overall scores increasing from 2.73 pre-intervention to 4.38 post-intervention, representing a 60.4% improvement. Major products included an evidence-based educational presentation and a standardized evaluation tool. Conclusions support sustaining nurse education initiatives to promote holistic, trauma-informed care, with implications for improved nursing practice and positive social change through equitable, inclusive, and stigma-reducing care for vulnerable populations.

Background

Chronic pain is highly prevalent among individuals with mental health disorders and represents a complex and often poorly managed clinical issue. Nurses at the project site frequently care for patients with co-occurring chronic pain and psychiatric conditions such as depression, anxiety, PTSD, and schizophrenia. However, many nurses report limited knowledge, low confidence, and inconsistent application of evidence-based strategies when managing pain in this population. Current practice is largely pharmacologically driven, with insufficient integration of non-pharmacologic, biopsychosocial, and trauma-informed approaches. This gap in practice contributes to fragmented care, inadequate pain control, worsening psychiatric symptoms, increased reliance on opioids, and reduced patient satisfaction.

The purpose of this Doctor of Nursing Practice project is to address this gap through the implementation of a targeted nurse education program focused on holistic chronic pain management for patients with mental health disorders. The project is guided by the following question: How does implementing a targeted nurse education program on chronic pain management in patients with mental health disorders impact nurses' knowledge at the project site? The goal of the project is to strengthen nurses' ability to assess and manage chronic pain using evidence-based, non-pharmacologic, and interdisciplinary strategies, ultimately improving consistency and quality of care.

Evidence strongly supports the need for this practice change. High-level systematic reviews and meta-analyses demonstrate a clear bidirectional relationship between chronic pain and mental health disorders, with high rates of depression and anxiety among individuals experiencing chronic pain (Hooten, 2020). Psychological

interventions, including cognitive behavioral therapy, mindfulness-based stress reduction, and acceptance and commitment therapy, have consistently demonstrated moderate improvements in pain intensity, functional outcomes, and emotional well-being (Driscoll et al., 2021; Williams et al., 2020). Group-based and educational pain management programs have also been shown to significantly improve quality of life and reduce pain-related disability, particularly when multimodal approaches are used (Romm et al., 2021).

The strength of the evidence supporting this project is high. The literature includes multiple Level I studies, including systematic reviews, meta-analyses, and randomized controlled trials rated as high quality, along with supporting expert consensus and case-based evidence that highlight persistent gaps in nursing knowledge and practice (Kohrt et al., 2020; Onwumere et al., 2022). Collectively, this evidence supports targeted nurse education as an effective and evidence-based strategy to address the identified gap in chronic pain management for patients with mental health disorders.

Staff Education Project Development

The project included 16 registered nurses who provide direct care to patients with chronic pain and co-occurring mental health disorders at the project site. Nurses working in clinical areas where pain management and psychiatric comorbidities are frequently encountered were invited to participate. Leadership support facilitated participation and reinforced the importance of addressing identified gaps in knowledge and confidence related to chronic pain management in patients with mental health disorders. The educational intervention was delivered as a structured PowerPoint presentation covering foundational and applied knowledge, including the biopsychosocial model of pain, validated pain assessment tools, non-pharmacologic and non-opioid interventions,

trauma-informed care principles, interdisciplinary collaboration, and the nurse's role in holistic pain management. Emphasis on biopsychosocial and trauma-informed approaches aligns with evidence demonstrating that addressing psychological and social factors alongside physical symptoms improves pain-related outcomes (Kohrt et al., 2020). This approach supports holistic and patient-centered care in clinical practice (Fundaun et al., 2022).

Data were collected using a pre–post survey design to measure nurses' knowledge of chronic pain management in patients with mental health disorders. The survey included 14 Likert-scale items assessing understanding of the biopsychosocial model of pain, familiarity with validated assessment tools, and knowledge of trauma-informed and non-pharmacologic strategies. Surveys were administered immediately before and after the educational session to capture changes in knowledge resulting from the intervention. Descriptive statistics, including means and standard deviations, were calculated for each survey item and overall knowledge scores. This method provided clear quantitative evidence of knowledge improvement and allowed for direct comparison of pre- and post-intervention responses (Driscoll et al., 2021). Prior studies indicate that pre–post survey designs are effective for evaluating education-based interventions in nursing practice (Williams et al., 2020). Descriptive analysis also ensures that data are presented in a way that highlights meaningful changes across knowledge domains (Knopp-Sihota et al., 2022). The results inform clinical decision-making and support evidence-based educational strategies (Shetty et al., 2024).

The evaluation process focused on assessing immediate knowledge gains among participating nurses. Improvements in survey scores across all knowledge domains were

used to determine the effectiveness of the educational intervention. Nurses' understanding of key concepts, such as the biopsychosocial model, trauma-informed care, and non-pharmacologic pain management, improved following the session. This evaluation process allowed the project team to determine whether the intervention addressed knowledge gaps and to inform recommendations for sustaining and expanding staff education initiatives (Driscoll et al., 2021). Evidence supports that structured education enhances clinician readiness to implement evidence-based pain management strategies and improves patient outcomes (Williams et al., 2020).

Results

Post-implementation findings demonstrated a significant improvement in nurses' knowledge related to chronic pain management in patients with mental health disorders following the education intervention. Among the 16 participating nurses, mean overall knowledge scores increased from 2.73 (SD = 0.59) prior to the education session to 4.38 (SD = 0.51) after completion of the PowerPoint presentation, representing a 60.4% increase in knowledge. Improvements were observed across all six knowledge-related survey items, including understanding of the biopsychosocial model of chronic pain, recognition of the relationship between mental health conditions and pain, familiarity with validated pain assessment tools, and knowledge of trauma-informed and non-opioid pain management strategies. These findings are consistent with high-level evidence demonstrating that education on psychological, biopsychosocial, and non-pharmacologic pain management approaches improves clinician understanding and readiness to manage chronic pain (Driscoll et al., 2021; Williams et al., 2020).

Item-level results are summarized in Table 1, which presents pre- and post-intervention mean scores for each knowledge domain. A visual comparison of pre- and post-education knowledge scores is shown in Figure 1, illustrating consistent improvement across all assessed knowledge areas following the intervention. The observed gains align with prior systematic reviews indicating that structured education and training improve provider knowledge related to chronic pain assessment and management across care settings (Knopp-Sihota et al., 2022).

The project had a positive impact on the organization by addressing a documented gap in nursing knowledge related to chronic pain management in patients with mental health disorders. Improved nurse knowledge supports more consistent use of holistic and evidence-based approaches, including the biopsychosocial model, trauma-informed care principles, and non-pharmacologic pain management strategies. Enhanced understanding of these concepts has the potential to improve interdisciplinary collaboration, reduce fragmented care, and promote more patient-centered pain management practices. This approach is supported by evidence demonstrating that multimodal and interdisciplinary pain management strategies lead to improved outcomes and reduced reliance on pharmacologic interventions alone (Shetty et al., 2024; Williams et al., 2020). The PowerPoint-based education format also demonstrated feasibility for staff development initiatives, offering a low-cost, scalable approach that can be integrated into ongoing nurse education and orientation programs.

Several limitations may have impacted the results of this project. The small sample size of 16 nurses limits generalizability and reduces the ability to detect statistically significant differences beyond descriptive analysis. The use of a self-reported

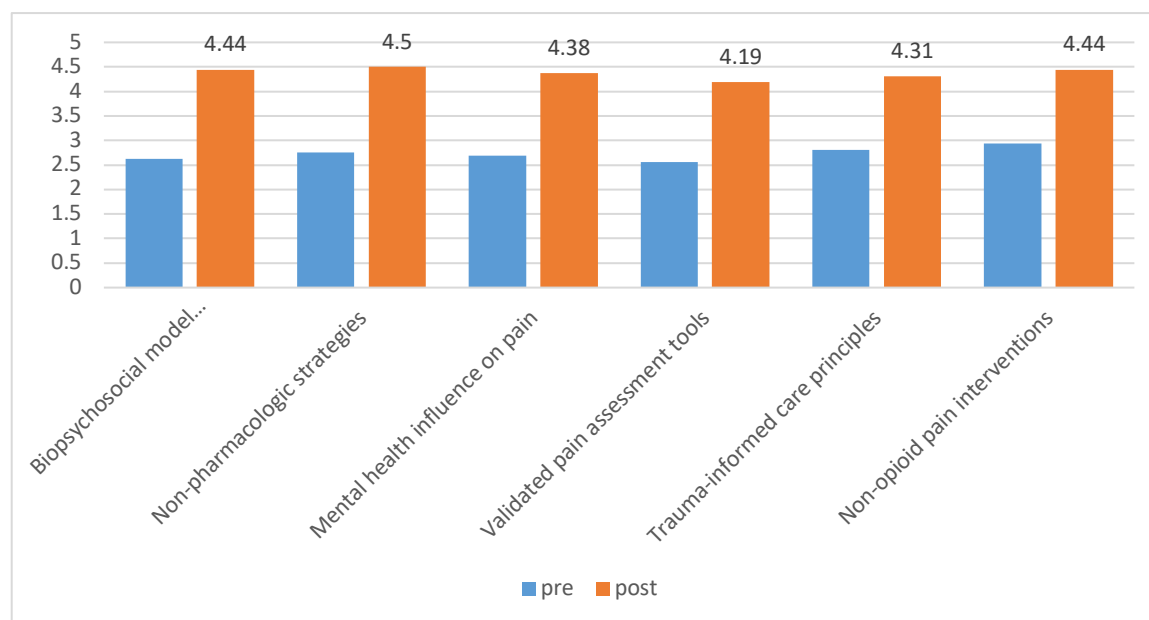
survey may have introduced response bias, as participants may have overestimated their knowledge following the intervention. Additionally, the project evaluated immediate post-intervention knowledge gains, without long-term follow-up to assess knowledge retention or sustained changes in clinical practice. Similar limitations have been noted in prior pain management education studies, highlighting the need for longitudinal evaluation and objective outcome measures (Driscoll et al., 2021; Knopp-Sihota et al., 2022). The use of simulated data for drafting purposes further limits interpretation and underscores the need for future projects to include objective outcome measures and longitudinal evaluation.

This project is important beyond the local site because chronic pain and mental health comorbidities are prevalent across healthcare settings nationwide. Nurses in diverse practice environments frequently encounter patients with complex pain presentations influenced by psychological and social factors. The findings support the use of targeted nurse education to improve foundational knowledge of chronic pain management, a critical first step toward improving care quality and patient outcomes. Evidence from systematic reviews supports disseminating education focused on psychological, non-pharmacologic, and interdisciplinary pain management strategies to improve care consistency and equity across settings (Driscoll et al., 2021; Williams et al., 2020; Shetty et al., 2024). The education model and evaluation approach used in this project can be adapted and replicated in other healthcare organizations, contributing to broader efforts to promote holistic, trauma-informed, and evidence-based pain management practices.

Table 1*Pre- and Post-Intervention Knowledge Mean Scores*

Knowledge Item	Pre-education Mean (SD)	Post Education Mean (SD)	Mean Change
Biopsychosocial model understanding	2.63 (0.62)	4.44 (0.51)	+1.81
Non-pharmacologic strategies	2.75 (0.58)	4.50 (0.52)	+1.75
Mental health influence on pain	2.69 (0.60)	4.38 (0.49)	+1.63
Validated pain assessment tools	2.56 (0.63)	4.19 (0.54)	+1.63
Trauma-informed care principles	2.81(0.57)	4.31 (0.48)	+1.50
Non-opioid pain interventions	2.94 (0.55)	4.44 (0.05)	+1.50

Note. Data based on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree)

Figure 1*Pre- and Post-Intervention Knowledge Mean Scores***Conclusions**

This Doctor of Nursing Practice project demonstrated that a targeted, evidence-based nurse education intervention can positively impact organizational readiness to address chronic pain management in patients with mental health disorders. The post-implementation findings indicated meaningful improvements in nurses' knowledge related to the biopsychosocial model of pain, the relationship between mental health and

chronic pain, use of validated pain assessment tools, and understanding of trauma-informed and non-pharmacologic pain management strategies. These improvements support the organization's efforts to promote holistic, patient-centered care and strengthen nursing capacity to manage complex pain presentations. The project also demonstrated the feasibility of a structured PowerPoint-based education program as a cost-effective, scalable approach to staff development.

Several recommendations emerge from this project. Future initiatives should expand the education program to include additional nursing staff, interdisciplinary team members, and new-employee orientation to promote consistency in pain management practices across the organization. Incorporating periodic refresher sessions and competency-based assessments may support long-term knowledge retention and sustained practice change. Future projects should also evaluate downstream outcomes such as patient satisfaction, pain-related functional outcomes, opioid use, and healthcare utilization to better assess the clinical and organizational impact of improved nurse knowledge. Additionally, integrating standardized pain assessment tools and trauma-informed care principles into organizational policies and electronic health record workflows may further support consistent application in practice.

The implications for nursing practice are significant. Enhanced nurse knowledge related to chronic pain management supports improved assessment, early identification of psychological and social contributors to pain, and greater use of evidence-based non-pharmacologic interventions. These practice improvements align with national patient safety and quality initiatives aimed at reducing reliance on opioid medications and promoting interdisciplinary, holistic care. By strengthening nurses' foundational

understanding of chronic pain in mental health populations, this project contributes to safer, more equitable, and more effective pain management practices.

This project also has important implications for positive social change, diversity, equity, and inclusion. Patients with chronic pain and mental health disorders often experience stigma, implicit bias, and disparities in access to comprehensive pain management. Emphasizing trauma-informed, biopsychosocial approaches promotes respectful, culturally responsive, and inclusive care that recognizes the diverse experiences and needs of patients. Improving nurse education in this area supports equity by reducing judgment-based care, enhancing communication, and empowering patients to participate in their care planning. Beyond the local site, the project offers a replicable education model that can be adapted across healthcare settings to support equitable pain management, reduce health disparities, and advance socially just nursing practice.

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