

MAKING THE INVISIBLE VISIBLE: IMPLICIT BIAS

Title Page

MAKING THE INVISIBLE VISIBLE: IMPLEMENTING AN IMPLICIT BIAS ACTIVITY IN NURSING EDUCATION

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Highlights

- Implicit bias is pervasive, universal and affects healthcare outcomes.
- Nursing education does not sufficiently address implicit bias.
- This article describes an implicit bias training activity in nursing education.
- Faculty and students found value in the activity.
- Implicit bias training is accessible and feasible for nurse educators.

Abstract

Background: Implicit bias (IB) is a pervasive phenomenon that negatively impacts health outcomes. IB is unconscious bias that operates at a level in which the individual is not aware of its existence. There is no requirement to include IB content in nursing education. **Purpose:** We sought to raise awareness of IB and its influence on health outcomes and support a discussion on ways to mitigate the impact of IB. **Methods:** Through preparatory and interactive activities, students became familiar with IB and its effects on health outcomes, completed a self-assessment using the Implicit Association Test, and engaged in a faculty-facilitated discussion. This activity was implemented at four institutions in the United States and included 110 students at the BSN, MSN and DNP levels. **Results:** The activity received positive evaluations. A majority of students reported the preparatory learning activities were helpful, increased awareness of their biases and felt recognition of their IB would be helpful in managing their nursing care. Student narratives are also described in this report. **Conclusions:** Inclusion of IB content in nursing education is acceptable to students and faculty. The content is best included at multiple points in the course of study.

Making the Invisible Visible: Implementing an Implicit Bias Activity in Nursing Education**Introduction**

People from racial and ethnic minority backgrounds are more likely to have worse outcomes than White people for a number of health conditions (Agency for Healthcare Quality and Research, 2016). Racism, at both the institutional and individual levels, is a key driver of these negative outcomes (Hostetter & Klein, 2018; Institute of Medicine [IOM], 2003). However, surveys of healthcare providers demonstrate low rates of explicit prejudice (Blair et al., 2013a; Sabin, Nosek, Greenwald, & Rivara, 2009; Johnson et al., 2016). This dichotomy has led to research on unconscious or implicit bias among healthcare providers as a contributing factor to health disparities faced by ethnic and racial minority people.

For the purpose of this paper, unconscious and implicit bias (IB) are used synonymously. IB operates at a level in which the individual is not aware of its existence (Staats, Capatosto, Tenney & Mamo, 2017). In contrast, explicit bias is when an individual is aware of their preference for or against a particular group or condition. The fact that IB is unconscious means that one can have explicit equalitarian beliefs and yet have unconscious prejudices influencing how one behaves.

Numerous studies in the past 10 years have looked at the influence of IB on healthcare providers' behavior, patient attitudes, and clinical outcomes (Blair et al., 2013a; Blair et al., 2013b; Fitzgerald & Hurst, 2017; Hagiwara et al., 2013). There is conflicting evidence on whether physician IB impacts the medical treatment plan for patients (Oliver, Wells, Joy-Gaba, Hawkins & Nosek, 2014). However, there is considerable evidence that there is an impact on interpersonal interactions and the patient's perception of the encounter with the healthcare provider. Higher implicit racial bias in providers has been associated with lower quality of

interaction and communication with Black patients (Blair et al., 2013b; Hagiwara et al., 2013; Maina, Belton, Ginzberg, Singh, & Johnson, 2018; Oliver, Wells, Joy-Gaba, Hawkins, & Nosek, 2014; Penner et al., 2016; Schaa, Roter, Biesecker, Cooper, & Erby, 2015). Additionally, Black patients felt less confident with their provider recommendations and physicians felt that their Black patients were less compliant when the physician had higher levels of IB in favor of Whites (Fitzgerald & Hurst, 2017; Maina et al., 2018). For people who are Asian, Native American, Black or Hispanic/Latino, communication from healthcare providers tends to be more dominant, have fewer positive emotions, and contain fewer requests for patient input about treatment (Hall et al., 2015).

IB has been researched through a variety of methods and tools (Maina et al., 2018). The Implicit Association Test (IAT) was developed in 1998 and is one method to assess IB (Greenwald, McGhee, & Schwartz, 1998). Project Implicit is a non-profit initiative hosted by Harvard University that provides the IAT for general use on a number of topics such as, race, skin tone, weight, sexuality, Arab-Muslim, and age. The IAT is a computerized test that requires an individual to rapidly pair two items. The testing platform measures in milliseconds the reaction time to pair these concepts.

The IAT is designed on the premise that one will more easily be able to pair two associated items than unassociated items. In the IAT, a respondent is presented with an image or word and asked to assign it to one of two categories using keys on the right or left side of the keyboard. For example in a racial IAT, the 'e' key may be "things that are good or African American"; the 'i' key is "things that are bad or European American". Then, a series of images (e.g. African American faces and European American faces) or words (e.g. "terrific", "scorn") appears on screen. The system times how long it takes the user to pair concepts by measuring the

time from when the image or word is displayed to when it is categorized. Over the duration of the testing (approximately 10 minutes), the configuration of the categories changes and the categories change as well (e.g. the ‘e’ key becomes “things that are good or European American”; the ‘i’ key becomes “things that are bad or African American”). In the example of the race IAT, an individual with implicit bias that favors White people will more easily and rapidly pair European American faces with “good” descriptors. The IATs can be accessed at <https://implicit.harvard.edu/implicit/>.

The first step in addressing the negative impact of IB is the recognition that it exists. However, simply taking the IAT is not enough. For some, the realization that one has IB against a specific group may cause anxiety when interacting with members of that group, impairing the relationship (Staats et al., 2017). Additionally, previous studies have found that resistance and questioning the validity of the IAT itself is common (Gonzalez, Kim, & Marantz, 2014). Thus it is important to include information on the science and universal nature of IB in preparatory discussions to move students from defensiveness and guilt to responsibility (Sukhera & Watling, 2018).

Despite the emerging body of research on IB among physicians and medical students, there has been very little published on either the effect of or interventions to address IB in nursing. There is one article published on IB training of graduate nursing students in the nursing literature (Schultz & Baker, 2017). These authors successfully implemented an IB activity and advocate for more deliberate inclusion of IB training across all levels of nursing education. Currently IB training is not a requirement in nursing education (American Association of Colleges of Nursing (AACN), 2006, 2008, 2011; National League for Nursing, 2016) .

National nursing education organizations have expressed a commitment to diversity and the issues associated with it in nursing education and patient care. The American Association of Colleges of Nursing's 2017 position statement on Diversity, Inclusion and Equity in Academic Nursing emphasizes the importance of learning from and with individuals from diverse backgrounds in colleges of nursing, preparing nurses to address pervasive inequities in healthcare and enhancing the civic readiness and engagement potential of nursing students (AACN, 2017). Diversity is an established core value of the National League of Nursing (NLN). The NLN created a diversity and inclusion toolkit in 2009 for recruitment and retention of minority students, diversification of nurse educators, and enhancement of classroom and clinical learning to enable students to work with diverse populations (National League for Nursing Center for Diversity and Global Initiatives, 2009). Their (2009) toolkit remarks "Injustices flourish where the implicit is not made explicit (p.2)". The National Organization for Nurse Practitioner Faculties affirmed its commitment to addressing diversity issues across the spectrum of nurse practitioner education (National Organization for Nurse Practitioner Faculties (NONPF), 2018). The American Association of Colleges of Nursing provides curricular Essentials to guide overall objectives in all levels of nursing education (AACN, 2006, 2008, 2011). Diversity and cultural competency are also at the forefront in the Essentials, yet challenges exist as to how effectively teach these competencies. To help bridge this gap, this article reports a curricular improvement to implement IB training at four nursing schools across the United States. The purpose of this activity was to raise awareness of IB and its influence on health outcomes and support a discussion on ways to mitigate the impact of IB.

Methods

This activity was reviewed and approved by each institution's Institutional Review Board or Office of the Protection of Research Subjects. Each institutions' ethical oversight office determined that this activity was as a quality improvement initiative or exempt educational activity.

This learning activity was implemented during the spring semester, 2018 at four nursing schools across the country: a public, urban, college of nursing on the west coast; a private, rural, faith-based school of nursing in the midwest; a public, urban college of nursing in the midwest; and a private, urban, secular school of nursing on the east coast. While some of the schools included content on IB in some courses, none of the schools had an IB assignment that asks students to look at their own IB. The purpose of this activity was to implement a curricular improvement to integrate IB content into nursing courses.

Each school incorporated the IB content into different courses within their programs. All of the courses into which the content was integrated are part of the students' required program of study. One school incorporated the activity into the vulnerable populations course taken by first-year family nurse practitioner (FNP) students (MSN level) as well as a final clinical seminar course taken by finishing FNP students (MSN level). Another school incorporated the content into the FNP students' (DNP level) first clinical management course. The third school implemented the content in its undergraduate community health clinical course (BSN level). The fourth school implemented the content into the final clinical seminar course taken by finishing FNP students (DNP level).

The learning objectives of the activity were to summarize the effects of implicit bias on quality in healthcare, identify a resource for self-assessment of IB using the IAT, and integrate knowledge of students' own IBs into their nursing care to improve the quality of their care.

Because these concepts were new across all levels of learners (BSN, MSN, DNP), the first two objectives are deliberately in the domains of knowledge and comprehension. The third objective, written in the higher synthesis domain, will have a different outcome dependent on the level of the learner (e.g. a BSN student should integrate this knowledge in their future RN practice whereas an MSN or DNP student will integrate this knowledge into their future FNP or systems-focused practice).

While IB can be present towards any number of traits, considerable evidence exists indicating widespread IB with a preference for white people over people of color (Blair et al., 2013b; Sabin et al., 2009; Johnson et al., 2016). For this reason, we chose to focus on IB towards *visible minorities* in the US, specifically people of African American, Arab, Asian, Native American and Hispanic/Latino ancestry. This focus highlights one area of disparity identified by the IOM (IOM, 2003). The IATs available for these groups through Project Implicit are identified as the Arab-Muslim IAT, Asian IAT, Native IAT, Race IAT, and Skin-tone IAT.

<Insert Table 1: IB Assignment Overview>

We developed a three-step assignment that included preparatory learning on IB, discussion of the content and evaluation of the activity by students (Table 1). This assignment and the faculty guide are provided as supplemental digital content with this article. The assigned activities were identical across all institutions except for the discussion component which was facilitated online in some institutions and in-person at others. While learners were at different levels (BSN, MSN, DNP) across the institutions, none of the programs included the topic of IB or self-assessment of IB prior to its introduction through this activity. Thus, it was appropriate to consider all students as novices in this area and use uniform activities for all learners.

Student preparation were the first two steps of the three-step assignment. In step 1, students watched a 14 minute video overview of the concept of IB, its implications in society and how it is assessed using the IAT (Kang, 2013). Students then read a peer-reviewed article that outlined the presence, consequences and strategies for reduction of IB in healthcare (Zestcott, Blair, & Stone, 2016). After engaging with the concept of IB and its consequences, students moved onto step 2 of the assignment, completing one of the racial/ethnic IATs. We instructed students to complete up to two additional IATs if the first IAT did not demonstrate any bias. While we did not systematically collect data around the number of IATs each student took, few students communicated to us that they needed to complete more than one IAT to identify bias.

After completion of the preparatory activities, students moved into step 3 of the assignment, completing a reflective discussion activity either in-person or online. All faculty who facilitated these discussions either participated in the development of the activity or were briefed by a developer and completed additional preparatory readings to improve their content knowledge on IB and the IAT (see supplemental digital materials). Prior to the discussion, we communicated ground rules to all students that included the normalcy of IBs as well as an expectation for mutual respect and confidentiality. In the discussion, we asked students to share the specific IAT that they took, whether they learned anything about themselves from completing the IAT, whether the results were surprising, and if they can identify any actions they can take to mitigate the effects of this bias when delivering nursing care. Faculty facilitated student discussions of IB, its impact on health outcomes and strategies to mitigate its effects in clinical practice. At the conclusion of the learning activity students completed an online evaluation of the assignment. The evaluation included 6 questions (see table 2) using a 5-point Likert scale

(strongly agree-strongly disagree). The evaluation also included an opportunity for students to provide narrative feedback about the activity (table 3).

Results

Over the semester, a total of 110 students (64 DNP, 33 MSN, 13 BSN) across the four institutions completed the assignment. The majority of students felt the preparatory learning activities were helpful (video: 89% strongly agree or agree; readings: 86% agree or strongly agree). Students reported increased awareness of their biases (83% strongly agree or agree) and felt recognition of their IB would be helpful in managing their nursing care (90% strongly agree or agree). Students felt the discussion and overall activity aided in identifying strategies and ability to manage IB (discussion: 70% strongly agree or agree; overall 69% strongly agree and agree).

<Insert Table 2: Student Evaluations of the Learning Activity>

The following are the themes that were identified from the open ended questions on the evaluation questionnaire.

<Insert Table 3: Narrative Themes>

Discussion

This curricular improvement sought to evaluate an educational module on IB in nursing students across multiple universities. There is very little published literature on training nursing students in IB with which to compare outcomes. Consistent with previous work (Schultz & Baker, 2017), the students felt that all components of the educational intervention were helpful. During the activity, some students questioned the legitimacy of the IAT. There were multiple comments on whether the test measures dexterity versus bias. While not supported by the

evidence underlying the IAT, this is a common concern since the IAT measures response time based on keystrokes (Gonzalez et al., 2014).

This project was implemented across multiple levels of nursing education (BSN, MSN, DNP). While we did not evaluate differences between learners, it is possible that learner level might impact the perceived value of this activity. Early learners may lack the self-reflection ability to evaluate their IB. Lack of patient exposure and care experience may also limit these self-reflection capabilities. Conversely, experienced nurses in graduate programs may be less receptive to this content as it has the potential to feel threatening to their sense of professionalism and egalitarianism in nursing practice. Future research may evaluate belief in the accuracy of the IAT and the ability to critically self-reflect across nursing students at various learner levels.

Appropriate time in the curriculum for training in IB still needs to be determined. This intervention was offered at various points in the curriculum across universities. This could impact the outcomes for a variety of reasons. Offering this activity early in the curriculum, prior to clinical experience, may allow students to enter their clinicals more aware of the impact of IB on patient outcomes. Faculty who facilitated this activity at the end of students' course of study (DNP) observed that students were less engaged with the activity and attributed this to competing responsibilities of preparing for graduation. For these reasons, it may be appropriate to offer it at multiple points in the curriculum. This is consistent with work evaluating IB in medical education that concluded it should be incorporated at multiple points in a program (Gonzalez et al., 2014). This was echoed by student feedback suggesting that the content should be incorporated throughout their course of study.

As noted above, there were multiple students who questioned the validity of the IAT, believing that it was a measure of dexterity rather than bias. This points to the importance of

explaining the science that underlies the IAT as well as the ubiquitous nature of bias. Research has demonstrated that if the IAT and IB are not appropriately framed prior to undertaking self-assessment, it may be met with disbelief or outright rejection (Gonzalez et al., 2014). We sought to address this issue by requiring a preparatory video that demonstrated the science underlying the IAT and refuted the claim that the test is an assessment of dexterity (Kang, 2013). Our activity relied on student self-reporting of completion of this activity. In the future, we would recommend showing this video in class and facilitating discussion around it prior to students completing the IAT.

A key element of the activity was discussion about IB and its effects on nursing care. This discussion was facilitated in-person at some universities and online at others, which may impact students' perceptions of the value of the discussion. While this activity did not require any students to disclose their biases, discussion of IB is a sensitive topic as identification and acknowledgment of IB can challenge an individual's self-perception. Online discussion forums often have a delay between when a post is written and a response is received, making the discussion feel forced. Additionally, online forums may make students more or less likely to be open and discuss sensitive topics. There is some research that describes how the lack of eye contact from online discussions can lead to disinhibition, possibly leading to offensive comments (Lapidot-Lefler & Barak, 2012). On the other hand, this disinhibition in online discussions may make students more open and comfortable to disclose and discuss their IB. Neither modality (in-person or online) included any anonymous polling or discussion opportunities. Future work may compare the different modalities and potential benefits of an anonymous component.

We did not formally evaluate faculty perception of the activity, all faculty participated in preparatory discussions before and debriefing after the activity. We found that faculty initially

were reticent and nervous to complete the activity. Prior to the activity, there was fear that they would open up an uncomfortable topic that could become volatile, offensive, or out of control. Since there is known IB in nursing faculty, this is understandable (Fitzsimmons, 2009). At the conclusion however, faculty overwhelmingly felt positively about the activity and reported that the experience and conversation was beneficial. Faculty who participated in this activity all agreed to include the activity in future semesters. Future work will benefit from more formal evaluation by faculty.

Limitations

Limitations to this activity include both student and faculty factors. We did not collect student demographics such as age, gender or race. This precludes the ability to discern if students' backgrounds relate to their perceptions of the value of the activity. There was no pre-intervention assessment of students' awareness of personal IB or the impact of IB on health outcomes. A pre- and post-test comparison might have provided information on effectiveness of the activity on changing awareness of bias. We did not formally collect faculty feedback about the activity. This could have included faculty perceptions of the value of IB assessment and education and its associated workload. Additionally, when the lead authors developed the activity, faculty who would implement the activity in their courses were not included in the design process. In our case, this was not an impediment to the success of the activity. However, others seeking to change curriculum to include IB content should consider early engagement of key faculty members.

Future Directions

This curricular improvement was well received by faculty and students. There are also many potential ways to enhance this educational activity. One improvement may be to increase

readiness of students for the discussion. This may include more content on IB or a discussion on IB prior to taking the IAT. It might also be beneficial to have them watch the video on IB again after taking the IAT, immediately prior to the discussion, or even together in class. Anonymous in-class polling in response to faculty-posed questions may also enhance discussion.

Conclusions

IB on the part of healthcare providers adversely affects provider-patient relationships and may lead to negative patient outcomes. It is essential that future healthcare providers, including nurses, receive training and education in IB. This curricular improvement demonstrates a feasible educational activity including preparatory classwork and a focused discussion that students and faculty favorably evaluated. This activity increased awareness of IB, personal bias, and IB impact on healthcare outcomes. Future work in IB in healthcare may evaluate change in actual bias, faculty perspective, appropriate learner level, and frequency of IB trainings for students.

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Table 1. Implicit Bias Assignment Overview

Step 1 – Preparatory Activities for Students <ul style="list-style-type: none">• Watch a video overview to learn about implicit bias and the implicit association test: https://youtu.be/9VGbwNI6Ssk (Kang, 2013)• Read an article to frame the issue of implicit bias in healthcare (Zestcott, Blair & Stone, 2016).
Step 2 – Complete one of the following Implicit Association Tests (IATs) from Project Implicit (http://implicit.harvard.edu) <ul style="list-style-type: none">• Asian IAT• Skin-tone IAT• Native IAT• Race IAT• Arab-Muslim IAT
Step 3 – Discussion Activity <ul style="list-style-type: none">• Post/share what IAT you completed. What did you learn about yourself from completing this IAT? Students do not need to disclose their biases.• Do the results surprise you? Why or why not?• What actions do you think you can take to mitigate the potential effects of this implicit bias?

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Table 2: Student Evaluations of the Learning Activity

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Preparatory video was helpful	30% (n=33)	59% (n=65)	11% (n=12)	0	0
Preparatory readings were helpful	24% (n=26)	62% (n=68)	15% (n=16)	0	0
Recognizing my own IB helpful in managing the effects of IB in my nursing care.	29% (n=32)	61% (n=67)	6% (n=7)	2% (n=2)	1% (n=1)
Based on this activity, I am more aware of my implicit biases.	29% (n=32)	54% (n=59)	14% (n=15)	3% (n=3)	1% (n=1)
Discussion of IB helpful in identifying strategies to manage the effects of IB in my nursing care.	25% (n=28)	45% (n=50)	25% (n=27)	4% (n=4)	1% (n=1)
Based on this activity, I am better able to manage my implicit	14% (n=15)	55% (n=61)	27% (n=30)	1% (n=1)	2% (n=2)

MAKING THE INVISIBLE VISIBLE: IMPLICIT BIAS

biases.					
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Rows may not add to 100% due to rounding

N=110 responses

The following are the themes that were identified from the open ended questions on the evaluation questionnaire.

MAKING THE INVISIBLE VISIBLE: IMPLICIT BIAS

Table 3 - Narrative Themes

What are some ways you may change your approach to patient care based on this assignment?
<p><i>Awareness / Mindfulness</i></p> <p>"I now realize some of my own biases towards people of the same ethnicity as me..."</p> <p>"I'll be more open-minded to the patient's culture, religion, etc."</p> <p>"Being mindful and cognizant of my biases in the first step in reducing them. Now that I am aware of some of the implicit biases I hold, I will be able to recognize them when they surface in my life and in my practice and hopefully redirect my thoughts and emotions so that I can correct my implicit biases in addition to not letting them affect my patient care."</p> <p><i>Pausing</i></p> <p>"...[I will take] a step back from the situation at hand, analyze what I am thinking and try to understand if I am expressing my biases in my work"</p> <p>"I can step back and think about the patient I am about to see and check myself"</p> <p>"When approaching patients, it is important to first self-reflect on your own biases and humble yourself to admit that you do not know everything about another individual or their cultural beliefs/attitudes. Therefore, you must ask the patient."</p> <p>"pause & recognize my bias before entering the room"</p> <p><i>Surprise</i></p> <p>"The IAT results were surprising, I have some changes to make in my patient care."</p> <p>"I treat all of my patients equally, but from this activity I have improvements to make."</p> <p>"I am very surprised at my results, and I now am aware that I need to work on this."</p> <p><i>Disbelief</i></p> <p>"It is hard to change one's unconscious feelings as we are influenced by our culture. I don't feel I judge patients."</p> <p>"One activity is not going to change the excellent care I give to my patients."</p> <p>"I wouldn't make any changes."</p> <p><i>Deliberate Exposure to People of Different Backgrounds</i></p> <p>"I will try not to use some of the automatic responses to stigmatized patients. I will also try to learn more about other races and ethnic groups. Furthermore, I will try to encounter and engage in positive interactions with members of different groups."</p> <p>"Seeking more experience with a group for which I have bias, instead of avoiding"</p>