Increasing Healthcare Provider's Awareness and Reducing Negative Perceptions of Pain during the Perioperative Period in the Black Community: An Educational Module

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Increasing Healthcare Provider’s Awareness and Reducing Negative Perceptions of Pain during the Perioperative Period in the Black Community: An Educational Module

A DNP Project Presented to the Faculty of the Nicole Wertheim College of Nursing and Health Sciences

Department of Nurse Anesthesia, Florida International University

In partial fulfillment of the requirements for the degree of Doctor of Nursing Practice

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Approval Acknowledged: ________________________, DNP Program Chair
Date: ________________

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Date: ________________

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ABSTRACT

**Background:** Inequality and disparities in healthcare is not an unfamiliar phenomenon as it was developed centuries ago during slavery. The longstanding beliefs that blacks and whites are biologically different date back centuries, as physicians, scientists, and slave owners proposed these beliefs as validation of the acts of slavery. Additionally, blacks have been exposed to unethical experiments for years. Three examples of unethical experiments that influenced fictitious notions of blacks include: (1) the experiment conducted by the US Public Health Services known as the Tuskegee Study of Untreated Syphilis in the Negro Male (2) the 1793 yellow fever epidemic in Philadelphia where it was assumed due to their race, black people were immune to the viral disease and (3) James Marion Sims known as the “father of modern gynecology” who performed unconsented vesicovaginal fistula repairs on enslaved black women without anesthesia.

**Objectives:** The objective of this project is to shed light and provide knowledge to providers on cultural competence to influence a change in perceptions of blacks, decrease disparities that lead to misdiagnosis and unequal treatment, as well as repair quality care and health outcomes in black patients. A literature review including six research studies address the PICO question, “In perioperative healthcare providers, does an educational module on pain perception in black patients, compared to no education, improve provider knowledge and treatment of pain perception in the black community?” The literature review was used as the basis for this study and served as the educational framework to increase perioperative healthcare provider knowledge.

**Methodology:** An online presentation in an educational format was the primary methodology used for the proposed project. An initial survey was created to assess perioperative provider knowledge of racial bias and inequality in healthcare towards the black community.

**Results:** A total of 10 individuals consented to participate in which 8 actually completed the survey. The survey consists of only CRNAs, 7 female participants and 1 male. The mean age of participants was 34. The participant’s ethnicity involved 3 Hispanics, 1 White, 4 African American/Blacks. Three of the participants possess Masters’ while the remaining 5 hold Doctorate degrees. Five of the participants have been in practice 1-2 years, 2 between 2-5 years, and 1 between 5-10 years. When asked the pre-survey questions, the results varied among the categories. The post-survey questions following the educational module revealed more consistency.

**Conclusions:** In conclusion, all participants were extremely likely to self-evaluate subconscious prejudices. Four participants feel race does not factor into patient care often, 1 not as often, 1 often, and 2 very often. Six of the participants are extremely likely there will be a change in their practice while equally one believed somewhat likely and the other is indifferent with neither likely or unlikely.

**Keywords:** Black people, black patients, black community, blacks, healthcare providers, perioperative providers, provider perception, pain perception, pain in black patients, pain management in blacks, healthcare inequalities, healthcare disparities, racial bias in healthcare.
Introduction

DNP Project Title

Improving Healthcare Provider’s Perception of Pain in the Black Community:

An Educational Module.

PICO Question or Purpose

Population (P): Perioperative healthcare providers

Intervention (I): Educate perioperative on pain in black patients

Comparison (C): No education

Outcomes (O): Improved provider knowledge of pain perception in the black community

PICO Question: In perioperative healthcare providers, does an educational module on pain perception in black patients, compared to no education, improve provider knowledge and treatment of pain perception in the black community.

Problem Statement/Significance of the Problem

The Institute of Medicine describes disparities as “racial or ethnic differences in the quality of healthcare that are not due to access-related factors or clinical needs, preferences, and appropriateness on intervention.”¹ Racial and ethnic disparities remain critical indicators on how healthcare is delivered to specific patient populations, particularly those of the black community. Blacks have an increased amount of diseases, disabilities and early deaths compared to whites.² While this may be true, a major component that accounts to the increase in disparities is largely related to healthcare and provider’s perception of black patients.² Research reveals there are false beliefs about the biological make up of blacks and whites that contributes to healthcare provider’s perception that blacks do not feel pain as much as whites. In fact, studies have shown
that black patients receive lower quality medical care and are subject to less beneficial procedures.²

These disparities have been reflected in overall treatment of black patients. For example, when prescribing medication for treatment of pain, blacks have been under prescribed while whites were overprescribed.³ Inequality in healthcare based on race is broadly displayed through healthcare funding, lack of patient education and advocacy, and providers attitudes or unconscious bias towards black patients. To improve this issue in healthcare, providers must first be aware and accept the issue actually exist and be open for change. The objective of this project is to improve the knowledge of cultural competence among providers in hopes to change perceptions of black patients, reduce disparities causing under diagnosis and under treatment, and improve quality care and patient outcomes in blacks.

Background

Inequality and disparities in healthcare is not an unfamiliar phenomenon as it was developed centuries ago during slavery. The longstanding beliefs that blacks and whites are biologically different date back centuries, as physicians, scientists, and slave owners proposed these beliefs as validation of the acts of slavery.⁵ Additionally, blacks have been exposed to unethical experiments for years. Three examples of unethical experiments that influenced fictitious notions of blacks include: (1) the experiment conducted by the US Public Health Services known as the Tuskegee Study of Untreated Syphilis in the Negro Male⁵ (2) the 1793 yellow fever epidemic in Philadelphia where it was assumed due to their race, black people were immune to the viral disease⁵ and (3) James Marion Sims known as the “father of modern gynecology” who performed unconsented vesicovaginal fistula repairs on enslaved black women without anesthesia.⁶
When a pain assessment is conducted, the first step involves a subjective approach, followed by physiological manifestations of pain such as changes in baseline vital signs. Furthermore, if there has been an insult to an organ or manipulation of tissue, based on science and the function of the nervous system, there is proof that one would experience pain. Every individual displays pain differently, which can be influenced by many cultural factors. However, the genetic makeup of humans is close to identical so an assumption cannot be made that a person experiences less pain than another based on race.

Unfortunately, in healthcare, these issues still exist rather in a hidden perception or assumed unconscious bias without distinctively mentioning racism as a factor that has potentially contributed to poor health outcomes in black people. As health disparities are explored, attention is brought to those who suffer under these disparities where the main attention needs to be brought to why this issue exists and continues to be a problem in the first place.

**Scope of the Problem**

Disparities remain a major problem in healthcare and have affected many black patients in several different aspects and levels of care. Statistically, black women are at a higher risk of maternal mortality and approximately 60% of maternal deaths are preventable. The maternal death rates in black women are three to four times more than white women. Although several factors contribute to maternal mortality in black women, poor quality maternal care secondary to structural racism and implicit bias is amongst those factors.

Unequal treatment of black patients is also displayed in the treatment of children that is also well documented. Disparities are demonstrated in children as early as seven years old and are related to stereotypes of lower economic status and distorted beliefs that blacks are biologically
different from whites. Several areas in healthcare such as cardiovascular, diabetes management, asthma treatment, and surgical services black patients experience disparities that influence health outcomes that contribute to rising morbidity and mortality rates. The perception of healthcare providers can negatively alter the plan of care of black patients, which may further influence outcomes.

**Consequences of the Problem**

One of the most essential components of healthcare is provider-patient relationship. It is imperative for healthcare providers to be culturally competent by understanding each patient’s values, beliefs, and preferred method of care and treatment. These cultural factors are essential for healthcare providers to comprehend to properly create a plan of care and build a trusting rapport with patients. Obtaining a greater awareness of a patient’s beliefs about healthcare may allow identification in gaps between healthcare provider’s perception and patient’s understanding of health conditions.

Studies of provider-patient interactions have revealed that providers underestimate black patients pain compared to white patients. If the problem of disparities in healthcare persists, several consequences will continue to impact healthcare, how it is practiced, and the lives of black patients. Disparities will continue to cause negative outcomes for black patients who are not treated appropriately further destroying families and communities. Healthcare provider’s attitudes towards black patients do not go unnoticed and has created a level of mistrust in the black community pertaining to the healthcare system.
Knowledge Gaps

While there is plenty of research that highlight racial disparities in different aspects of healthcare, several gaps still exist that require attention in order to grasp solid understanding of racial and ethnic disparities that affect black patients.\(^1\) One of the most important gaps consist of research that is deficient in identifying elements to explain occurrences of these disparities.\(^1\) Research must include several factors such as patient and provider attitudes towards clinical encounters, what influences clinical decision-making, environment care is being offered, and lack of comparison data.\(^1\) Additionally, a significant limitation in existing research is the lack of evaluation of the care that is rendered in blacks compared to whites. Different research highlights other subgroups where healthcare may be compromised based on other components such as immigrant status or issues related to access of healthcare. However, when this issue of healthcare disparities is mentioned, research is consistent with identifying the differences in care received by blacks compared to whites.

Proposal Solution

One of the most effective ways to promote change is education. Healthcare providers need to be aware of the existing disparities, do away with personal perceptions of black patients, and learn how to properly assess and care for this population group. Additionally, black patients need to research chosen providers and if that opportunity is not an option, become knowledgeable about their health to ask appropriate questions. It is imperative for black patients to be aware and have a full understanding of treatment options and not feel forced or coerced into a health decision. Although disparities in healthcare cannot diminish overnight, the attempt for change must start and the beginning point is with healthcare providers.
Methodology

Systemic Review Rationale

Racial and ethnic disparities continue to be significant contributing factors in healthcare inequality in black patients. The Institute of Medicine defines disparities as “racial or ethnic differences in the quality of healthcare that are not due to access-related factors or clinical needs, preferences, and appropriateness on intervention.” The perception of healthcare providers is a key element that contributes to the increase in healthcare disparities amongst black patients. Several research studies have confirmed false beliefs that black people do not feel the same level of pain as white people due to biological differences that has also influenced healthcare provider’s perception of blacks, pain, and treatment plans. Furthermore, other research studies have revealed that black people receive medical care that is of lower quality and are recommended to have procedures that are less beneficial to health outcomes.

Black patients have been under prescribed especially in treatment of pain compared to white patients which has been a direct reflection of disparities and how blacks are treated in healthcare. Inequality in healthcare based on race is broadly displayed through healthcare funding, lack of patient education and advocacy, and providers attitudes or unconscious bias towards black patients. To exhibit change, it is imperative for healthcare providers to acknowledge and accept racial inequality in healthcare exist.

Objectives

The purpose of the literature review was to first identify the problem of racial and ethnic disparities in healthcare especially those of the black community. The second objective was to
understand why this problem exists in the first place further exploring historical events that explain but does not justify the problem. Lastly, the third objective involves analyzing different research studies that identify and investigate previous research on healthcare provider’s perception and attitudes towards black patients particularly in pain management. The objective of this project is to shed light and provide knowledge to providers on cultural competence to influence a change in perceptions of blacks, decrease disparities that lead to misdiagnosis and unequal treatment, as well as repair quality care and health outcomes in black patients.

**Eligibility Criteria**

For this literature review, the objectives mentioned, assisted in the process of choosing each research study for examination. For the research studies to qualify, each study had to meet a certain criterion for this literature review. The eligible criteria included: published within a five-year range unless significantly helpful, predominantly conducted within the United States, and written in English. Other eligible criteria included studies that focused on healthcare inequalities particularly in patients of the black community, healthcare provider perception and attitudes towards black patients, and perception being a factor in pain management for this population. The search engines that assisted in the research was the library services provided by Florida International University (FIU) and Google Scholar.

The PICO question created guided the search using the following keywords: Healthcare provider perception, Pain perception, Black patients’ pain, Racial inequality in healthcare, Healthcare disparities.
Information Sources

The Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, and MEDLINE databases were used for this research. The Institute of Medicine was another valuable source that played a significant role in the research and literature review.

Search Strategy

The original search generated 1,580,000 results. The search parameters consist of narrowing the search by entering the year 2016 to 2021 in the custom time range for the latest articles within five years resulting in 31,700 results. The next search PubMed was used generating 2,985 results. CINAHL and MEDLINE did not generate valuable sources for this literature review; therefore, articles were reviewed but not chosen. The key search terms guided the search. Additionally, the titles of the articles, abstracts, and conclusions of articles were considered to distinguish common themes in relation to the PICO question and main topic. Ultimately, the search resulted in six primary articles that were chosen for analysis.
Diagram 1: Keywords

Black People OR Black Patients OR Black Community OR Blacks

"Healthcare Providers" OR "Perioperative Providers" OR "Provider Perception"

"Healthcare Inequalities" OR "Healthcare Disparities" OR "Racial Bias in Healthcare"

"Pain Perception" OR "Pain in Black Patients" OR "Pain Management in Blacks"
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Purpose</th>
<th>Methodology/Research Design</th>
<th>Intervention(s)/Measures</th>
<th>Sampling/Setting</th>
<th>Primary Results</th>
<th>Relevant Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoffman et al., 2016</td>
<td>To examine beliefs associated with racial bias, pain management, well-documented racial disparities</td>
<td>Systematic Literature Review Level I</td>
<td>Literature review conducted using Google Scholar and PubMed. The Google search focused on assessing studies that related racial bias and pain in blacks compared to whites. The PubMed search focused on assessing studies of racial disparities in healthcare and pain management in black patients.</td>
<td>Study 1: 121 participants with no medical training, 92 (white, born in the US, native English speakers)</td>
<td>Study 1: Hold beliefs that blacks and whites are biologically different. Beliefs were noted to be associated with racial bias related to pain perception.</td>
<td>Alarming need to eliminate racial disparities in healthcare. Close attention to explore racial bias in the assessment and treatment of pain within the black community by white providers. Both studies demonstrated: - Biological differences among blacks and whites - Beliefs stem from slavery - Perceptions that blacks feel less pain than whites contribute to inadequate treatment of pain in blacks</td>
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| Mende-Siedlecki et al., (2019) | To analyze the perceptions that contribute to racial bias | Meta-analysis | 7 experiments (2 supplementary experiments) to explore racial disparities | *Experiment 1*: 85 white participants (diversity based on: age, race, gender, | *Experiment 1*: Pain was perceived earlier on white vs black faces and prescribing less analgesic to blacks than whites | The experiments concluded with results that were consistent with the misperception that blacks are... |
in recognizing pain\textsuperscript{6} contributing to perception of pain and how treatment is influenced\textsuperscript{6} and geographical location) Experiment 2: 80 white participants Experiment 3: 158 white participants Experiment 4: 307 white participants Experiment 5: 129 white participants Experiment 6: 124 white participants Experiment 7: 122 white participants\textsuperscript{6} Experiment 2: Results identical to Experiment 1 Experiment 3: Results replicated 1\textsuperscript{st} two experiments broadly Experiment 4: Results replicated 1\textsuperscript{st} three experiments Experiment 5: Results replicate and further reveal perceptual contributions to pain management based on racial bias Experiment 6: Replication of results continued Experiment 7: No significance in identifying pain between races However, race remained significant factor in prescribing and managing pain in blacks\textsuperscript{6} dismissed in terms of their emotional expressions as it relates to pain\textsuperscript{6}

<p>| Chan et al., (2020) | Examine the disparities with different healthcare providers of community and individual racial ethnicity to assess the providers potential\textsuperscript{7} | Multiple logistic regression models/ Mediation analysis | Examine disparities in access to different healthcare providers based on community and race-ethnicity testing supply of providers as a potential factor\textsuperscript{7} | National secondary data 2014 Medical Expenditures Panel Survey\textsuperscript{7} 2010-2014 estimate American Community Survey &amp; 2014 Info USA\textsuperscript{7} | Minority PCSAs significantly/independently related to less visits to a number or healthcare providers\textsuperscript{7} | Communities dominantly racial-ethnic minority and individulas independently associated with lower use of health services\textsuperscript{7} |</p>
<table>
<thead>
<tr>
<th>Smedley et al., (2003)</th>
<th>Analyzing if stereotypes and biases of healthcare providers contributes to unequal treatment&lt;sup&gt;3&lt;/sup&gt;</th>
<th>Comprehensive, multi-level strategy</th>
<th>Evaluate racial and ethnic minority receiving lower quality of healthcare compared to non-minorities&lt;sup&gt;3&lt;/sup&gt;</th>
<th>Defines disparities, inequalities, stereotypes, prejudice in healthcare&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Several categories that explain unequal treatment in minorities&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Well-documented inequalities in healthcare related to race in several areas&lt;sup&gt;3&lt;/sup&gt;</th>
</tr>
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<tbody>
<tr>
<td>Morden et al., (2021)</td>
<td>Statistical Analysis to measure the difference in prescribing opioids according to race within individual health systems&lt;sup&gt;8&lt;/sup&gt;</td>
<td>Statistical Analysis</td>
<td>Medicare claims from 2016-2017</td>
<td>Beneficiaries of both black and white races from the ages 18-64 in healthcare systems&lt;sup&gt;8&lt;/sup&gt;</td>
<td>National sample 2, 197, 153</td>
<td>Little difference in annual prevalence of opioid receipt</td>
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<td></td>
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<td>310 racially diverse systems</td>
<td>(47.4% all patients and 56.1% black patients from national sample)&lt;sup&gt;8&lt;/sup&gt;</td>
<td>Mean annual dose: higher in white patients than in black patients (91% system &amp; 15% &gt;75% systems)&lt;sup&gt;8&lt;/sup&gt;</td>
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<td></td>
<td>Blacks and whites received remarkably different doses of opioids&lt;sup&gt;8&lt;/sup&gt;</td>
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<td></td>
<td>Significant racial inequality in opioid prescriptions&lt;sup&gt;8&lt;/sup&gt;</td>
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<td></td>
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<td></td>
<td></td>
<td>Unknown how it has impacted patient outcomes&lt;sup&gt;8&lt;/sup&gt;</td>
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<td></td>
<td>“Overall observation &amp; system specific reporting prompts action of policymakers to examine causes, consequences, and effective strategies to implement for racially unequal opioid receipt”&lt;sup&gt;8&lt;/sup&gt;</td>
</tr>
<tr>
<td><strong>Johnson et al., (2019)</strong></td>
<td>Evaluate pain assessment frequency and treatment difference in patients by race and ethnicity for women post cesarean</td>
<td>Retrospective cohort study</td>
<td>Pain scores documented &amp; medications administered after delivery were grouped into 0-24 and 25-48 hours postpartum time periods</td>
<td>1,987 women</td>
<td>1,701 met inclusion criteria</td>
<td>30,984 documented pain scores</td>
</tr>
</tbody>
</table>
Results

Hoffman et al. explored the well-documented racial disparities and beliefs that are associated with racial bias when managing pain, which has been a major healthcare concern.\textsuperscript{5} This article provided two studies that involved examining the beliefs of individuals without medical training and individuals who possess medical training. The participants were given a series of scenarios that included false beliefs, biological differences between blacks and whites, and pain rating scores.\textsuperscript{5} In the conclusion of both studies, there was a direct correlation between racial bias and the belief of biological differences amongst blacks and whites and the perception of pain.\textsuperscript{5} These results highlighted the need to further examine racial bias in the assessment of pain and treatment recommendations in those who acquire medical training particularly in pain management, which has been well documented.\textsuperscript{5} It also revealed three major factors that support inequality in healthcare for black patients that include: there is a belief that blacks and whites are biologically different, false beliefs about blacks and how they experience pain dates back to slavery, and blacks are receiving inadequate treatment recommendations for pain due to these reasons.\textsuperscript{5}

Mende-Siedlecki et al. shed light on the systematic issue of under diagnosed and undertreated pain in blacks compared to whites.\textsuperscript{6} This article conducted seven experiments to explore contributing factors of racial disparities associated with perception of pain and how these perceptions influence treatment.\textsuperscript{6} The participants were given a series of black and white faces in order to depict pain based on facial expressions in which perceptual thresholds were compared.\textsuperscript{6} An assessment of the participants’ racial bias and perceptions of difference in black’s and white’s status were explored to determine if treatment and perception biases were independently related.\textsuperscript{6} The results revealed that pain was perceived earlier on white faces in
comparison to black faces. These results were consistent with the misconception that blacks are
dismissed in terms of their emotional expressions to pain, which led to prescribing less analgesic
to blacks compared to whites. In fact, several participants depicted anger on black faces rather
than pain.

Chan et al. objective was to examine disparities in the use and access to a variety of
healthcare providers based on the community and race-ethnicity. It also explored the supply of
providers playing a possible role in disparities. The study revealed observable disparities on a
national level was significantly lower within communities. Further explaining communities as a
factor for addressing disparities in healthcare within minority populations and communities.
Not only are blacks being treated unfairly within the healthcare system, there are other
contributing factors such as lack of access to healthcare providers.

Smedley et al. is a source that confronts racial and ethnic disparities and unequal
treatment in healthcare. The source encompasses immense amounts of information divided into
sections focusing on each contributing factor to racial disparities that also included the input of
the Institute of Medicine. It defined disparities, inequalities, stereotypes, and prejudice in the
healthcare setting. The source explored different aspects in healthcare where unequal treatment
was identified. For this literature review, the areas of healthcare perceptions, assessment and
treatment of pain, and other supporting components were considered for simplicity.

Morden et al. conducted a statistical analysis based on Medicare claims that assessed the
difference of prescribing opioids to whites versus blacks nationally and within healthcare
systems. There was a remarkable difference in prescribed opioid dosages in blacks and whites.
When prescribing pain medication, black patients have been under prescribed compared to white
patients who were prescribed over the need. The significant racial inequality in opioid
prescriptions has brought attention to policymakers for further examination, assessment of consequences, and strategies to implement change.\textsuperscript{8}

Johnson et al. evaluated pain assessment frequency and treatment differences in patients by race and ethnicity for women post cesarean.\textsuperscript{9} Documented pain scores and administration of medications post-delivery were categorized into 0-24 and 25-48 hours postpartum time periods.\textsuperscript{9} These results were measured by pain scores and pain medication administered for cesarean deliveries within two different post-partum time periods reflecting disparities.\textsuperscript{9} Again, racial and ethnic inequalities were identified in this study as it relates to how black patients were assessed and treated for postpartum pain.

\textbf{Discussion}

\textbf{Summary of the Evidence}

Six research articles were examined and explored to support the PICO question designed for this literature review and project. All six sources explored racial disparities, health inequalities, healthcare providers perceptions, and false beliefs about black patients in healthcare. Each source examined these concerns in a different manner. However, they all confirmed a disconnect to how black people are perceived in healthcare especially pertaining to pain management.

\textbf{Conclusion}

In conclusion, there is an alarming concern regarding healthcare inequality in the United States within the black community. Unfortunately, inequality has been an issue since the time of slavery.\textsuperscript{1} Healthcare disparities are not limited to one area of healthcare as it has been identified in every area. Pain assessment and management seems to be an area of high concern. Many sources have revealed that healthcare providers are not adequately assessing black patients,
leading to lower amounts of prescribed pain medication compared to their white counterparts. This longstanding issue has created false notions that black people do not experience the same level of pain as white people.\textsuperscript{1} Based on research, these myths have influenced healthcare provider’s perceptions of black people further influencing the way pain management has been treated or undertreated for that matter.

In conclusion, there is an alarming concern regarding healthcare inequality in the United States within the black community. Unfortunately, inequality has been an issue since the time of slavery.\textsuperscript{1} Healthcare disparities are not limited to one area of healthcare as it has been identified in every area. Pain assessment and management seems to be an area of high concern. Many sources have revealed that healthcare providers are not adequately assessing black patients, leading to lower amounts of prescribed pain medication compared to their white counterparts. This longstanding issue has created false notions that black people do not experience the same level of pain as white people.\textsuperscript{1} Based on research, these myths have influenced healthcare provider’s perceptions of black people further influencing the way pain management has been treated or undertreated for that matter.

**Implementation of Educational Project**

The Institute of Medicine’s definition for disparities is “racial or ethnic differences in the quality of healthcare that are not due to access-related factors or clinical needs, preferences, and appropriateness on intervention.”\textsuperscript{1} In the United States, minorities, particularly black patients, receive a lower quality of medical care in comparison to white non-Hispanics.\textsuperscript{2} Research has revealed false beliefs that black patients do not feel the same level of pain as white people.\textsuperscript{2} This false notion is related to a belief that whites and blacks are biologically different
and has contributed to healthcare providers perception of black patients and pain that has influenced treatment plans. Additionally, research has proven that black people receive an inferior quality of care and are often recommended for procedures that are not beneficial to their health outcomes. The perception of healthcare providers is a key component that contributes to the rise in healthcare disparities amongst black patients.

Black patients have been under prescribed particularly in pain management compared to white patients. As a result, a direct reflection of disparities and how black people are treated in healthcare has been identified. Inequality in healthcare based on race is broadly displayed through healthcare funding, lack of patient education and advocacy, and providers attitudes or unconscious bias towards black patients. To exhibit change, it is imperative for healthcare providers to acknowledge and accept that racial inequality exist in healthcare.

The purpose of the project is to first identify racial and ethnic disparities within the black community in healthcare. The project’s goal is to explore why racial disparities and inequality remains an existing problem in healthcare. The project will assess various research studies that identify and discuss healthcare providers perception and attitudes towards pain management in black patients. The educational intervention designed for this project was created with the intent to acknowledge and provide insight to providers on cultural competence in healthcare. The educational intervention was also designed to influence a change in perceptions of black patients, reduce disparities that lead to misdiagnosis and unequal treatment, and reconstruct the quality of care and health outcomes in black patients.
Program Structure

The strength, weakness, opportunities, and threats (SWOT) analysis is a tool used for strategic planning and brainstorming. In developing the educational tool for this project, the internal and external components must be considered. The SWOT analysis tool will be useful in distinguishing these components. Thus, the SWOT analysis tool will also be used to explore the advantages, disadvantages, and any threats the educational plan may encounter. The project’s goal is to explore the perceptions of healthcare providers towards black patients in the perioperative setting, educate healthcare providers on racial bias and unequal treatment, and reduce the incidences of unequal treatment in black patients particularly in pain management.

First, it is imperative to explore healthcare providers perceptions towards black patients and pain management in the perioperative setting. The providers will be given a pre-assessment questionnaire to evaluate biases and to measure their knowledge on this particular issue. Following the pre-assessment questionnaire, the providers will be provided with an educational presentation that addresses racial inequality, biases, and false beliefs that influence perceptions of black patients. The presentation will also highlight strategies to properly assess and manage pain in black patients. After the presentation, providers will be provided with another questionnaire that will assess the knowledge differences prior to and after the educational intervention.

Strengths

Positive factors and internal capabilities of an establishment that are significant to achieve goals and serve clients sufficiently is the strength of a SWOT analysis. The strengths associated with the educational presentation involve bringing awareness to this issue which may reduce racial biases and the inequality in healthcare that black patients encounter. Two issues
that were identified as potential ways racial disparities in pain management can occur in healthcare include. First, providers may recognize pain in black patients but do not treat them due to noncompliance concerns or lack of healthcare access. Second, providers not recognizing pain in black patients at all stemming from racial bias and perceptions of black patients in relation to pain. Creating an educational tool to make providers aware of this issue and teach them how to assess black patients properly disregarding preconceived perceptions will assist in the reduction of racial biases and inequality in healthcare. Ultimately, the goal is to provide safe and effective care to all patients for good healthcare outcomes.

An educational presentation created with a focus on adequate assessment and treatment of black patients pain in the perioperative setting will allow healthcare providers to have a different perspective when treating black patients. Providing healthcare clinicians with the knowledge base and appropriate tools to assess and effectively manage black patients pain particularly in the perioperative setting may eventually improve patient outcomes. Additionally, providers will become better practitioners as it relates to how patients are treated.

**Weakness**

Weaknesses in a SWOT analysis consist of internal factors or constraints that may impede the organizations performance. An internal problem that this project may encounter is that it may not be acknowledged in all hospitals based on demographics, patient populations, and specialties. For example, areas where black patients are not frequently cared for may not see a need for this change. However, they should also be aware of this issue so they will be fully prepared when faced with the opportunity to care for this patient population. Another weakness may be contributed to non-compliance with pain management guidelines and interventions that may be due to many factors such as lack of knowledge, unfavorable attitudes, and perceptions of
pain and pain management towards black patients. During the perioperative period, providers need sufficient knowledge on assessment and management of pain in order to implement appropriate interventions and enhance compliance.

**Opportunities**

Opportunities in the SWOT analysis are factors that are favorable to the business establishment with outside affiliations. Black patient’s responses to healthcare providers may also be a contributing factor to disparities due to how they have been previously treated. Mistreatment from negative experiences amongst this population has created a level of mistrust in the healthcare system in regard to their care and wellbeing. Educational programs focusing on cross-cultural content have been created to improve awareness in health professional of how impactful cultural and social factors are in healthcare and strategies to achieve this goal. When the healthcare team’s approach toward this population improves, the patient-provider relationship will begin restoration.

For successful implementation, it is imperative that all members of the healthcare team are involved with the assessment and implementation of pain treatments for black patients. The healthcare team includes all providers in the perioperative services such as preoperative nurses, surgeons, anesthesia providers, and post-anesthesia care unit nurses. All providers should be on the same accord in regard to treatment plans in black patients to show improvement. This educational tool will introduce new opportunities to the healthcare team. These new opportunities include improvement in patient-provider relationships, patient compliance secondary to trusting healthcare providers, and overall better healthcare outcomes.
Threats

The threats in the SWOT analysis refer to the negative factors that may postpone or prevent the process from achievable goals.\textsuperscript{7} Although the educational presentation may be helpful for most of the healthcare team, a few threats may hinder the progress of the project. Stereotypes, biases, and perceptions are characteristics that have been built in individuals over time. Society and currently social media may influence these characteristics tremendously. A threat that may potentially interfere with the project is non-receptive providers or those who are in denial that the issue exists or that they play a role in the problem.

There are persons of the healthcare team that feel because they are minority, that it is impossible to treat black patients differently from other races. Others may be in denial of their preconceived perceptions that because they associate or work with black people, they would not treat them differently. There are also other members of the healthcare team that may not note this as a problem and refuse to be receptive to the educational module. However, the threat presents, it may create mixed feelings and hinder the progress of the project. For these reasons, it is important for the presenter to be mindful of how the educational information is delivered.

Definition of Terms

Throughout this project the group of individuals are referred to as black people, black patients, the black community, and blacks. Black people are a racialized classification of people based on skin color-based and political category for specific populations with a mid to dark complexion. They are referred to as black people in the project as an umbrella that covers Africans, African Americans and those individuals from Caribbean that are black. The other populations identified in the project are healthcare providers and perioperative providers. Provider perception, pain perception, pain in black patients, pain management in blacks,
Setting and Participants

The setting for this project took place in Hollywood, Florida. In 2019, the estimated population in Hollywood was 152,511. Memorial Health System was established in 1953 and has been providing high quality healthcare services to South Florida residents. Memorial Regional is the primary and largest facility of the system with a 797-bed capacity that offers extensive and diverse health services. The Level I Trauma Center is equipped to handle most critical situations with a staff of board-certified and well-trained trauma surgeons. There are 19 state of the art operating suites in the main surgical department. Anesthesia services are provided by Envision Physicians Services since its inception in 1953. The participants who were eligible to participate in the project included the perioperative surgical team particularly Anesthesia providers.

Recruitment

The project approach first entailed advertisement of the educational forum in the surgical department. Individuals of the surgical team had an opportunity to sign up to participate. To avoid schedule conflicts, participants were able to attend the educational forum at their leisure to be completed within a specific time frame. Participants were sent an email that consist of instructions and access to pre and post questionnaires and a PowerPoint presentation voiceover. For privacy, safety, and non-bias judgment, the pre and post questionnaires were provided by a free anonymous platform.

Protection of Human Subjects

Due to the nature of the project, the approach was designed for participants to freely answer questions anonymously. The participants were not placed in any personal or professional harm as the anonymous platform provides privacy even from the data collector. With the use of
technology risks are always possible; however, no exposure of participants or their responses to questionnaires were intentionally revealed. Both benefits of the project and disclaimer risks were provided to all participants prior to participating.

**Data Collection**

The anonymous platform that was used to generate results of the pre and post questionnaire was Qualtrics. The pre-educational questions and scenarios were to evaluate and provide baseline knowledge of racial biases and inequality in healthcare to the black community. The post education questionnaire had the same questions as the pre assessment to measure the adequacy and receptiveness of the educational PowerPoint. All data results provided, and participants remained anonymous. The results and number of participants were identified to assess the effectiveness of the educational PowerPoint and identify areas of improvement. The data results were kept in a secured file on a password-protected laptop that only is utilized by the investigator of the project to ensure confidentiality to all participants.

**Implementation Discussion**

**Limitations**

Limitations are inevitable factors of a project that involves the participation of others. The limitations of this project include and are not limited to, the sample size of participants, participants who consented but failed to complete survey, and the lack of racial variety of participants. These limitations did not allow a large outcome of results. However, with the small size of participants, the results were still greatly impacted by the educational module provided.
Future Implications for Advanced Practice Nursing

A total of 10 individuals consented to participate in which 8 completed the survey. The survey consists of only CRNAs, 7 female participants and 1 male. The mean age of participants was 34. The participant’s ethnicity involved 3 Hispanics, 1 White, 4 African American/Blacks. Three of the participants possess Masters while the remaining 5 hold Doctorate degrees. Five of the participants have been in practice 1-2 years, 2 between 2-5 years, and 1 between 5-10 years. When asked the pre-survey questions, the results varied among the categories. The post-survey questions following the educational module revealed more consistency. See APPENDIX E for Summary of Data.

In conclusion, all participants were extremely likely to self-evaluate subconscious prejudices. Four participants feel race does not factor into patient care often, 1 not as often, 1 often, and 2 very often. Six of the participants are extremely likely there will be a change in their practice while equally one believed somewhat likely and the other is indifferent with neither likely or unlikely. Based on the results, the educational module influenced the participants in being more self-conscious when providing care to black patients. People of the black community have been unequally treated in healthcare from the beginning of time. In order to implement change, healthcare providers need to be aware and educated on this topic. Future implications for Advanced Practice Nursing include implementing educational modules in curriculums and or job training so black patients have the opportunity to receive equal care as others.
References


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APPENDIX A:

MEMORANDUM

To: Dr. Fernando Alfonso
CC: Kamaria Scott
From: Maria Melendez-Vargas, MIBA, IRB Coordinator

Date: April 11, 2022
Protocol Title: “Increasing Healthcare Provider's Awareness and Reducing Negative Perceptions of Pain during the Perioperative Period in the Black Community: An Educational Module”

The Florida International University Office of Research Integrity has reviewed your research study for the use of human subjects and deemed it Exempt via the Exempt Review process.

IRB Protocol Exemption #: IRB-22-0151 IRB Exemption Date: 04/11/22
TOPAZ Reference #: 111568

As a requirement of IRB Exemption you are required to:

1) Submit an IRB Exempt Amendment Form for all proposed additions or changes in the procedures involving human subjects. All additions and changes must be reviewed and approved prior to implementation.
2) Promptly submit an IRB Exempt Event Report Form for every serious or unusual or unanticipated adverse event, problems with the rights or welfare of the human subjects, and/or deviations from the approved protocol.
3) Submit an IRB Exempt Project Completion Report Form when the study is finished or discontinued.

Special Conditions: N/A

For further information, you may visit the IRB website at http://research.fiu.edu/irb.

MMV/em
APPENDIX B:

Nicole Wertheim College of Nursing & Health Sciences

Increasing Healthcare Provider’s Awareness and Reducing Negative Perceptions of Pain during the Perioperative Period in the Black Community.

Dear Memorial Health System Anesthesia Provider:

My name is Kamaria Scott and I am a student from the Anesthesiology Nursing Program Department of Nurse Anesthetist Practice at Florida International University. I am writing to invite you to participate in my educational project. The goal of this project is to improve health care provider knowledge on Healthcare Provider’s Awareness and Reducing Negative Perceptions of Pain during the Perioperative Period in the Black Community. You are eligible to take part in this project because you are a member of the Anesthesia Department for Envision at Memorial Health.

If you decide to participate in this project, you will be asked to complete and sign a consent form for participation. Next, you will complete a pre-test questionnaire, which is expected to take approximately 5 minutes. You will then be asked to view an approximately 15 minute long educational presentation online. After watching the video, you will be asked to complete the post-test questionnaire, which is expected to take approximately 5 minutes. No compensation will be provided.

Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please email or contact me at kscot053@fiu.edu or 305-542-6257.

Thank you very much.

Sincerely,

Kamaria Scott, SRNA, BSN, MSN-Ed, CCRN
APPENDIX C:

CONSENT TO PARTICIPATE IN A QUALITY IMPROVEMENT PROJECT

“Increasing Healthcare Provider’s Awareness and Reducing Negative Perceptions of Pain during the Perioperative Period in the Black Community: An Educational Module”

SUMMARY INFORMATION
Things you should know about this study:

- **Purpose**: Educational module to Increasing Healthcare Provider’s Awareness and Reducing Negative Perceptions of Pain during the Perioperative Period in the Black Community.
- **Procedures**: If you choose to participate, you will be asked to complete a pre test watch a voice PowerPoint and then a post test
- **Duration**: This will take about a total of 20 minutes total.
- **Risks**: The main risk or discomfort from this research is minimal. There will be minimal risks involved with this project, as would be expected in any type of educational intervention, which may have included mild emotional stress or mild physical discomfort from sitting on a chair for an extended period of time, for instance.
- **Benefits**: The main benefit to you from this research is Increasing Healthcare Provider’s Awareness and Reducing Negative Perceptions of Pain during the Perioperative Period in the Black Community.
- **Alternatives**: There are no known alternatives available to you other than not taking part in this study.
- **Participation**: Taking part in this research project is voluntary.

Please carefully read the entire document before agreeing to participate.

PURPOSE OF THE PROJECT

- You are being asked to be in an educational project. The goal of this project is to Increasing Healthcare Provider’s Awareness and Reducing Negative Perceptions of Pain during the Perioperative Period in the Black Community.
**DURATION OF THE PROJECT**
Your participation will require about 20 minutes of your time. If you decide to participate you will be 1 of 10 participants.

**PROCEDURES**
If you agree to be in the project, we will ask you to do the following things:
1. Complete an online 12 question pre-test survey via Qualtrics, an Online survey product for which the URL link is provided.
2. Review the educational PowerPoint Module lasting 10 minutes via Qualtrics, an Online survey product for which the URL link is provided.
3. Complete the online 12 question post-test survey via Qualtrics, an Online survey product for which the URL link is provided.

**RISKS AND/OR DISCOMFORTS**
The main risk or discomfort from this research is minimal. There will be minimal risks involved with this project, as would be expected in any type of educational intervention, which may have included mild emotional stress or mild physical discomfort from sitting on a chair for an extended period of time, for instance.

**BENEFITS**
The following benefits may be associated with your participation in this project: An increased awareness and reduced negative perception of pain during the perioperative period in the black community.

The overall objective of the program is to increase the quality of healthcare delivery and improve healthcare outcomes for black patients.

**ALTERNATIVES**
There are no known alternatives available to you other than not taking part in this project. However, if you would like to receive the educational material given to the participants in this project, it will be provided to you at no cost.

**CONFIDENTIALITY**
The records of this project will be kept private and will be protected to the fullest extent provided by law. If, in any sort of report, we might publish, we will not include any information that will make it possible to identify you as a participant. Records will be stored securely, and only the project team will have access to the records.

**PARTICIPATION**: Taking part in this research project is voluntary.

**COMPENSATION & COSTS**
There is no cost or payment to you for receiving the health education and/or for participating in this project.
RIGHT TO DECLINE OR WITHDRAW
Your participation in this project is voluntary. You are free to participate in the project or withdraw your consent at any time during the project. Your withdrawal or lack of participation will not affect any benefits to which you are otherwise entitled. The investigator reserves the right to remove you without your consent at such time that they feel it is in the best interest.

RESEARCHER CONTACT INFORMATION
If you have any questions about the purpose, procedures, or any other issues relating to this research project, you may contact Kamaria Scott at 305-542-6257 at kscot053@fiu.edu and Fernando Alfonso at 305-348-3510/ falfonso@fiu.edu

IRB CONTACT INFORMATION
If you would like to talk with someone about your rights pertaining to being a subject in this project or about ethical issues with this project, you may contact the FIU Office of Research Integrity by phone at 305-348-2494 or by email at ori@fiu.edu.

PARTICIPANT AGREEMENT
I have read the information in this consent form and agree to participate in this study. I have had a chance to ask any questions I have about this study, and they have been answered for me. By clicking on the “consent to participate” button below I am providing my informed consent.
APPENDIX D:

Pretest and Posttest Questionnaire:

Increasing Healthcare Provider’s Awareness and Reducing Negative Perceptions of Pain during the Perioperative Period in the Black Community: An Educational Module

INTRODUCTION

The primary aim of this QI project is to improve the knowledge of CRNAs perception of pain in the black community.

Please answer the questions below to the best of your ability. The questions are either in multiple choice or true/false format and are meant to measure knowledge and perceptions on pain in the black community.

PERSONAL INFORMATION

1. Gender: Male Female Other_______

2. Age 25 and above: ______

3. Ethnicity: Hispanic Caucasian African American Asian Other___________

4. Position/Title: __________________________________________

5. Level of Education: Associates Bachelors Masters Other___________

6. How many years have you been an anesthesia provider?

   Over 10 5-10 years 2-5 years 1-2 years
QUESTIONNAIRE

1. What race experiences the highest level of inequality in healthcare?
   a. Asians
   b. Whites
   c. Blacks
   d. Hispanics

2. Black and whites are biologically different. Therefore, black patients do not experience the same level of pain as their white counterparts.
   a. True
   b. False

3. Unethical experiments that influenced fictitious notions of blacks include:
   a. Howard Study of Untreated Herpes in the Negro Male
   b. 1793 yellow fever epidemic in New York
   c. James Marion Sims known as the "father of modern gynecology"
   d. Covid-19 pandemic

4. Inequality and disparities in healthcare is not an unfamiliar phenomenon. It was developed:
   a. During the Covid 19 pandemic
   b. Inequality and disparities do not exist in healthcare
   c. Centuries ago during slavery
   d. Between 1999-2000

5. What order of interventions can assist in improving healthcare providers perception?
a. Change, implement, advocate, educate, and acknowledge
b. Acknowledge, educate, advocate, implement, and change
c. Acknowledge, implement, educate, advocate, and change
d. Advocate, implement, acknowledge, educate, and change

6. Which of the following is INCORRECT?

a. African-American patients are more likely than white patients to receive a late-stage cancer diagnosis, which undermines the probability of survival.
b. Physician perceptions of minority patients, physicians surveyed rated African-American patients as less intelligent, less educated, more likely to abuse alcohol and drugs.
c. White American patients are more likely to receive lower-quality healthcare and are subject to less desirable procedures.
d. There is an assumption that white patients feel more pain than black patients.

7. The Institute of Medicine defines disparities as:

a. Racial or ethnic differences in the quality of healthcare that are not due to access-related factors or clinical needs, preferences, and appropriateness on intervention.
b. The Institute of Medicine has not defined disparities.
c. Racial or ethnic differences in the quality of healthcare that are due to access-related factors or clinical needs, preferences, and appropriateness on intervention.
d. Equality amongst racial or ethnic groups with no relation to outside factors.

8. An educational module about healthcare providers perception of pain in the black community will impact how you approach future patients.

a. Strongly Agree
b. Somewhat Agree

c. Somewhat Disagree

d. Strongly Disagree

9. Which of the following is not true about pain:

   a. Pain is only objective.

   b. Pain is subjective and is what the patient says it is.

   c. Pain can be determined by facial grimacing or guarding.

   d. There are different types of pain.

10. How likely are you to self evaluate subconscious prejudices?

   a. Most Likely

   b. Somewhat Likely

   c. Less Likely

   d. Least Likely

11. How often does race factor into your patient care?

   a. Very Often

   b. Somewhat Often

   c. Not as Often

   d. Not Often

12. How likely will there be a change in your practice?

   a. Most Likely

   b. Somewhat Likely

   c. Less Likely

   d. Least Likely
APPENDIX E:

PERSONAL INFORMATION

Gender

- Male
- Female

Ethnicity

- Hispanic
- Caucasian
- AA/ Black
- Asian
What race experiences the highest level of inequality in healthcare?

Blacks & whites are biologically different. Therefore, black patients do not experience the same level of...

Unethical experiments that influenced fictitious notions of blacks include:

Inequality & disparities in healthcare is not an unfamiliar phenomenon. It was developed:

Which of the following is INCORRECT?

Which of the following is NOT true about pain:

The IOM defines disparities as:

What order of interventions can assist in improving healthcare providers perception?

Which of the following is NOT true about pain:

The IOM defines disparities as:

What order of interventions can assist in improving healthcare providers perception?

Inequality & disparities in healthcare is not an unfamiliar phenomenon. It was developed:

Unethical experiments that influenced fictitious notions of blacks include:

Blacks & whites are biologically different. Therefore, black patients do not experience the same level of...

What race experiences the highest level of inequality in healthcare?
An educational module about healthcare providers perception of pain in the black community will impact how you approach future patients.

How likely are you to self evaluate subconscious prejudices?
How often does race factor into your patient care?

How likely will there be a change in your practice?
APPENDIX F:

**Scope of the Problem**

The Institute of Medicine defines health disparities as "racial or ethnic differences in the quality of health care that are not due to access, needs, or clinical factors." The perceptions of healthcare providers (vs. critical elements that contribute to the success of healthcare delivery) support these findings.

The perceptions of healthcare providers (vs. critical elements that contribute to the success of healthcare delivery) support these findings. Patients tend to have lower expectations compared to their peers, which has been a direct result of these injustices and lower healthcare access.

**Purpose/Objective**

This project aims to shed light on the following knowledge to provide an understanding of the perceptions of blacks, decrease disparities that lead to under-diagnosis and unequal treatment, and equip quality care and health outcomes in black patients.

**PICO Clinical Question**

1. Improve provider knowledge of pain perception in the black community
2. Educate perioperative staff to provide care to black patients
3. No education
4. Provider education on pain perception in the black community

**PICO Question**

To examine the perceptions of healthcare providers, a survey methodology was used to gather data from healthcare providers. Survey participants included staff nurses and perioperative nurses from a community hospital in order to assess their perceptions of pain and healthcare practices for black patients.
Discussion

Results
Proprietary software allows offline
evaluation and comparison between
simulated and observed data, providing
a comprehensive overview of the
system's performance.

The human
Proprietor can access real-time
data from the system, enabling
immediate decision-making.

Conclusions

The developed
model is a useful tool for
simulation and analysis,
providing insights for
improved performance.

References

Thank you and Acknowledgments

I would like to thank the team for their support and guidance throughout the project. The successful completion of this work is a testament to their dedication.

Special thanks to [Name of Key Contributor] for their invaluable contributions.