

IMPLEMENTING IMPLICIT BIAS EDUCATIONAL MODULES INTO NURSING
STUDENT CURRICULA

UNIVERSITY OF HAWAI'I AT MĀNOA NANCY ATMOSPORA-WALCH SCHOOL OF
NURSING

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By

Kristen M. Chin

Dissertation Committee:

Richard Ramirez, Chairperson (September 2021 to February 2023)

Deborah Mattheus, Chairperson (February to April 2023)

Andrea Hermosura

Kimberly U'ilani Chow-Rule

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Abstract

Problem Statement: Implicit bias towards racial/ethnic minorities and other marginalized groups is pervasive among healthcare professionals. Implicit bias may negatively impact the quality of care nurses provide to patients and perpetuates health disparities. Education on implicit bias within the nursing curricula is limited, which indicates a need for presenting information on this topic.

Purpose: To develop effective and sustainable implicit bias education for both undergraduate and graduate nursing students that focused on increasing student awareness, knowledge, and management of implicit bias.

Methods: Three evidence-based educational modules were delivered to students in September and October 2022. Surveys containing an adapted version of the Attitudes Toward Implicit Bias Instrument (ATIBI) and open-ended questions on management strategies were used to collect data pre-intervention, immediately post-intervention, and three months post-intervention.

Results: Three students attended Module 1, and two of those students completed the entire module series. Five students responded to a pre-intervention survey, two to an immediate post-intervention survey, and four to a three-month post-intervention survey. Average adapted ATIBI results increased from 84.2 at baseline to 91 immediately after the intervention. Participants were better able to list individual management strategies immediately after the intervention.

Longitudinal results were limited due to the inability to verify that students who completed the modules responded to a three-month post-intervention survey.

Discussion: The educational modules demonstrated promising short-term benefits on increasing student awareness, knowledge, and management of implicit bias. Therefore, efforts to integrate implicit bias education into nursing curricula should continue to be pursued.

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List of Abbreviations

AACN	The American Association of Colleges of Nursing
ANA	American Nurses Association
ATIBI	Attitudes Toward Implicit Bias Instrument
BSN	Bachelor of Science in Nursing
CINAHL	Cumulative Index to Nursing and Allied Health Literature
DEI	Diversity, Equity, and Inclusion
DGO	Data Governance Office
DNP	Doctor of Nursing Practice
GEPN	Graduate Entry Program in Nursing
IAT	Implicit Association Test
LGBTQ	Lesbian, Gay, Bisexual, Transgender, Queer
MeSH	Medical Subject Headings
MH	Subject Heading
MM	Major Heading
MS	Master of Science
NAWSON	Nancy Atmospera-Walch School of Nursing
NHPI	Native Hawaiians and Pacific Islanders
PhD	Doctor of Philosophy
UHM	University of Hawai‘i at Mānoa

Implementing Implicit Bias Educational Modules into Nursing Student Curricula

Implicit bias among healthcare professionals perpetuates health disparities and decreases quality of care (FitzGerald & Hurst, 2017). Implicit bias in healthcare is the unconscious or automatic attitudes and prejudices towards already disadvantaged social groups that may negatively impact care delivery (FitzGerald, Martin, Berner, & Hurst, 2019). Implicit bias differs from explicit bias, which is bias against social groups that are consciously assumed by healthcare providers. Implicit bias cannot be readily identified; therefore, healthcare providers may inadvertently differ in their care of minority, underserved, and marginalized populations and promote health inequalities for these groups (Hall et al., 2015). While healthcare providers generally abstain from exhibiting explicit bias, they may not be aware of their implicit biases.

The psychological foundation for implicit bias is based on heuristics, or cognitive shortcuts in the brain, that promote rapid judgements and decision making (Narayan, 2019). Although the human brain is uniquely developed for high level analytic thinking and reasoning, this slower type of thinking requires more energy and cognitive resources (Gopal, Chetty, O'Donnell, Gajria, & Blackadder-Weinstein, 2021). To reduce cognitive load in high-stress, high-input, or new situations, the brain relies on heuristic mental shortcuts and intuitive decisions (Narayan, 2019). Heuristics develop early in childhood and are based on personal experiences (Gopal et al., 2021). Therefore, the social and cultural environment of where one lives, works, and plays strongly influences the development and persistence of automatic associations that form implicit bias. Heuristics are increased in healthcare providers due to working in fast-paced and demanding clinical settings (Narayan, 2019).

Despite a dedication to delivering equitable care, healthcare providers in the United States, including nurses and nursing students, demonstrate similar levels of implicit bias as the

general population (FitzGerald & Hurst, 2017; Hall et al., 2015). Existing literature on implicit bias in the United States primarily focuses on ethnic and racial impacts, specifically in African American patients. Studies also primarily examine implicit bias against singular social identities (e.g., ethnicity, race, sexuality, body weight, disability) and rarely scrutinize the intersectionality of implicit bias (Ogungbe, Mitra, & Roberts, 2019). Literature investigating implicit bias among healthcare providers in Hawai‘i is limited. However, health disparities among Hawai‘i’s most vulnerable (including Native Hawaiian, Pacific Islander, and the homeless populations) are well documented (Department of Native Hawaiian Health, 2020; Pruitt & Barile, 2020). The multiplicative effects of implicit bias likely exert a unique impact on health outcomes in Hawai‘i.

Governmental bodies, healthcare organizations, and schools are recognizing the significance of implicit bias and the importance of social equity. The American Association of Colleges of Nursing (AACN) includes diversity, equity, and inclusion as a key competency in professional nursing education and advocates for student investigation and understanding of implicit bias to address persistent health disparities (American Association of Colleges of Nursing, 2021). In addition, the American Nurses Association’s (ANA) Code of Ethics dictates that “The nurse practices with compassion and respect for the inherent dignity, worth, and unique attributes of every person” (American Nurses Association, 2015).

The prevalence of implicit bias among healthcare providers and its negative impact on quality of care and health outcomes is documented, therefore, many healthcare organizations and nursing schools across the United States are pursuing interventions to address implicit bias (FitzGerald et al., 2019). By educating and training healthcare professionals and nursing students on implicit bias and its contribution to health disparities, they will be better equipped to provide culturally competent care and to attain health equity.

Background

Implicit bias is pervasive and is a product of childhood experiences and sociocultural reinforcements (Narayan, 2019). Not only does implicit bias negatively impact how healthcare providers interact with racial/ethnic minorities and marginalized groups (Hall et al., 2015; Maina, Belton, Ginzberg, Singh, & Johnson, 2018), it can also inhibit healthcare providers from recognizing historical contexts and structural inequalities that promote health disparities (Lawrence III, 2015).

Health Disparities in Hawai‘i

Current data on health disparities within the state of Hawai‘i substantiate the necessity for nursing students to recognize and address their implicit biases (Department of Native Hawaiian Health, 2020; Hawaii State Department of Health, 2017, 2018; Pruitt & Barile, 2020). Although a variety of social groups experience health disparities, this quality improvement project focused on health disparities that are particularly relevant to the state of Hawai‘i. Out of all the racial and ethnic minorities in Hawai‘i, Native Hawaiians and Pacific Islanders (NHPI) (to include Samoans, Tongans, Micronesians, and Melanesians) experience the greatest chronic disease and behavioral health disparities (Department of Native Hawaiian Health, 2020). Other notable populations in the state that experience behavioral health and care access inequities include individuals experiencing homelessness and members of the lesbian, gay, bisexual, transgender, and queer (LGBTQ) community (Hawaii State Department of Health, 2017; Pruitt & Barile, 2020).

Native Hawaiians and Pacific Islanders. The imposition of Western culture on NHPI has created a long history of health disparities for these groups (Department of Native Hawaiian Health, 2020). Following the arrival of Westerners two centuries ago, NHPI experienced

disproportionate morbidity and mortality from infectious diseases due to lack of natural immunity. In current times, NHPI suffer from health disparities related to chronic disease such as obesity, diabetes, cardiovascular disease, cancer, and behavioral health issues. These disparities are consequences of unjust historical trauma, devastation to traditional lifestyle practices, and ongoing discrimination within healthcare, political, and social arenas. The lack of culturally appropriate treatments and culturally competent providers exacerbates these issues (Department of Native Hawaiian Health, 2020).

NHPI have the highest rates of major modifiable risk factors for chronic disease to include unhealthy diet, tobacco use, alcohol use, and physical inactivity (Department of Native Hawaiian Health, 2020). NHPI experience the highest rates of obesity in the state with 43% of Native Hawaiians and 54% of Pacific Islanders classified as obese. NHPI also have the greatest incidence of behavioral health problems to include anxiety, depression, suicide, substance abuse, adverse childhood experiences, and trauma. As a result, NHPI have the shortest life expectancy of all racial and ethnic groups in Hawai'i. In 2015, NHPI were 2.64 times more likely to die from coronary heart disease, 3.65 for stroke, 3.44 for heart failure, 1.96 for cancer, and 3.32 for diabetes. During the COVID-19 pandemic, this population experienced a significantly greater chance of SARS-CoV-2 infection, severe symptoms, and subsequent hospitalizations due to their higher incidence of comorbidities as well as increased likelihood of exacerbation of behavioral health issues (Department of Native Hawaiian Health, 2020; Hawai'i State Department of Health, 2021).

Individuals Experiencing Homelessness. Hawai'i has one of the highest rates of homelessness in the country related to increased housing costs and cost of living (Pruitt, McKinsey, & Barile, 2020). In Hawai'i, health disparities towards individuals experiencing

homelessness are driven by negative narratives that paint these individuals as threats to society, the economy, and public safety. In addition, bias towards people experiencing homelessness is fueled by beliefs that homelessness is a choice or an individual issue. Many governmental policies and programs to address homelessness in Hawai‘i have been inadequate and controversial (Pruitt et al., 2020).

Based on the 2022 O‘ahu Point-In-Time Count, 3,951 individuals (3,406 adults and 545 children) were experiencing homelessness the night of March 9, 2022 (O‘ahu Continuum of Care, 2022). Of these individuals, 23% were chronically homeless and had been identified at previous annual point-in-time counts. In addition, 22% reported mental health issues, 18% reported substance abuse, and 36% reported physical and/or developmental disabilities. NHPI were disproportionately represented in the 2022 count and were 2.65 times more likely to represent in the point-in-time count compared to the general population of O‘ahu (O‘ahu Continuum of Care, 2022).

LGBTQ Community. For centuries, Western cultures and religions have indoctrinated concepts of male-female and heterosexual binaries and persecuted same-sex love and gender non-conforming individuals. However, many other ancient and indigenous cultures, including NHPI, have traditionally accepted and respected additional genders with both male and female characteristics (Hawaii State Department of Health, 2018). Despite this recognition, only in the past few decades has Hawai‘i ratified legislation increasing civil liberties for members of the LGBTQ community. Unfortunately, these individuals continue to experience uncomfortable and discriminatory healthcare situations or providers (Hawaii State Department of Health, 2017). The Hawaii State Department of Health (2017, 2018) analyzed data on LGBTQ adults from 2011 to 2015 and LGBTQ youth in 2017.

Individuals identifying as LGBTQ are less likely to receive timely healthcare, have lower rates of preventative screening, decreased participation in healthy lifestyle habits, and are more likely to be overweight or obese (Hawaii State Department of Health, 2017, 2018). Thirty-one percent of LGBTQ adults have two or more chronic conditions and are at higher risk for cancer and heart disease than heterosexual adults (Hawaii State Department of Health, 2017). Gay and bisexual men are disproportionately affected by human immunodeficiency virus and acquired immunodeficiency syndrome.

LGBTQ youth and adults demonstrate higher rates of substance use and behavioral health issues (Hawaii State Department of Health, 2017, 2018). LGBTQ youth are significantly more likely to abuse substances such as alcohol, tobacco, marijuana, and IV drugs than their cisgender and heterosexual peers. Almost 25% of LGBTQ adults binge drink, and 24% smoke cigarettes. In 2017, half of transgender youth attempted suicide with LGBTQ youth 4 to 7 times more likely to attempt suicide than cisgender and heterosexual youth. LGBTQ adults are twice as likely as heterosexual adults to have a depressive disorder (Hawaii State Department of Health, 2017, 2018).

Problem Statement

Per the project lead's experiences as a student at the Nancy Atmospera-Walch School of Nursing (NAWSON) at University of Hawai'i at Mānoa (UHM), nursing curricula provide limited education on implicit bias. Current curricula may not consistently distinguish between explicit bias and implicit bias, and bias is commonly only reviewed as a phenomenon that nursing students should reflect upon, identify, and address to achieve culture competency. While some courses introduce the Implicit Association Test (IAT) (Project Implicit, n.d.) as a tool to promote cultural competency, they often do not provide additional contextual information or

education. For instance, the effects of implicit bias on care delivery and health outcomes for racial/ethnic minorities and marginalized populations may not be thoroughly reviewed. In addition, although students are advised to address their biases, there is limited review of strategies to manage them.

This educational gap was also identified by the NAWSON Diversity, Equity, and Inclusion (DEI) Taskforce which consists of UHM faculty and students. The DEI Taskforce charges are to increase, retain, and promote NAWSON's commitment to DEI and its incorporation into the curricula of the undergraduate and graduate nursing programs offered at NAWSON. The DEI Taskforce recognizes that innovation of the nursing curricula is necessary to meet the AACN's (2021) current standards for professional nursing excellence. This quality improvement project sought to implement sustainable implicit bias education to support NAWSON's commitment to DEI and to develop a competent nursing workforce invested in providing high quality, culturally appropriate care aimed at eliminating health inequities in the state of Hawai'i.

PICOT

Will implementation of implicit bias education into undergraduate and graduate nursing curricula (I) improve nursing student (P) awareness, knowledge, and management of implicit bias in healthcare (O), compared to current nursing curricula (C), over a 3-month period (T)?

Purpose and Objectives

To address the health disparities that racial/ethnic minorities and marginalized groups experience in Hawai'i, nursing students should receive education on the role of implicit bias in healthcare (Hall et al., 2015; Maina et al., 2018). Because there is limited implicit bias education

imbedded into the nursing curricula at NAWSON, the purpose of this project was to integrate educational modules on implicit bias into the curricula.

Objectives of this project included: (1) Developing comprehensive educational modules on implicit bias by May 2022, (2) obtaining peer student feedback on the educational modules between May 2022 and August 2022 to determine areas of success and improvement, (3) delivering the educational module series to undergraduate and graduate nursing students between August 2022 and December 2022, (4) collecting survey data and analyzing longitudinal impacts of the implicit bias education from August 2022 to March 2023, and (5) developing a sustainability plan for continued implicit bias education within NAWSON nursing curricula by March 2023.

Framework

The conceptual framework that was used for this quality improvement project was the revised Iowa Model (Appendix A). Permission to use the model was obtained from the University of Iowa Hospitals and Clinics (Appendix B). The Iowa Model was developed as a framework for implementing evidence-based practice in health care. The major steps of the Iowa Model are as follows: (1) identify issues in practice or opportunities to improve practice, (2) state the question or purpose and determine if it is a priority for the organization, (3) form a team, (4) gather and synthesize the evidence and determine if available evidence is sufficient, (5) design and pilot the practice change and determine if it is appropriate to implement into practice, (6) integrate and sustain the practice change, and (7) disseminate results/findings (Iowa Model Collaborative et al., 2017).

Although most of the evidence supporting and describing implicit bias education in healthcare is from non-experimental studies and expert opinion reports, the existing evidence

was deemed sufficient to execute this project. The implicit bias modules were delivered to students, and data were obtained to determine the impact of the intervention. Video recordings of the modules, slide decks of the modules, comprehensive instructions, and resources were developed to guide NAWSON faculty on delivering the implicit bias education within the nursing curricula.

Synthesis of the Evidence

Evidence Search

To gather evidence regarding implicit bias education in nursing, a literature search was conducted through PubMed and Cumulative Index to Nursing and Allied Health Literature (CINAHL) databases. Search terms used included “implicit bias,” “unconscious bias,” “non-conscious bias,” “racial bias,” nursing, health, education, and curriculum. Truncations were used to expand the sensitivity of searches. Searches were also conducted using the Medical Subject Headings (MeSH) terms “prejudice” and “education, nursing” in PubMed as well as using “prejudice” as a subject heading (MH) and major heading (MM) in CINAHL. PubMed and CINAHL did not have MeSH terms, MH, or MM that were more specific to the construct of implicit bias. Boolean operators AND/OR were also adopted to focus the literature search. Inclusion criteria were articles written in the English language, published between the years 2011 and 2021, and involving human subjects. A total of 92 articles were found using these search strategies.

After reviewing the abstracts, methods sections, results sections, discussion sections, and/or conclusions of the identified articles, the following were excluded: Studies non-specific to healthcare professionals, articles that were specific to non-nursing disciplines (e.g., physicians, medical students, dentists), and studies that did not investigate implicit bias as an individual

construct (i.e., studies that reviewed bias overall without distinguishing between explicit and implicit bias). After implementation of the exclusion criteria, 41 articles were deemed applicable to the project and were critically appraised (Appendix C).

Mosby's hierarchy of evidence (Ackley, Swan, Ladwig, & Tucker, 2008) was used to grade the articles, differentiate the levels of evidence, and determine the number of articles critiqued for each level (Appendix D). Most of the articles were based on expert opinion (Level VII), literature reviews (Other), and single descriptive or qualitative studies (Level VI). There were 7 systematic reviews that included primarily descriptive and qualitative studies (Level V) and no meta-analyses or systematic reviews specific to high-quality randomized controlled trials (RCTs). The highest level of evidence gathered were studies using quasi-experimental designs (Level III).

Literature Synthesis

The themes identified in the literature include the prevalence of implicit bias in nursing, the need for education on implicit bias within nursing curricula, and the importance of strategies to manage implicit bias.

Prevalence of Implicit Bias in Nursing. Healthcare professionals, including nurses and nursing students, demonstrate similar levels of implicit bias as the general population (FitzGerald & Hurst, 2017; Hall et al., 2015). Healthcare providers harbor pro-White bias, pro-heterosexual bias, and pro-wealth bias with negative implicit biases against people of color, lower socioeconomic status, overweight/obesity, people with disabilities, members of the LGBTQ community, and mental illness (FitzGerald & Hurst, 2017; Haider et al., 2015; Hall et al., 2015; Maina et al., 2018; Ogungbe et al., 2019; J. A. Sabin, Riskind, & Nosek, 2015; VanPuymbrouck, Friedman, & Feldner, 2020). When comparing nurses and physicians, nurses have shown to

greater levels of implicit bias against lesbian/gay individuals and patients with cervical cancer (Liang, Wolsiefer, Zestcott, Chase, & Stone, 2019; J. A. Sabin et al., 2015).

Nursing bias is particularly concerning because it has been associated with disparities in care delivery to include perceived provider mistreatment, poorer patient-provider communication, decreased interactions, and less adequate pain management. (Cooper et al., 2012; Groves, Bunch, & Sabin, 2021; Maina et al., 2018; Saluja & Bryant, 2021). Since implicit biases are present among nursing students at similar levels found in professional and community settings, education regarding implicit bias and strategies to manage implicit bias should be implemented in the academic setting to mitigate the negative impacts of implicit bias as nursing students move forward through their professional careers (Hall et al., 2015; Maina et al., 2018; Waller, Lampman, & Lupfer-Johnson, 2012).

Interventions Against Implicit Bias for Nursing Students. Interventions against implicit bias should include both educational components and strategies to manage implicit bias. Interventions that only seek to increase awareness and elucidate the impact of implicit bias on patient outcomes may increase anxiety and promote avoidance of interactions with marginalized groups (Hagiwara, Kron, Scerbo, & Watson, 2020). Therefore, incorporating strategies on how to reduce implicit bias is crucial. Since implicit bias can be a sensitive and triggering topic, establishing a safe and respectful learning environment is also essential (Sukhera & Watling, 2018; Sukhera, Watling, & Gonzalez, 2020; Vora et al., 2021). Nursing students should be internally motivated to maximize the benefit of implicit bias training (Hagiwara et al., 2020).

Education on Implicit Bias. Implicit bias education includes increasing student awareness and recognition of implicit bias, knowledge of the neuroscience behind implicit bias, and appreciation for how implicit bias affects health outcomes and leads to disparities (Bucknor-

Ferron & Zagaja, 2016; Hagiwara et al., 2020; Sukhera & Watling, 2018). Educational programs may result in decreased anxiety regarding implicit bias and increased student knowledge, motivation, and comfortability with addressing implicit bias (Morris et al., 2019; Ricks, Abbyad, & Polinard, 2021; J. Sabin et al., 2020; Schultz & Baker, 2017).

To promote awareness of implicit bias, the IAT (Project Implicit, n.d.) is often used because it is the most widely validated tool for measuring implicit bias (Gatewood, Broholm, Herman, & Yingling, 2019; J. Sabin et al., 2020; Schultz & Baker, 2017; Sukhera, Milne, Teunissen, Lingard, & Watling, 2018; Sukhera, Wodzinski, Milne, et al., 2019). Other methods for triggering awareness include case vignettes, simulated patient experiences, dramatization exercises, and self-reflection tools (Johnson & Richard-Eaglin, 2020; Masters et al., 2019; Perdomo et al., 2019; Sadarangani, 2020; Sukhera, Miller, et al., 2020; Teall et al., 2019; Vandermause et al., 2021).

Awareness exercises should be accompanied by debriefing and discussion sessions because they are essential for minimizing defensiveness and promoting internal processing of personal implicit bias (Perdomo et al., 2019; Sukhera et al., 2018; Sukhera, Watling, et al., 2020; Sukhera, Wodzinski, Milne, et al., 2019). Faculty selection and training is also key to ensure successful facilitation of implicit bias discussions (Crandlemire, 2020; Sukhera & Watling, 2018; Teall et al., 2019).

Strategies to Manage Implicit Bias. The most effective interventions at reducing implicit bias in the short-term include intentional strategies to overcome bias, intergroup contact, individuation, identifying self with the outgroup, stereotype replacement, counter-stereotyping, evaluative conditioning, and mindfulness training (Burgess, Beach, & Saha, 2017; FitzGerald et al., 2019; Narayan, 2019; Zestcott, Blair, & Stone, 2016). Many strategies focus on addressing

implicit biases at the individual level. However, the cultural environment of an institution may influence the effectiveness of implicit bias interventions, and organizational commitment to cultural humility is strongly recommended (Marcelin, Siraj, Victor, Kotadia, & Maldonado, 2019; Persaud, 2019; Sukhera & Watling, 2018). Another institutional strategy for minimizing the impact of implicit bias on patient care is the implementation of standardized checklists or processes to inform decision-making (Colón-Emeric et al., 2017; Gopal et al., 2021).

Quality, Quantity, and Consistency of Evidence

Because of growing interest in social equity and addressing health disparities, there are many studies investigating the prevalence of implicit bias in healthcare as well as methods for mitigating the negative effects of implicit bias on health outcomes (FitzGerald & Hurst, 2017; FitzGerald et al., 2019; Hall et al., 2015; Maina et al., 2018). However, given the difficulty of studying implicit bias and isolating its impact on real-world patient outcomes, the quality of evidence on implicit bias is often low with most studies categorized as descriptive, qualitative, literature reviews, or expert opinion. For these reasons, the evidence on effective implicit bias interventions is inconsistent. More research is needed to determine why implicit bias interventions are successful in some settings and not in others (FitzGerald et al., 2019).

Weaknesses, Gaps, and Limitations of the Literature

Existing literature on implicit bias often focuses on the field of medicine or healthcare professionals overall. Fewer studies solely investigate the prevalence of implicit bias in nursing. Most research primarily investigates implicit bias related to individual social identities and fails to address the intersectionality and multiplicative effects of implicit biases (Ogungbe et al., 2019). In addition, the amount of research that focuses on racial bias against African Americans greatly exceeds research on implicit bias against other social identities (Blair, Steiner, &

Havranek, 2011). At this time, there are no studies that exclusively examine implicit bias in healthcare in the state of Hawai‘i. Generalizability of studies is often limited due to small sample sizes or singular study locations. Directly measuring the relationship between implicit bias and real-world outcomes is challenging, and existing literature in this area is scarce (Blair et al., 2011; Hagiwara et al., 2020).

For implicit bias education, the literature typically only describes conceptual frameworks or general guidelines for developing curricula, which increases the risk for variable interpretation and, therefore, variable impacts and success rates of implicit bias education (Ricks et al., 2021). Implicit bias education often only results in short-term reductions in implicit bias, and most interventions fail to demonstrate long-term impacts. This is because interventions are generally delivered as singular, stand-alone trainings that are not sufficient to combat implicit biases that have slowly been developing across lifetimes (FitzGerald et al., 2019; Sukhera & Watling, 2018). More research is needed to develop interventions that will lead to long-term changes in implicit bias.

Methods

Project Design

This project was an implementation of an evidenced-based healthcare improvement process determined through quality improvement initiatives or program/system evaluation. To improve and further develop process improvement and program effectiveness, project activities were related to quality improvement and did not produce generalizable knowledge. This project was submitted to the University of Hawai‘i Human Studies Program for review on July 28, 2022 and was determined to be not human subjects research on August 12, 2022 (Appendix E). Since

the project did not qualify as exempt or non-exempt research, review or approval by the University of Hawai'i Institutional Review Board was not required.

Setting

The Nancy Atmospera-Walch School of Nursing (NAWSON) is the nursing and dental hygiene school at University of Hawai'i at Mānoa (UHM), a Research 1 University. NAWSON offers a variety of undergraduate and graduate nursing programs including the traditional four-year Bachelor of Science in Nursing (BSN), an Associate Degree in Nursing to BSN, an accelerated one-year Graduate Entry Program in Nursing (GEPN), Master of Science (MS), Doctor of Nursing Practice (DNP), and Doctor of Philosophy (PhD) in Nursing programs. The BSN, MS, and DNP programs are accredited by the Commission on Collegiate Nursing Education (NAWSON, 2019).

Intervention

Educational Module Development. Implicit bias educational modules were developed based on the following evidence-based six-point framework: (1) create a safe and non-threatening learning environment, (2) review the neuroscience and psychology behind implicit bias, (3) connect implicit bias to clinician behaviors and patient outcomes, (4) promote self-awareness of implicit bias, (5) encourage efforts to address implicit bias, and (6) enhance empathy and patient-provider collaboration (Sukhera & Watling, 2018). This framework was selected because it was created for health professions students and was both detailed and comprehensive. In comparison to other articles within existing literature that only offered general recommendations (Gatewood et al., 2019; Hagiwara et al., 2020; Vora et al., 2021), the six-point framework by Sukhera and Watling (2018) provided clear guidance for developing implicit bias education and was deemed the most applicable for this quality improvement project.

Three one-hour educational modules were created between January 2022 and May 2022 based on the six-point framework by Sukhera and Watling (2018). The modules were primarily didactic lectures but also incorporated discussions and practical exercises. Module 1 introduced definitions of terms, the neuroscience and psychology behind implicit bias, the IAT (Project Implicit, n.d.), and the effects of implicit bias on care delivery and health systems. Module 2 explored the historical, political, and social factors contributing to implicit bias in the state of Hawai‘i and reviewed data substantiating ongoing local health disparities. Lastly, Module 3 examined both individual and institutional strategies to address implicit bias. The overall themes for the module objectives were awareness, knowledge, and management (Appendix F). All three modules were extensively reviewed by the DNP project committee.

Peer Student Feedback. One of the objectives of the project was to obtain peer student feedback during the Summer 2022 semester to determine areas of improvement for the educational modules. Attempts were made to coordinate the delivery of the educational modules with the GEPN students during one of their summer courses. Unfortunately, peer student feedback could not be obtained due to limitations on student recruitment and the use of designated class time.

Implementation of the Educational Modules. Prior to the implementation of the educational modules, prospective participants were requested to complete an IAT (Project Implicit, n.d.) of their choice and a pre-intervention survey. The modules were offered in the Fall 2022 semester during open sessions on Mondays, Wednesdays, and Fridays from 5:00 p.m. to 6:00 p.m. Module 1 was scheduled during the week of September 26, 2022; Module 2 was scheduled during the week of October 3, 2022; and Module 3 was scheduled during the week of October 10, 2022. The project lead delivered the modules via the video conferencing program

Zoom according to the previously devised schedule. The module slides were shared with the participants at the beginning of each session, and the sessions were not recorded. Following the completion of the modules, participants were requested to complete post-intervention surveys.

Recruitment

In Fall 2021, a total of 395 students enrolled at NAWSON comprising 235 BSN-seeking students, 48 GEPN students, and 112 advanced nursing degree students (NAWSON, 2021). This quality improvement project intended to provide implicit bias education to both undergraduate and graduate NAWSON nursing students. All enrolled undergraduate and graduate NAWSON nursing students were eligible to participate in the project. However, participation was on a volunteer basis. To encourage students to volunteer, a certificate of completion was offered following attendance of all three modules (Appendix G). Distribution of the certificate was not linked to completion of the post-intervention surveys. Participation did not have an impact on student performance in any course or student graduation eligibility.

The DNP Program Director introduced the quality improvement project to NAWSON's undergraduate, GEPN, and master's degree program directors. Efforts were made to coordinate and offer the modules during optimal student availability. The project lead created videos and met with prospective participants in-person to introduce the project. Recruitment emails (Appendix H) and flyers (Appendix I) were sent to the NAWSON program directors on September 12, 2022 to forward to students via the departmental listservs. Emails to the departmental listservs were used to protect students' personal identifiable information. All NAWSON program directors confirmed that they forwarded the recruitment email to their respective students. The program directors were also asked to send reminder emails the week of September 19, 2022.

Attendance. Three students attended Module 1. Of those three students, two students also attended Modules 2 and 3, which was a 66.67% completion rate for those who participated in the modules. The two students who completed the entire module series were awarded certificates of completion. Of the 395 students enrolled in a nursing program at NAWSON in Fall 2021 and were eligible to participate in the project, the completion rate was 0.51%. Five students completed a pre-intervention survey, two students completed an immediate post-intervention survey, and four students completed a three-month post-intervention survey. For all surveys completed, all students consented to participate in the quality improvement project.

Data Collection

This quality improvement project measured student awareness of implicit bias, knowledge of implicit bias and its impact in healthcare, and utilization of strategies to manage implicit bias. To measure these concepts, an adapted version of the Attitudes Toward Implicit Bias Instrument (ATIBI) was used (Gonzalez, Grochowalski, Garba, Bonner, & Marantz, 2021). The ATIBI is the only known valid and reliable tool to measure medical students' attitudes towards implicit bias education and its relevance to healthcare (Appendix J). A 27-item tool was initially created and administered to medical students from 2015 to 2018, but nine items were removed due to poor item statistics or low construct loadings. The final 18-item ATIBI has a high reliability ($\alpha = 0.90$) as well as evidence for three types of construct validity: content, internal structure, and relationship to other variables. Each item is answered via a six-point Likert-type scale ranging from strongly disagree to strongly agree. The ATIBI is scored as a sum of response values for all items. Analyzing only a few items or each item individually was found to have low reliability (Gonzalez et al., 2021).

Permission was obtained from the developers of the ATIBI to adapt and use the tool for this quality improvement project with full attribution (Appendix K). References to “medical,” “medicine,” and “physician” in the original ATIBI were changed to “nursing” and “nurses” in the adapted version. In addition, the original ATIBI focused on implicit bias towards racial and ethnic minorities. This was expanded to “racial/ethnic minorities and marginalized groups,” and other verbiage was minimally modified to accommodate for assessment of implicit bias towards a variety of groups. The definition of “racial/ethnic minorities and marginalized groups” was clearly defined to ensure consistency between student responses. The adapted ATIBI included the 18-items and was answered via six-point Likert-type scales ranging from strongly disagree to strongly agree (Appendix L).

The 18-item ATIBI had multiple questions that measured awareness and knowledge (Gonzalez et al., 2021). However, only one item (item 15) measured utilization of strategies to manage implicit bias. To gather additional data on nursing students’ use of management strategies, separate open-ended questions were added since there were no other reliable and valid tools that had been developed to measure the acquisition of strategies to address implicit bias (Appendix L). The open-ended questions asked participants to describe the role of self-reflection in addressing implicit bias, to list at least three strategies effective at managing implicit bias, and to name at least one strategy they would use in the next three months. The adapted 18-item ATIBI and open-ended questions were combined into one survey that collected data prior to delivery of the educational modules, directly following completion of the modules, and three months after completion.

In addition to the adapted ATIBI and open-ended questions, demographic information (i.e., age, gender, race/ethnicity) was also collected for data analysis (Appendix M). Feedback on

the delivery and content of the educational modules as well as whether the module learning objectives were met were solicited from students after conclusion of the module series to determine areas for revision and improvement.

Role of the Implicit Association Test. The IAT (Project Implicit, n.d.) is the most widely used tool for measuring implicit bias (Sukhera, Wodzinski, Rehman, & Gonzalez, 2019). Although multiple studies have demonstrated that the IAT has high validity and reliability (Sukhera, Wodzinski, Rehman, et al., 2019), the IAT was not used to measure the impact of implicit bias education for the following reasons. Critics doubt whether the IAT truly measures implicit bias and if the results of the IAT are applicable to the real-world (Sukhera, Wodzinski, Rehman, et al., 2019). In addition, results of the IAT may poorly predict actual discriminatory behaviors, judgements, and decisions (Oswald, Mitchell, Blanton, Jaccard, & Tetlock, 2013). Although there are multiple versions of the IAT, it had limited applicability to this quality improvement project because it does not compare social groups that are relevant to Hawai'i (e.g., Native Hawaiians vs. Japanese). The IAT was not utilized because of increasing recognition that eliminating or reducing bias is challenging since bias develops early in childhood and is reinforced by sociocultural factors (Sukhera, Wodzinski, Rehman, et al., 2019). Implicit bias education should instead promote nursing students' recognition of their implicit bias and sense of professional responsibility to address their biases. Therefore, the IAT was not used as a data collection tool for this quality improvement project.

Pre-Intervention Survey. The pre-intervention survey included demographic questions, the adapted ATIBI, and the open-ended questions and was created through Google Forms. A link to the survey was included in the recruitment email. The survey was to be completed prior to attending Module 1 to prioritize the hour for the delivery of the module. The survey was

available for students to complete from the time the email was sent on September 12, 2022 until September 30, 2022 after the last session for Module 1 was offered.

Immediate Post-Intervention Survey. The immediate post-intervention survey included demographic questions, the adapted ATIBI, the open-ended questions, and educational module feedback questions and was also created through Google Forms. A link to the survey was sent directly to participants in the Zoom chat box after the conclusion of Module 3; therefore, only students who completed the module series had access to the immediate post-intervention survey. The survey was open starting October 10, 2022 after the first session for Module 3 was offered and was closed on October 14, 2022 after the last session for Module 3 was offered.

Three-Month Post-Intervention Survey. The three-month post-intervention survey included demographic questions, the adapted ATIBI, and the open-ended questions and was created through Google Forms. A link to the survey was sent in an email to the NAWSON program directors on January 16, 2023 to forward to students via the departmental listservs. The email was sent via the departmental listservs and not directly to the participants who completed the module series since student names and emails were not collected. The email included a disclaimer that asked students who did not attend the implicit bias educational modules to disregard the survey. NAWSON program directors confirmed that they forwarded the recruitment email to their respective students. The three-month post-intervention survey was closed on January 20, 2023.

Data Governance. The project lead completed UHM Information Security Awareness Training on June 13, 2022. A Data Governance Process request was submitted to the UHM Data Governance Office (DGO) on August 19, 2022. The DGO approved the collection of student data and permitted the quality improvement project to proceed on September 9, 2022 (Appendix

N). UHM Data Governance advised against collecting student names, emails, or other personal identifiable information to ensure anonymity of survey data.

Data Storage. All data filed was collected and stored in a secured Google Drive located within the University of Hawai‘i at Mānoa’s Google@UH Drive system. Data uploaded and downloaded from Google Drive automatically encrypted in transit between Google Drive and the web browser using the transport layer security protocol. All files uploaded to Google@UH Drive were encrypted while stored on Google’s servers. Data were stored in the author’s secured file folder that uses file encryption and were only accessible with dual-authentication identification password protection. After project completion, all data filed on the Google@UH Drive will be stored for a maximum of three years.

Analysis

Data collected from the pre- and post-intervention Google Form surveys was analyzed by comparing quantitative pre- and post-intervention ATIBI scores and qualitative pre- and post-intervention responses to the open-answer questions. Since the surveys were completed anonymously, survey data could not be invalidated if a participant did not complete all pre- and post-intervention surveys. In addition, pre- and post-intervention survey data could not be invalidated if a participant did not attend the modules. Only aggregate data was analyzed. This quality improvement project did not seek to elucidate how the intervention affected each participant individually.

Results

Participant Demographics

Of the five students who completed a pre-intervention survey, 60% identified as male and 40% identified as female. Sixty percent reported being aged 26 to 40, 20% aged 41 to 55, and

20% aged over 55. Forty percent identified as White (non-Hispanic), 20% Hispanic, 20% Asian, and 20% other race/ethnicity (Appendix O).

Of the two students who completed an immediate post-intervention survey, one (50%) identified as male and the other (50%) identified as female. Both participants reported being aged 26 to 40. One (50%) participant identified as White (non-Hispanic), and the other (50%) identified as other race/ethnicity (Appendix P).

Although only two students completed the module series, four students responded to a three-month post-intervention survey. One (25%) identified as male, and three (75%) identified as female. All four participants reported being aged 26 to 40. Three (75%) participants identified as White (non-Hispanic), and one (25%) identified as other race/ethnicity (Appendix Q).

Pre-Intervention vs. Immediate Post-Intervention Project Outcomes

Adapted 18-Item ATIBI. The adapted 18-item ATIBI was scored as a total of the response values for all items, and items were not reviewed individually. This was congruent with the original design of the tool by Gonzalez et al. (2021) with higher total scores suggesting more positive attitudes towards implicit bias and its instruction. Since this project did not compare pre- and post-intervention responses of individual participants and since the AITBI used a total score, data were represented as a sum of the total scores for all participants. Because the number of participants who completed pre- and post-intervention surveys varied, mean scores were calculated to compare pre- and post-intervention scores more accurately (Table 1).

Of the five participants who completed a pre-intervention survey, the sum of their adapted ATIBI responses was 421. This equated to an average adapted ATIBI score of 84.2. Of the two participants who completed the entire educational module series and an immediate post-intervention survey, the sum of their adapted ATIBI responses was 182 with an average of 91.

Results suggested immediate improvements in nursing student awareness, knowledge, and management of implicit bias after participating in the educational modules as evidenced by an increase in the average adapted ATIBI total score.

Table 1			
<i>Adapted 18-Item ATIBI Total and Mean Scores</i>			
	<i>n</i>	Sum of total scores	Mean score
Pre-intervention survey	5	421	84.2
Immediate post-intervention survey	2	182	91

Open-Ended Questions. Participants were asked to respond to the open-ended questions to the best of their abilities and to put “N/A” if unable to answer.

Role of Self-Reflection. All five participants who completed a pre-intervention survey expressed similar sentiments and suggested that self-reflection is important for addressing implicit bias. One participant noted that “self-reflection allows a person to acknowledge any implicit bias they may have, determine whether or not the bias is influencing their behavior, and come up with a plan on how to mitigate bias influence in the future.”

The participants who completed an immediate post-intervention survey indicated that self-reflection “aids in awareness” and “allows one to identify and address implicit bias... and find ways to change the stereotype or ensure their behavior is not influenced by their bias.” Immediate post-intervention responses were similar to pre-intervention responses. This suggested that participants’ attitudes towards self-reflection were either not impacted by the educational modules or were reinforced and preserved by the educational modules.

Strategies to Address Implicit Bias. Prior to the intervention, strategies that participants indicated as effective in managing implicit bias included education, exposure to bias, awareness,

self-reflection, empathy, mindfulness, rejection of stereotypes, and patient-centered care. Only one participant indicated that they did not know any strategies to manage bias. Three participants listed self-reflection as a strategy they would use in the next three months to address their implicit biases. One student proposed “[pivoting their] thoughts or attitudes.”

Immediately post-intervention, participants listed self-reflection, journaling, introspection, counter-stereotyping, and mindfulness as strategies effective at managing implicit bias. Participants voiced that they would practice counter-stereotyping, mindfulness, openness to discussions, and journaling in the next three months to address their own implicit biases. There were no participants immediately post-intervention who were not able to list strategies to address implicit bias.

Strategies that were listed in both the pre-intervention and immediate post-intervention groups included self-reflection and mindfulness. Compared to pre-intervention responses, the management strategies reported on the immediate post-intervention survey had all been mentioned as evidence-based strategies in Module 3. All of them were also strategies to manage individual bias, and participants did not list any institutional strategies to address systemic bias. Results suggested that the educational modules were effective at increasing nursing student knowledge of evidence-based individual strategies to address implicit bias.

Three-Month Post-Intervention Project Outcomes

Of the four students who completed a three-month post-intervention survey, the sum of their adapted ATIBI responses was 319, which equated to an average adapted ATIBI score of 79.75. Participants voiced the importance of self-reflection in addressing implicit bias and relayed that self-reflection promotes accountability for addressing one’s own implicit biases and improving oneself. Participants listed active listening, reflection, exposure to diversity,

perspective-taking, mindfulness, education and knowledge, training, and receiving feedback as strategies effective at managing implicit bias. Strategies that they would use in the next three months included self-reflection, reading a book to increase cultural knowledge, and slowing down and deep breathing.

Results reflected a lower average adapted ATIBI score of 79.75 three months post-intervention compared to 91 immediately post-intervention. Less than half of the strategies participants reported on the three-month post-intervention survey were evidence-based strategies reviewed in Module 3. However, since the total student population was surveyed three-months post-intervention and because it could not be verified that the students who attended the module series completed a three-month post-intervention survey, the three-month post-intervention survey results may not have been reflective of students who completed the intervention.

Implicit Bias Module Feedback

Constructive feedback, comments, and suggestions on how to improve the educational modules were elicited from students after they had completed the series. The educational modules were overall received positively in terms of content and pace, and both students who completed the modules reported that the learning objectives were met. One participant noted that “adding visuals/video or real-life examples (i.e., news articles, current affairs) may supplement the material.”

Discussion

This quality improvement project sought to provide implicit bias education to enrolled undergraduate and graduate NAWSON nursing students. The literature (Hall et al., 2015; Maina et al., 2018; Waller et al., 2012), the AACN (2021), and the ANA (2015) strongly support the implementation of implicit bias education into nursing curricula to improve cultural competency

and the quality of care provided by nurses. The goals of this quality improvement project were to increase nursing student awareness, knowledge, and management of implicit bias, which were consistent with the recommendations for implicit bias education outlined in the literature (Sukhera & Watling, 2018). Three one-hour educational modules were developed to introduce the role of implicit bias in nursing, to describe the history of implicit bias and its impact on health disparities in Hawai‘i, and to review individual and institutional strategies to address implicit bias. The construction and intent of the modules was congruent with recent recommendations in the literature to deliver education focused on implicit bias recognition and management, rather than implicit bias reduction or implicit bias awareness only (Gonzalez et al., 2022).

Both the quantitative results of the adapted ATIBI and the qualitative responses to the open-ended questions suggested that the intervention had positive short-term impacts on nursing student awareness, knowledge, and management of implicit bias. These findings were consistent with the impact of implicit bias education described in the literature (FitzGerald et al., 2019; Gatewood et al., 2019; Schultz & Baker, 2017). At baseline, the average adapted ATIBI score was 84.2. Immediately after the intervention, the average adapted ATIBI score increased to 91, which suggested that the implicit bias educational modules did improve participants’ attitudes towards implicit bias and its instruction. Since the adapted ATIBI was limited in its ability to measure the acquisition of management strategies, additional open-ended questions on management strategies were included in the surveys. Immediately after the intervention, participants were better able to identify and commit to evidence-based individual strategies to manage implicit bias, such as self-reflection, journaling, introspection, counter-stereotyping, and mindfulness. None of the participants listed institutional strategies to address implicit bias, which

may have been due to the limited actionability of institutional strategies for nursing students. Because a link to the immediate post-intervention survey was provided directly to students who attended Module 3, the immediate post-intervention results reliably reflected the impact of the intervention.

Interpretation of longitudinal impacts of the educational modules was limited since the total NAWSON nursing student population was re-surveyed three-months post-intervention. The number of students who responded to a three-month post-intervention survey exceeded the number of students who completed the educational module series. It was unclear whether the students who completed the series responded to a three-month post-intervention survey. Three-month post-intervention survey results demonstrated an average ATIBI score of 79.95 and low reporting of evidence-based strategies to manage implicit bias. Unfortunately, there is also a paucity of evidence on the longitudinal impacts of implicit bias education within the literature, which recommends further research in this area (FitzGerald et al., 2019; Morris et al., 2019; Ricks et al., 2021). Despite the limitations of the three-month post-intervention results, evidence of the short-term benefits suggested that the NAWSON nursing student population would continue to benefit from the integration of implicit bias education into their curricula.

Strengths

Current NAWSON nursing curricula offer limited education on implicit bias. The educational module series developed for this project greatly expanded upon existing education on implicit bias. Although this project could have adopted pre-existing educational modules on implicit bias, original modules were created that were evidence-based and uniquely specific to the nursing profession and to the state of Hawai'i. This approach increased the applicability of the material to the nursing students at NAWSON. Another strength of the modules was the

flexibility to deliver them either in-person or virtually through a video conferencing program. Of the three students who attended Module 1, two students completed the module series, which was a 66.67% completion rate for those who participated. This suggested that the modules were effective at retaining student interest and participation. Lastly, the educational modules were overall received positively, and all students who completed the educational module series agreed that the learning objectives of the modules were met.

Limitations

The project yielded a very small sample size in comparison to the population of enrolled nursing students at NAWSON. Only three students attended Module 1, and only two of those students completed the entire module series, which equated to a 0.51% completion rate for all students who were eligible to participate in the project. Although the program directors were solicited for information on optimal student availability, the nursing student population was not surveyed directly. The modules were offered after-hours multiple times per week, but there may have been interested students who could not attend due to scheduling conflicts. Because student personal identifiable information could not be collected, the recruitment email had to be sent via the departmental listservs. This limited the flexibility of following up and engaging with potential participants.

In addition, a convenience sample was utilized since participation in the modules and the surveys had to be voluntary. Based on discussions with students during the modules, it appeared that most participants had foundational knowledge about implicit bias or were particularly interested in learning about implicit bias. Therefore, it was likely that students who participated in the project harbored baseline attitudes about implicit bias that were more positive than average. Given the small convenience sample, results of the project were limited and poorly

generalizable. However, results of the project still offered promising insight into the potential of the educational module series.

Five participants completed the pre-intervention survey but only three students attended Module 1. This discrepancy occurred because a link to the pre-intervention survey was included in the recruitment email, and it was not mandatory for students to attend the modules if they completed the survey. It was also not possible to verify whether the students who attended Module 1 completed the pre-intervention survey for the following reasons: the surveys were completed anonymously, participation in the modules was not contingent upon completing a pre-intervention survey, participant identification codes were not used to track individual responders, and only aggregate data was analyzed. However, only participants who attended Module 3 and completed the educational series were sent a link to the immediate post-intervention survey. The demographic results of the immediate post-intervention survey were reflected in the demographic results of the pre-intervention survey; therefore, it may be deduced that the two participants who finished the educational series completed both a pre-intervention and immediate post-intervention survey.

Because student contact information could not be collected, the three-month post-intervention survey had to be sent via the departmental listservs. Although the email included a disclaimer that students who did not attend the educational modules should disregard the email, more students than those who attended the modules completed a three-month post-intervention survey. The anonymity of the survey and the lack of participant identification codes to track individual responders precluded the ability to verify whether the students who completed the module series responded to a three-month post-intervention survey. As a result, the longitudinal impacts of the intervention could not be clearly elucidated.

Sustainability

The literature emphasizes that implicit bias education for nursing students is crucial and should be integrated into nursing curricula. Unfortunately, this project demonstrated that student interest and turnout on a volunteer-basis is low. The low participation rate could have been due to a variety of reasons, such as lack of awareness about implicit bias, lack of perception that implicit bias is as important a learning topic as other core nursing subjects, and difficulty accommodating implicit bias education into busy student schedules. To fully integrate implicit bias education into NAWSON nursing curricula, it would need to be mandatory or incorporated into pre-existing courses, such as nursing professionalism or leadership classes.

Although the educational modules were designed to be delivered live to facilitate participant discussion, recordings were developed to sustain the project after the project lead graduated. The modules were recorded after the implementation period and did not include any real or mock student participants. The DNP project committee determined that recording the modules would be the most feasible sustainability plan since minimal faculty training would be required and the modules could be assigned to students to review independently. Discussions on implicit bias and the IAT could be held separately during class time. Written instructions were developed to guide instructors on implementing the implicit bias education (Appendix R) and to navigate students through the recorded modules (Appendix S).

There was also a low risk of the module recordings becoming significantly obsolete or outdated over the next few years since implicit bias is a natural psychological phenomenon and will remain pervasive in society. Even though health disparity data could change, the patterns of health disparities have persisted for decades and will likely continue over the next few years. The module recordings were not intended to be a permanent solution; rather they would provide

implicit bias education while NAWSON nursing curricula were amended to incorporate implicit bias education more seamlessly.

To promote the integration of implicit bias education into nursing curricula, NAWSON faculty would need to be comfortable with developing material, presenting didactic information, and facilitating discussions on implicit bias. The literature reviews that educators should not only be comfortable and knowledgeable about the subject, but also approachable, non-threatening, inclusive, and supportive to students since implicit bias can be a sensitive and difficult topic to approach (Gonzalez et al., 2022; Sukhera & Watling, 2018; Vora et al., 2021). To address these expectations for educations, NAWSON faculty should be trained on how to deliver implicit bias education to promote informative experiences for nursing students. To further support the integration of implicit bias education into NAWSON nursing curricula, future quality improvement projects could provide implicit bias training to faculty or re-implement this project with a larger population of undergraduate and graduate nursing students.

DNP Essentials

This quality improvement project fulfilled the eight DNP essentials (American Association of Colleges of Nursing, 2006), which are the core competencies that must be achieved by higher level nurses pursuing a Doctor of Nursing Practice degree. Each DNP essential as well as how the project applied each essential is outlined in Table 2 below.

Table 2		
<i>The Application of Essentials of Doctoral Education for Advanced Nursing Practice</i>		
DNP Essential	Essential Description	Application of the Essential
I.	Scientific Underpinnings for Practice	<ul style="list-style-type: none"> Integrated nursing science with concepts from neuroscience, psychology, population health, and ethics to create the implicit bias educational modules.

II.	Organizational and Systems Leadership for Quality Improvement and Systems Thinking	<ul style="list-style-type: none"> • Developed and evaluated evidence-based educational modules that met the need for increased implicit bias education in NAWSON nursing curricula. • Reviewed and assessed the use of management strategies to address individual and institutional implicit bias.
III.	Clinical Scholarship and Analytical Methods for Evidence-Based Practice	<ul style="list-style-type: none"> • Performed comprehensive literature review to determine evidence-based approaches to implicit bias education. • Designed, directed, and evaluated the evidence-based quality improvement project. • Created evidence-based modules to expand NAWSON nursing student education on implicit bias.
IV.	Information Systems/Technology and Patient Care Technology for the Improvement and Transformation of Health Care	<ul style="list-style-type: none"> • Utilized video conferencing technology to deliver the educational modules to participants. • Utilized electronic surveys to facilitate data collection. • Recorded the modules for sustainability of implicit bias education at NAWSON.
V.	Health Care Policy for Advocacy in Health Care	<ul style="list-style-type: none"> • While developing educational material on systemic bias, critically analyzed current and historical policies that promote bias within the community. • Educated NAWSON nursing students on the impacts of health policy on population outcomes and advocated for social justice and health equity in the educational modules.
VI.	Interprofessional Collaboration for Improving Patient and Population Health Outcomes	<ul style="list-style-type: none"> • Consulted with community experts on the development of the implicit bias educational modules. • Effectively collaborated and communicated with NAWSON nursing students and faculty on the implementation of the quality improvement project.
VII.	Clinical Prevention and Population Health for Improving the Nation's Health	<ul style="list-style-type: none"> • Analyzed epidemiological data on health disparities within the state of Hawai'i. • Reviewed strategies to manage individual and institutional bias to promote health of populations, improve health access, and address gaps in care quality.
VIII.	Advanced Nursing Practice	<ul style="list-style-type: none"> • Developed comprehensive and evidence-based educational modules to supplement NAWSON nursing curricula.

		<ul style="list-style-type: none">• Guided, mentored, and supported nursing students in meeting the highest expectations of the nursing profession.
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Conclusion

All individuals experience implicit bias. In healthcare professionals, implicit bias can negatively impact the quality of care provided to patients. Implicit bias education is an essential component of nursing curricula to foster the development of compassionate and culturally competent care. This quality improvement project implemented implicit bias educational modules into NAWSON nursing curricula and demonstrated promising advances in student awareness, knowledge, and management of implicit bias. Although education is a crucial component for addressing implicit bias, education alone may not be enough to sustain long-term change. Nursing students and professionals should continue to practice ongoing reflection, an open mindset to bias, and management strategies to address bias. The doctorally-prepared Advanced Practice Registered Nurse is ideally positioned to promote continued implicit bias education and management within academic and clinical settings. Through efforts to address both individual and systemic bias, nurses can be leaders in achieving diversity, health equity, and social justice within healthcare and the community.

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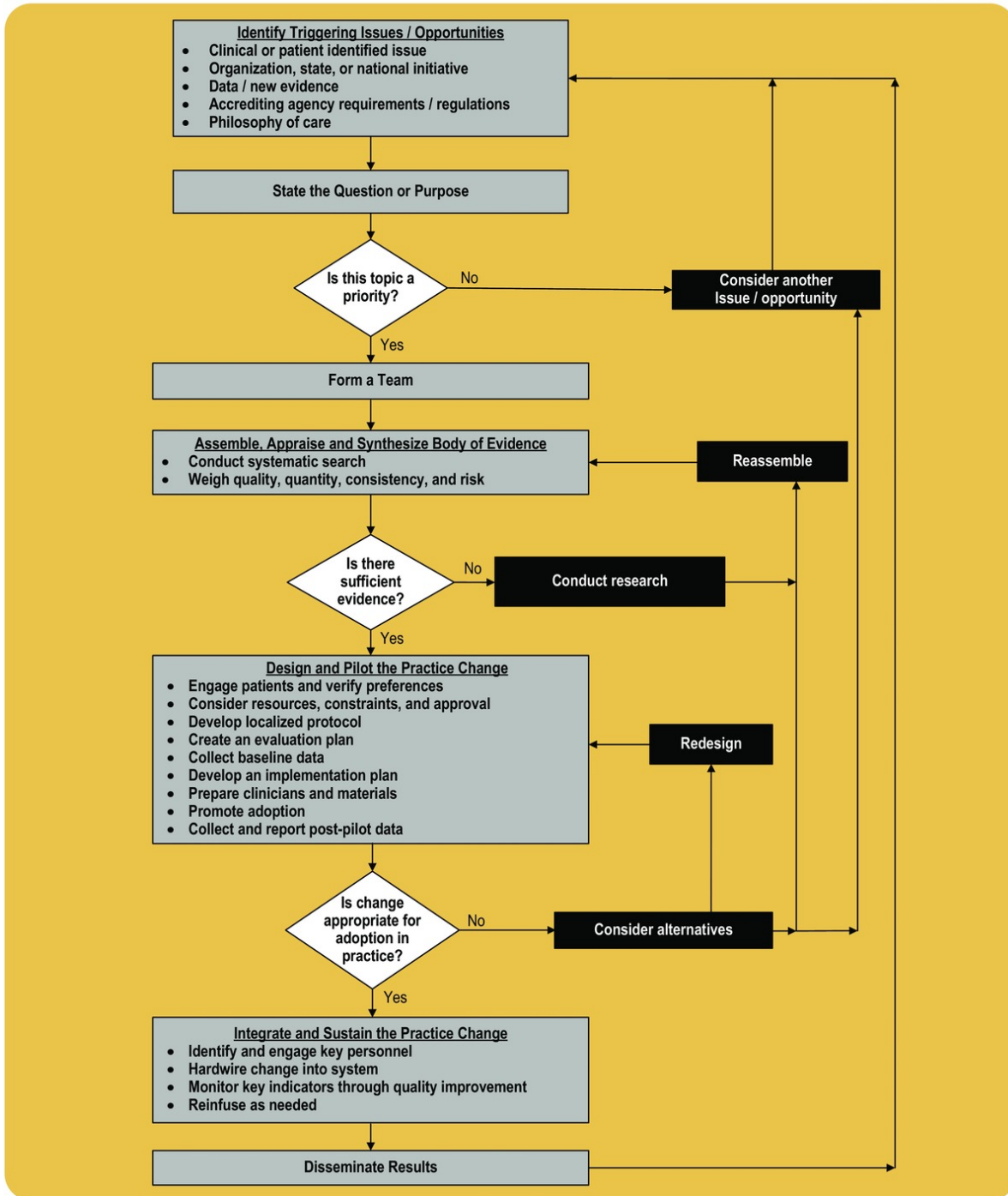
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APPENDIX A

The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care



◆ = a decision point

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APPENDIX B



Kristen Chin <kmchin@hawaii.edu>

Permission to Use The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care

1 message

Kimberly Jordan - University of Iowa Hospitals and Clinics <survey-bounce@survey.uiowa.edu>

Thu, Apr 21, 2022 at 8:42 AM

Reply-To: Kimberly Jordan - University of Iowa Hospitals and Clinics <kimberly-jordan@uiowa.edu>

To: kmchin@hawaii.edu

You have permission, as requested today, to review and/or reproduce *The Iowa Model Revised: Evidence-Based Practice to Promote Excellence in Health Care*. Click the link below to open.

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Reference: Iowa Model Collaborative. (2017). Iowa model of evidence-based practice: Revisions and validation. *Worldviews on Evidence-Based Nursing*, 14(3), 175-182. doi:10.1111/wvn.12223

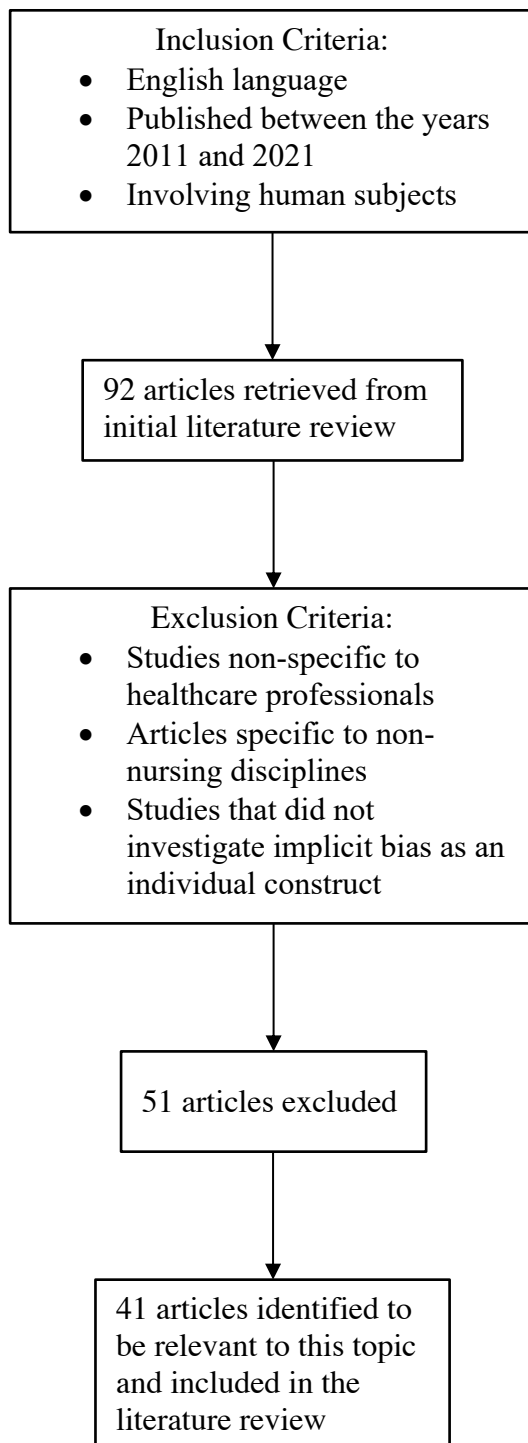
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APPENDIX C

Literature Review



APPENDIX D

Mosby's Level of Evidence and Number of Articles Critiqued (Ackley et al., 2008)

Mosby's Level of Evidence and Description	Number of Articles (Total of 41)
Level I: Meta-analysis or systematic review from all relevant RCTs	0
Level II: Randomized controlled trial (RCT)	0
Level III: Quasi-experimental design	3
Level IV: Case-controlled, cohort, or longitudinal studies	2
Level V: Systematic reviews of descriptive or qualitative studies	7
Level VI: Single descriptive or qualitative studies	9
Level VII: Authority opinion or expert committee reports	10
Other: Performance improvement or literature reviews	10

APPENDIX E



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Office of Research Compliance
Human Studies Program

DATE: August 12, 2022

TO: Ramirez, Richard, DNP, University of
Hawaii at Manoa, Nancy
Atmospera-Walch School of Nursing,
Dept of Nursing
Tse, Alice, University of Hawaii at
Manoa, Nancy Atmospera-Walch
School of Nursing, Chin, Kristen, BSN,
University of Hawaii at Manoa, Nursing,
Nancy Atmospera-Walch School of
Nursing

FROM: Rivera, Victoria, Dir, Ofc of Rsch
Compliance, Social&Behav Exempt

PROTOCOL TITLE: Implementing implicit bias education
modules into nursing curricula

FUNDING SOURCE: None

PROTOCOL NUMBER: 2022-00588

APPROVAL DATE: August 12, 2022

NOT HUMAN SUBJECTS RESEARCH DETERMINATION

The above referenced study, and your participation as a principal investigator, was reviewed and determined to be Not Human Subjects Research (NHSR). As such, your activity falls outside the parameters of IRB review. You may conduct your study, without additional obligation to the IRB, as described in your application.

The NHSR Determination is based upon the following Federally provided definitions:

"**Research**" is defined by these regulations as "a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge."

The regulations define a "**Human Subject**" as "a living individual about whom an investigator (whether professional or student) conducting research obtains data through intervention or interaction with the individual, or identifiable private information."

All Human Subjects Research must be submitted to the IRB. If your study changes in such a way that it becomes Human Subjects Research please contact the Research Compliance office immediately for the appropriate course of action.

Please contact this office if you have any questions or require assistance.

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APPENDIX F

Implicit Bias Education Outline and Objectives

Module 1 (1 hour): Introduction*Module 1 Objectives:*

1. Define and differentiate implicit bias and explicit bias.
2. Identify regions of the brain associated with implicit bias.
3. Describe the cognitive processes that lead to the development of implicit bias.
4. Discuss and reflect on the Implicit Association Test.
5. Explain how implicit bias can perpetuate health disparities.

Module 1 Outline:

1. Definitions: Implicit bias, explicit bias, racial/ethnic minorities, marginalized populations
2. Implicit Bias:
 - a. Science of implicit bias:
 - i. Neuroscience
 - ii. Psychology: Systems 1 vs. Systems 2 thinking, heuristics, origins of implicit bias
 - b. Implicit Association Test (IAT):
 - i. Class discussion/reflection on IAT
 - ii. Methodology of the IAT, controversial nature of IAT, tool for awareness
 - c. Impact of implicit bias on care delivery and health systems

Module 2 (1 hour): Implicit Bias in Healthcare*Module 2 Objectives:*

1. Use the Nixon Coin Model to explain health inequities.
2. Analyze the historical, political, and social factors that inform and reinforce implicit bias.
3. Evaluate the implicit biases that contribute to health disparities for various populations in Hawai'i.

Module 2 Outline:

1. Nixon Coin Model
 - a. Intersectionality
2. Health disparities in Hawai'i:
 - a. Historical trauma, minority stress theory
 - b. History of Bias: Native Hawaiians and Micronesians
 - i. Health disparity data for Native Hawaiians and Micronesians
 - c. History of Bias: Individuals who are homeless
 - i. Health disparity data for individuals experiencing homelessness
 - d. History of Bias: LGBTQ community
 - i. Health disparity data for LGBTQ community

Module 3 (1 hour): Management of Implicit Bias*Module 3 Objectives:*

1. Demonstrate individual strategies to manage implicit bias.
2. Describe institutional interventions to address systemic bias.

Module 3 Outline:

1. Reducing implicit bias
2. Importance of strategies to address implicit bias
3. Individual strategies:
 - a. Introspection
 - b. Intergroup contact
 - i. Identifying self with the outgroup
 - ii. Individuation
 - c. Stereotype replacement
 - d. Counter-stereotyping
 - e. Mindfulness
4. Institutional interventions/systemic change:
 - a. Standard procedures, clinical checklists
 - b. Organizational culture and strategies
 - c. Reduction of discriminatory policies

APPENDIX G

CERTIFICATE OF COMPLETION

THIS CERTIFIES THAT:

Has successfully completed:

Implicit Bias Education for Nursing Students

Three (3)

Learning Hours



Date of Completion



APPENDIX H



Kristen Chin <kmchin@hawaii.edu>

Implicit Bias Education for Nursing Students

Kristen Chin <kmchin@hawaii.edu>

Mon, Sep 12, 2022 at 7:57 AM

To: "Richard (Rick) Ramirez" <rjr64@hawaii.edu>, William Siegman <siegman@hawaii.edu>, Gary Glauberman <glauberm@hawaii.edu>, Maureen O'Brien <obrienma@hawaii.edu>

Good morning, NAWSON program directors:

Thank you for working with me these past few weeks on my DNP project. Please forward the information below to your students via the departmental listservs. You may Cc me so that I can assist with sending follow-up emails/reminders.

Thank you!
Kristen Chin

~~~~~

**Aloha UH Manoa nursing students!**

My name is Kristen Chin, and I am a Doctor of Nursing Practice (DNP) candidate. I invite you to participate in my DNP capstone project:

### **Implicit Bias Education for Nursing Students**

**September/October 2022**

**Live Sessions via Zoom | Total Learning Hours: 3 hours**

This is a unique educational opportunity to learn more about implicit bias and how you may improve the quality of care you can provide to patients!

My DNP capstone project offers a series of three (3) one-hour educational modules. The modules will be offered at the following dates/times:

| <b>Module 1: Introduction</b>                                                        | <b>Module 2: Implicit Bias in Healthcare</b>                                          | <b>Module 3: Management of Implicit Bias</b>                                             |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Monday, 9/26/22 at 5-6pm<br>Wednesday, 9/28/22 at 5-6pm<br>Friday, 9/30/22 at 5-6 pm | Monday, 10/3/22 at 5-6pm<br>Wednesday, 10/5/22 at 5-6 pm<br>Friday, 10/7/22 at 5-6 pm | Monday, 10/10/22 at 5-6pm<br>Wednesday, 10/12/22 at 5-6 pm<br>Friday, 10/14/22 at 5-6 pm |

For each module, you only need to attend one (1) session. Prior to Module 1, please complete the following items:

1. [Implicit Bias Education Pre-Survey](#)
2. An [Implicit Association Test \(IAT\)](#) of your choice: The IAT will be discussed in Module 1. The link leads to a disclaimer from Project Implicit. Review the disclaimer and select "I wish to proceed" to access the IATs.

**All sessions may be accessed through this ZOOM link: <https://us06web.zoom.us/j/2102214587?pwd=UUeV0N5MnlucVU4MEd6Rzg5aENKQT09>**

A certificate of completion will be awarded after attending all three modules! Please see below for more details about the project.

**More About This Project:**

**Who can participate?**

- Any UH Manoa NAWSON student enrolled in an undergraduate nursing program, GEPN, or graduate nursing program is welcome to sign up!

- *Participation is on a volunteer basis. If you choose to participate or not participate, neither will have an impact on your performance in any course or your eligibility to graduate.*

#### What is implicit bias?

- Implicit bias (or unconscious bias) is attitudes or prejudices towards people and things that we don't even know we have! Implicit bias can negatively affect how we perceive and interact with patients.

#### What will I be learning?

- Module 1: Introduction
  - Learn about the neuroscience and psychology behind implicit bias, the Implicit Association Test, and the impact of implicit bias on care delivery and health systems
- Module 2: Implicit Bias in Healthcare
  - Dive into the historical, political, and social factors contributing to implicit bias in the state of Hawaii and review data substantiating ongoing local health disparities
- Module 3: Management of Implicit Bias
  - Discover how to address implicit bias through concrete individual and institutional strategies
- *If you sign up, you are not obligated to complete any or all the modules. However, completing all three modules in the series is highly recommended for your educational benefit.*

#### What else does your project involve?

- Voluntary completion of 5- to 10-minute anonymous surveys: (1) pre-survey, (2) immediate post-survey, and (3) a 3-month post-survey
- *If you sign up, you are not obligated to complete any or all the surveys. However, I would greatly appreciate participation in the surveys to gather data for my project and to improve the modules for future students.*

#### Why participate?

- To learn more about implicit bias and how it can affect nursing care and perpetuate health disparities
- To learn how to address your personal implicit biases as well as systemic bias
- To earn a certificate documenting completion of the module series
- To witness an example of a DNP project in action

Please feel free to reach out to me for more information. I hope to see you there!

--  
 Kristen Chin, BSN, RN  
 Pronouns: She/her/hers  
 2023 Doctor of Nursing Practice Candidate  
 Adult-Gerontology Primary Care Nurse Practitioner Track  
 University of Hawaii at Manoa  
 Email: [kmchin@hawaii.edu](mailto:kmchin@hawaii.edu)

---

 DNP Project - Implicit Bias Education Flyer.pdf  
 4190K

## APPENDIX I

## Interested in learning more about implicit bias?

**If you are a UH Manoa nursing student, you may be eligible to attend a unique educational opportunity!**

### What is implicit bias?

**Implicit bias** (or unconscious bias) is attitudes or prejudices towards people and things that we don't even know we have!

### What is this educational opportunity?

This is a Doctor of Nursing Practice (DNP) project that aims to provide quality education on implicit bias over three (3) one-hour modules:

1. **Module 1:** Introduction
2. **Module 2:** Implicit Bias in Healthcare
3. **Module 3:** Management of Implicit Bias

### Why participate?

- Learn more about implicit bias and how it can affect nursing care and perpetuate health disparities
- Learn how to address personal and systemic implicit bias
- Earn a certificate of completion
- Witness an example of a DNP project in action

### Who can participate?

UH Manoa NAWSON students enrolled in an undergraduate nursing, GEPN, or graduate nursing program



To learn more about the project or to participate:

Please contact DNP candidate Kristen Chin, BSN, RN at

Email: [kmchin@hawaii.edu](mailto:kmchin@hawaii.edu)

## APPENDIX J

**Table 1** Items on the original administration of the Attitudes Toward Implicit Bias Instrument after expert consensus through modified Delphi-technique, 2015–2018

|                                                                                                                                                         |                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. (When I make an assumption about someone different than me, the person overreacts.)                                                                  | 15. (Medical schools have a responsibility to help students become aware of their biases and their potential impact on clinical decision making.)  |
| 2. Individuals carry assumptions and opinions in their subconscious (in the form of implicit bias) that they are not aware of.                          | 16. Learning about implicit bias is as important to the practice of medicine as learning about patient-physician communication skills.             |
| 3. Racial and ethnic minority groups are often treated in subtly disrespectful ways.                                                                    | 17. When I have an exam looming I don't want to waste time learning about implicit bias.                                                           |
| 4. Learning about implicit bias is as important to the practice of medicine as learning about basic science.                                            | 18. I have the skills to address my own implicit biases that come up in the course of delivering care.                                             |
| 5. It is important to me to learn how to recognize when one of my own implicit biases is activated.                                                     | 19. An individual's implicit bias can affect her/his/their behavior.                                                                               |
| 6. I am able to define implicit bias in my own words.                                                                                                   | 20. (Learning about implicit bias is as important to the practice of medicine as learning about clinical reasoning.)                               |
| 7. The personal implicit biases that other students hold about racial and/or ethnic minorities may affect the quality of care they provide to patients. | 21. The assumptions I make about racial and/or ethnic minorities may affect the way I treat them                                                   |
| 8. I worry about saying the wrong thing during discussions about racial and ethnic implicit bias.                                                       | 22. It is important to discuss race, ethnicity, and culture during medical school.                                                                 |
| 9. Implicit bias recognition and management is a competency students should master before attaining their medical degree                                | 23. (Implicit bias class discussions should allow for all opinions to be expressed)                                                                |
| 10. I have made assumptions about racial and/or ethnic minorities that have proven to be incorrect                                                      | 24. (The US health care system provides fair and equitable care to all populations, regardless of their race, ethnicity and/or immigration status) |
| 11. I worry that my actions won't match my values when I interact with patients who are racially or ethnically different than me.                       | 25. (The personal implicit biases physicians hold about racial and/or ethnic minorities may affect the quality of care they provide to patients.)  |
| 12. (The personal implicit biases that I myself hold about racial and/or ethnic minorities may affect the quality of care I provide to patients.)       | 26. (I feel comfortable during discussions about race and ethnicity.)                                                                              |
| 13. Racism is only an issue of the past.                                                                                                                | 27. (If a test were to find that I subconsciously favor one racial or ethnic group over another, I would question the validity of the test)        |
| 14. It is important to me to learn how to minimize the effects my implicit biases may have on my clinical decision-making.                              |                                                                                                                                                    |

Note: Items in parentheses were subsequently removed because of poor item statistics or low construct loadings

## APPENDIX K



Kristen Chin &lt;kmchin@hawaii.edu&gt;

---

**Attitudes Toward Implicit Bias Instrument**


---

**Kristen Chin** <kmchin@hawaii.edu>  
 To: crgonzal@montefiore.org

Tue, Dec 7, 2021 at 9:14 PM

Aloha Dr. Gonzalez:

My name is Kristen Chin, and I am a Doctor of Nursing Practice (DNP) student at the University of Hawaii at Manoa (UHM). I am currently developing my DNP project, which is a quality improvement initiative that implements evidence into practice. My DNP project aims to integrate implicit bias education into the nursing curriculum at the UHM School of Nursing. I seek to measure the impact of implicit bias education on students' awareness of implicit bias, knowledge of the impact of implicit bias on patient health outcomes, and utilization of strategies to manage implicit bias. I have read your recent study, and the novel Attitudes Toward Implicit Bias Instrument (ATIBI) appears to measure these constructs.

Although the validity of the ATIBI was established among medical students, do you think it can be adapted for nursing students? If yes, with your permission, I am interested in using the 18-item ATIBI to measure the outcomes of my intervention.

Please let me know if you have any thoughts or questions about my program, project idea, and/or intentions for the ATIBI. I appreciate all of the work you and your team have done in the field of implicit bias.

Thank you!

--

Kristen Chin, BSN, RN  
 Pronouns: She/her/hers  
 DNP - Adult-Gerontology Primary Care Nurse Practitioner Student  
 University of Hawaii at Manoa



Kristen Chin &lt;kmchin@hawaii.edu&gt;

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**Attitudes Toward Implicit Bias Instrument**


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**Cristina Gonzalez** <CRGONZAL@montefiore.org>  
 To: Kristen Chin <kmchin@hawaii.edu>

Fri, Dec 17, 2021 at 5:41 PM

Hello,

Thank you for your email. Yes, please feel free to adapt it to nursing students and analyze it psychometrically. That would be great! You are welcome to use it with full attribution, of course. Let me know how it goes!

Happy Holidays,

Cristina M. Gonzalez, MD, MEd  
 Professor of Medicine  
 Albert Einstein College of Medicine  
 Academic Hospitalist  
 Montefiore Medical Center-Weiler Division  
[1825 Eastchester Road](#)  
 DOM 2-76  
 Bronx, NY 10461



Kristen Chin <kmchin@hawaii.edu>

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## Attitudes Toward Implicit Bias Instrument

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**Kristen Chin** <kmchin@hawaii.edu>

Thu, Jan 6, 2022 at 10:04 AM

To: Cristina Gonzalez <CRGONZAL@montefiore.org>

Aloha Dr. Gonzalez:

Apologies for an additional inquiry. For the implicit bias education I am developing, I am considering including additional groups that experience health disparities along with racial/ethnic minorities. Since your instrument focuses on racial/ethnic minorities, would I possibly be able to adapt verbiage to be inclusive of other groups?

Example: ~~Racial and ethnic minority groups~~ Racial/ethnic minorities and marginalized groups are often treated in subtly disrespectful ways.

Appreciate your time and consideration.

Thank you and Happy New Year!



Kristen Chin <kmchin@hawaii.edu>

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## Attitudes Toward Implicit Bias Instrument

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**Cristina Gonzalez** <CRGONZAL@montefiore.org>

Thu, Jan 6, 2022 at 12:12 PM

To: Kristen Chin <kmchin@hawaii.edu>

You can do that, but you run the risk of having people answer in ways you didn't intend when you were asking the question. I would suggest running the question by some people who are similar to your target audience and see what they think about the questions. Almost like a micro-cognitive interview for that change.

Cristina M. Gonzalez, MD, MEd  
Professor of Medicine  
Albert Einstein College of Medicine  
Academic Hospitalist  
Montefiore Medical Center-Weiler Division  
[1825 Eastchester Road](#)  
DOM 2-76  
Bronx, NY 10461

## APPENDIX L

## Adapted Attitudes Toward Implicit Bias Instruction (ATIBI)\*

1. Individuals carry assumptions and opinions in their subconscious (in the form of implicit bias) that they are not aware of.
2. Racial/ethnic minorities and marginalized groups are often treated in subtly disrespectful ways.
3. Learning about implicit bias is as important to the practice of nursing as learning about basic science.
4. It is important to me to learn how to recognize when one of my own implicit biases is activated.
5. I am able to define implicit bias in my own words.
6. The personal implicit biases that other students hold about racial/ethnic minorities and marginalized groups may affect the quality of care they provide to patients.
7. I worry about saying the wrong thing during discussions about implicit bias.
8. Implicit bias recognition and management is a competency students should master before attaining their nursing degree.
9. I have made assumptions about racial/ethnic minorities and marginalized groups that have proven to be incorrect.
10. I worry that my actions won't match my values when I interact with patients who are racially, ethnically, socially, and culturally different than me.
11. Racism and discrimination are only issues of the past.
12. It is important to me to learn how to minimize the effects my implicit biases may have on my clinical decision-making.
13. Learning about implicit bias is as important to the practice of nursing as learning about patient-nurse communication skills.
14. When I have an exam looming, I don't want to waste time learning about implicit bias.
15. I have the skills to address my own implicit biases that come up in the course of delivering care.
16. An individual's implicit bias can affect her/his/their behavior.
17. The assumptions I make about racial/ethnic minorities and marginalized groups may affect the way I treat them.
18. It is important to discuss race, ethnicity, sexuality, and culture during nursing school.

*\*Each item answered via a six-point Likert-type scale ranging from strongly disagree to strongly agree*

## Open-Ended Questions

1. Describe the role of reflective practice in addressing implicit bias.
2. Name at least 3 strategies that are effective in managing implicit bias.
3. Name at least 1 strategy you will use in the next 3 months to address your own implicit biases.

## APPENDIX M

## Demographic Questions

1. What is your age-range?
  - a. 18 to 25
  - b. 26 to 40
  - c. 41 to 55
  - d. Over 55
2. What is your gender?
  - a. Male
  - b. Female
  - c. Other
3. What is your race/ethnicity?
  - a. White, non-Hispanic
  - b. Black or African American
  - c. Hispanic
  - d. Asian
  - e. Native Hawaiian or Pacific Islander
  - f. American Indian or Alaskan Native
  - g. Other race/ethnicity

## APPENDIX N



Kristen Chin &lt;kmchin@hawaii.edu&gt;

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**Fwd: APPROVED: DGP 220829-4 UHM DNP Survey (R. Ramirez)**


---

Rick Ramirez <rjr64@hawaii.edu>  
 To: Kristen Chin <kmchin@hawaii.edu>

Fri, Sep 9, 2022 at 4:44 PM

Here you go :)

----- Forwarded message -----

From: **Kuali Notifications** <no-reply@mail.kualibuild.com>  
 Date: Fri, Sep 9, 2022 at 4:43 PM  
 Subject: APPROVED: DGP 220829-4 UHM DNP Survey (R. Ramirez)  
 To: <rjr64@hawaii.edu>



Richard J Ramirez (impersonated by Cameron K Ahana),

Data Governance Process request DGP 220829-4 UHM DNP Survey (R. Ramirez) has been approved.

**DGO Notes and/or Conditions for Approval:** Delete responses from Google Drive after downloading them to a secure UHM server. Delete the responses from the UH server after extrapolating aggregate findings.

The completed document is attached. You may proceed with the requested activity/project/purchase. If you listed a Fiscal/Business Officer/Administrator, a Secondary Contact Person on your form, and/or a Requester that is not the Submitter (you), those individuals are being notified as well.

For questions, please contact [datagov@hawaii.edu](mailto:datagov@hawaii.edu).

This email was automatically generated.

Powered by Kuali Build



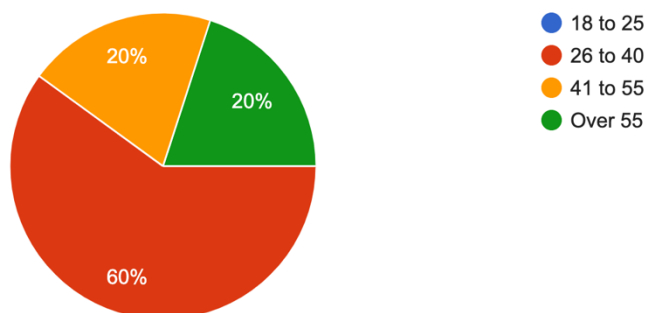
Rick Ramirez, DNP, APRN, AG-ACNP-BC, FNP-BC, ENP-C, CEN, CPEN  
 Pronouns: He/Him/His  
 Doctor of Nursing Practice Program Director and Assistant Professor  
 APRN Clinical Course Series Faculty Coordinator  
 University of Hawai'i at Mānoa  
 Nancy Atmospera-Walch School of Nursing  
 2528 McCarthy Mall, Webster 440  
 Honolulu, HI 96822  
 Office: 808-956-4865  
 Email: [rjr64@hawaii.edu](mailto:rjr64@hawaii.edu)  
 Web: [www.hawaii.edu/nursing](http://www.hawaii.edu/nursing)

## APPENDIX O

## Pre-Intervention Survey Participant Demographics

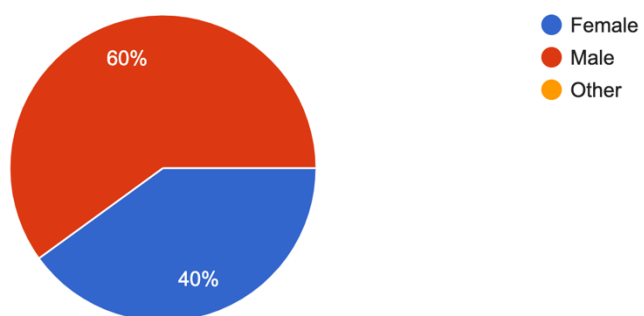
What is your age range?

5 responses



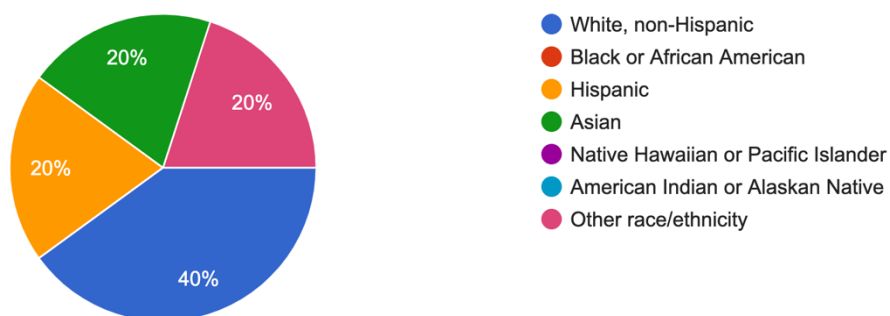
What is your gender?

5 responses



What is your race/ethnicity?

5 responses

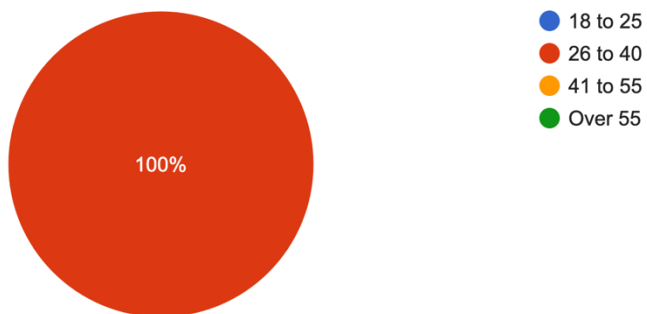


## APPENDIX P

## Immediate Post-Intervention Survey Participant Demographics

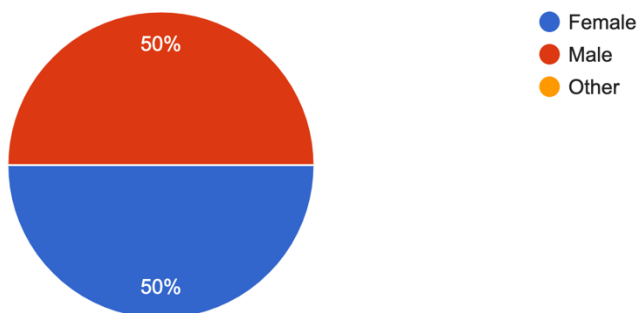
What is your age range?

2 responses



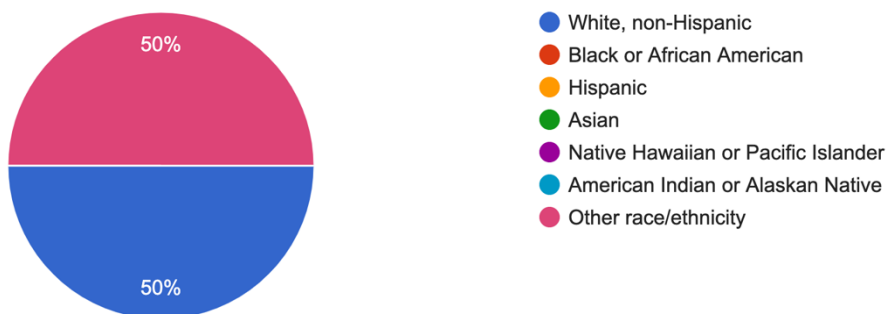
What is your gender?

2 responses



What is your race/ethnicity?

2 responses

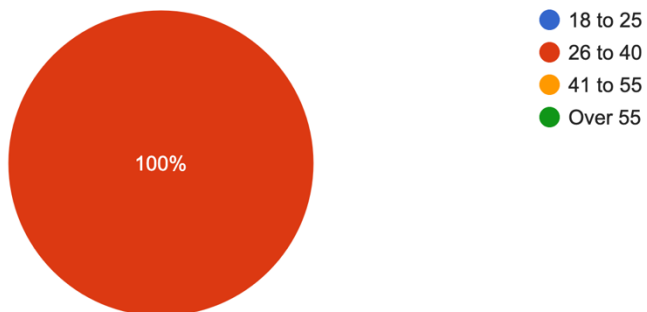


## APPENDIX Q

## Three-Month Post-Intervention Survey Participant Demographics

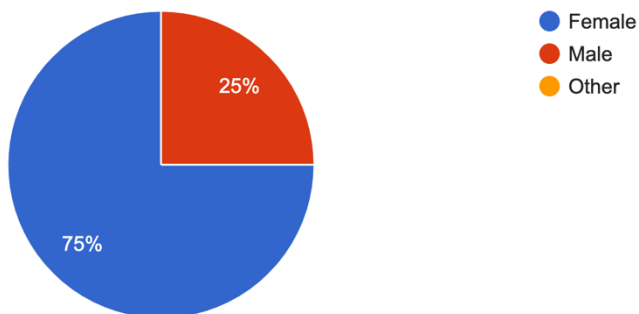
What is your age range?

4 responses



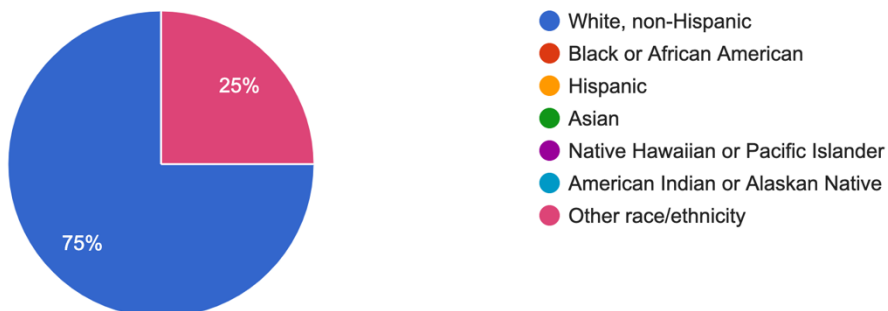
What is your gender?

4 responses



What is your race/ethnicity?

4 responses



## APPENDIX R

## Implicit Bias Education for UH Nursing Students: Guide for Instructors

The University of Hawai‘i at Mānoa Nancy Atmospera-Walch School of Nursing is dedicated towards integrating Diversity, Equity, Inclusion, and Justice topics into its undergraduate and graduate nursing programs. In line with this initiative, implicit bias education modules were developed by 2023 DNP candidate Kristen Chin, RN for her DNP capstone project, “Implementing Implicit Bias Education Modules Into Nursing Student Curricula.” The three-part modules series was recorded in November 2022 to facilitate project sustainability and the integration of implicit bias education into the curricula.

Resources for Instructors:

- American Association of Colleges of Nursing (AACN) 2017 position statement on “Diversity, Equity, and Inclusion in Academic Nursing” (<https://www.aacnursing.org/News-Information/Position-Statements-White-Papers/Diversity>)
- Sabin, J. A. (2022). Tackling implicit bias in health care. *The New England Journal of Medicine*, 387(2), 105–107. <https://doi.org/10.1056/NEJMp2201180>
  - A brief perspective piece on implicit bias in healthcare
- Sukhera, J., & Watling, C. (2018). A framework for integrating implicit bias recognition into health professions education. *Academic Medicine*, 93(1), 35–40. <https://doi.org/10.1097/ACM.0000000000001819>
  - The framework referenced to develop the implicit bias educational modules for UH nursing students
  - A helpful guide on how to integrate implicit bias education into health professions curricula
  - Includes tips on how educators may facilitate discussions on implicit bias in the classroom
- Kirwan Institute Implicit Bias Module Series (<https://kirwaninstitute.osu.edu/implicit-bias-training>)
  - Quick 1- to 5-minute videos related to (1) understanding implicit bias, (2) real-world implications in academia, (3) understanding your own biases, and (4) mitigating unwanted biases

Module Overview:

The modules introduce implicit bias, review the impact of personal and systemic implicit bias on nursing practice and health outcomes, and provide concrete individual and institutional strategies to address implicit bias. This module series is evidence-based and uniquely applicable to the nursing profession and to the impact of implicit bias in the state of Hawai‘i. Module outlines and objectives are described below:

**Module 1: Introduction***Module 1 Objectives:*

1. Define and differentiate implicit bias and explicit bias.

2. Identify regions of the brain associated with implicit bias.
3. Describe the cognitive processes that lead to the development of implicit bias.
4. Discuss and reflect on the Implicit Association Test.
5. Explain how implicit bias can perpetuate health disparities.

*Module 1 Outline:*

1. Definitions: Implicit bias, explicit bias, racial/ethnic minorities, marginalized populations
2. Implicit Bias:
  - a. Science of implicit bias:
    - i. Neuroscience
    - ii. Psychology: Systems 1 vs. Systems 2 thinking, heuristics, origins of implicit bias
  - b. Implicit Association Test (IAT):
    - i. Class discussion/reflection on IAT
    - ii. Methodology of the IAT, controversial nature of IAT, tool for awareness
  - c. Impact of implicit bias on care delivery and health systems

**Module 2: Implicit Bias in Healthcare**

*Module 2 Objectives:*

1. Use the Nixon Coin Model to explain health inequities.
2. Analyze the historical, political, and social factors that inform and reinforce implicit bias.
3. Evaluate the implicit biases that contribute to health disparities for various populations in Hawai'i.

*Module 2 Outline:*

1. Nixon Coin Model
  - a. Intersectionality
2. Health disparities in Hawai'i:
  - a. Historical trauma, minority stress theory
  - b. History of Bias: Native Hawaiians and Micronesians
    - i. Health disparity data for Native Hawaiians and Micronesians
  - c. History of Bias: Individuals who are homeless
    - i. Health disparity data for individuals experiencing homelessness
  - d. History of Bias: LGBTQ community
    - i. Health disparity data for LGBTQ community

**Module 3: Management of Implicit Bias**

*Module 3 Objectives:*

1. Demonstrate individual strategies to manage implicit bias.
2. Describe institutional interventions to address systemic bias.

*Module 3 Outline:*

1. Reducing implicit bias
2. Importance of strategies to address implicit bias
3. Individual strategies:
  - a. Introspection

- b. Intergroup contact
    - i. Identifying self with the outgroup
    - ii. Individuation
  - c. Stereotype replacement
  - d. Counter-stereotyping
  - e. Mindfulness
4. Institutional interventions/systemic change:
    - a. Standard procedures, clinical checklists
    - b. Organizational culture and strategies
    - c. Reduction of discriminatory policies

Guide/Instructions:

- The modules touch upon topics that may be sensitive to students, to include bias, prejudice, discrimination, and racism. Please establish a safe and nonjudgmental environment for students to discuss the topics and information reviewed.
- Resources for each module include a recorded video of the lecture and an accompanying slide deck.
  - Module 1: Introduction (33 min)
  - Module 2: Implicit Bias in Healthcare (40 min)
  - Module 3: Management of Implicit Bias (32 min)
- Students may be provided access to all three modules at once to be reviewed at their preferred pace, or the modules may be introduced during separate weeks per instructor discretion.
- The modules are to be viewed sequentially from Module 1 through Module 3. All three modules should be reviewed.
- Prior to Module 1, students should complete an Implicit Association Test (IAT): <https://implicit.harvard.edu/implicit/takeatest.html>.
  - The link leads to a disclaimer from the creator of the IAT, Project Implicit. Students should review the disclaimer and select “I wish to proceed” to access the IAT.
  - Available IATs include Age, Arab-Muslim, Asian American, disability, gender-career, gender-science, Native American, presidents, race, religion, sexuality, skin-tone, transgender, weapons, and weight.
  - Students may complete an IAT of their choice.
  - Each IAT will take about 10-15 minutes to complete.
- Module 1 includes an opportunity to discuss/reflect on the IAT. Instructors may choose to facilitate this discussion during class time. The purpose of the discussion is to reflect on the experience of taking the IAT. Students should not be asked to disclose the results of their IAT. Evidence suggests that individuals are more likely to accept the results of the IAT and their own biases if they are given a safe space to reflect.
  - Example discussion questions:
    - How did you feel taking the test?
    - What do you feel about your results?
    - Were you surprised by your results?
    - Did you doubt the accuracy of the IAT?

- What are some concerns you have about your test results?
- Do you think the IAT was helpful?
- Would you take another IAT?
- The IAT discussion and reflection portion may be held after Module 1 or after completion of the series depending on how the instructor chooses to integrate the education modules into their course schedule.
- Additional discussions/reflections on the topics reviewed in the modules may be arranged per instructor discretion.

For Questions:

- Please contact either UH NAWSON faculty member:
  - Dr. Deborah Mattheus, Nancy Atmospera-Walch Endowed Professor in School Health & Associate Professor ([mattheus@hawaii.edu](mailto:mattheus@hawaii.edu))
  - Dr. Kimberly U'ilani Chow-Rule, Assistant Professor ([chowrule@hawaii.edu](mailto:chowrule@hawaii.edu))

## APPENDIX S

### Implicit Bias Education for UH Nursing Students: Student Instructions

The University of Hawai‘i at Mānoa Nancy Atmospera-Walch School of Nursing is dedicated towards integrating Diversity, Equity, Inclusion, and Justice topics into its undergraduate and graduate nursing programs. In line with this initiative, implicit bias education modules were developed by 2023 DNP candidate Kristen Chin, RN for her DNP capstone project, “Implementing Implicit Bias Education Modules Into Nursing Student Curricula.”

#### Module Overview:

The three-part modules series was recorded in November 2022. The modules introduce implicit bias, review the impact of personal and systemic implicit bias on nursing practice and health outcomes, and provide concrete individual and institutional strategies to address implicit bias. This module series is evidence-based and uniquely applicable to the nursing profession and to the impact of implicit bias in the state of Hawai‘i. Module objectives are listed below:

#### **Module 1: Introduction**

##### *Module 1 Objectives:*

1. Define and differentiate implicit bias and explicit bias.
2. Identify regions of the brain associated with implicit bias.
3. Describe the cognitive processes that lead to the development of implicit bias.
4. Discuss and reflect on the Implicit Association Test.
5. Explain how implicit bias can perpetuate health disparities.

#### **Module 2: Implicit Bias in Healthcare**

##### *Module 2 Objectives:*

1. Use the Nixon Coin Model to explain health inequities.
2. Analyze the historical, political, and social factors that inform and reinforce implicit bias.
3. Evaluate the implicit biases that contribute to health disparities for various populations in Hawai‘i.

#### **Module 3: Management of Implicit Bias**

##### *Module 3 Objectives:*

1. Demonstrate individual strategies to manage implicit bias.
2. Describe institutional interventions to address systemic bias.

#### Resources:

- Resources for each module include a recorded video of the lecture and an accompanying slide deck.
  - Module 1: Introduction (33 min)
  - Module 2: Implicit Bias in Healthcare (40 min)
  - Module 3: Management of Implicit Bias (32 min)

Instructions:

1. Prior to reviewing the modules, complete an Implicit Association Test (IAT):  
<https://implicit.harvard.edu/implicit/takeatest.html>.
  - a. The link leads to a disclaimer from the creator of the IAT, Project Implicit. Review the disclaimer and select “I wish to proceed” to access the IAT.
  - b. Available IATs include Age, Arab-Muslim, Asian American, disability, gender-career, gender-science, Native American, presidents, race, religion, sexuality, skin-tone, transgender, weapons, and weight.
  - c. Complete an IAT of your choice.
  - d. Each IAT will take about 10-15 minutes to complete.
2. Review the modules sequentially from Module 1 through Module 3. All three modules should be reviewed.
  - a. Your instructor may assign you to review all three modules at your own preferred pace or provide you a timeline to review the modules according to their course schedule.

For Questions:

- Please contact your course instructor