Provider Awareness of Implicit Bias and Evaluation of the Feasibility and Utility of a Perspective Taking Intervention

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"On my honor, I pledge that I have neither given nor received aid on this assignment."
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Abstract

Purpose: The implicit bias of healthcare providers has been implicated as contributing to health disparities in the United States. The purpose of this study was to evaluate the feasibility and utility of a perspective taking intervention, called "BE KIND", on Licensed Independent Practitioner (LIP)s' awareness of implicit bias in the Emergency Department of a community hospital.

Research Question: What is the awareness of implicit bias among LIPs working in an emergency room setting in a community hospital? After participation in an online educational intervention about implicit bias, what is the LIP's evaluation of the feasibility and utility of the perspective taking intervention, BE KIND, in their environment?

Methods: A group of LIPs were recruited from an emergency department. The LIPs completed a pre-intervention survey followed by a brief education module about the importance of implicit bias and a perspective taking intervention intended to help LIPs take the patient's perspective. After one month of using the perspective taking intervention, the LIPs then completed a post-intervention survey to evaluate the feasibility and utility of the perspective taking intervention in the emergency room.

Results: Seven of the 47 eligible LIPs participated in the project, giving a recruitment rate of 14.9%. The sample age ranged from 30-61 years and were predominantly male (71.4%), Caucasian (100%), and Medical Doctors (85.7%). No APRNS participated. Years of experience in their current role was 3-18 years. The self-reported awareness of implicit bias was no to low awareness (28.6%) and moderate awareness (71.4%). No participants reported high awareness or receiving any education about implicit bias.

Five participants reported using BE KIND and two did not use BE KIND. Of the five

participants that used BE KIND, two reported using BE KIND once a week, one reported using BE KIND once a shift, and two reported using BE KIND with most patients. Four participants agreed they would use BE KIND in future practice and one participant strongly agreed to use BE KIND in future practice. The LIPs that used BE KIND in practice found it to be useable and feasible.

No relationships were found between demographic data and reported usage of BE KIND, perceived feasibility/usability of this perspective taking intervention, and intent to change practice.

Conclusions: The low power of the study resulted in inconclusive findings about relationships between demographic data and reported usage, perceived feasibility/usability, and intent to change practice. While BE KIND was not used by all participants, participants that used the intervention found it useful and feasible. A larger study sample could yield more data that would be helpful in determining if BE KIND is a viable tool that LIPs can use to raise awareness and reduce or remove implicit bias in their practice.

Key words: Implicit bias, health disparities, perspective taking, providers, BE KIND

Provider Awareness of Implicit Bias and Evaluation of the Feasibility and Utility of a Perspective Taking Intervention

The Institute of Medicine's (IOM) 2002 report, "Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care," stated that there are racial and ethnic health disparities even when the patient's age, income, illness severity, and insurance status are comparable (Nelson, 2002). In addition to this expert report, other studies have found similar disparities related to sex (Bogaev, 2016) and sexual orientation (Dilley, Simmons, Boysun, Pizacani, & Stark, 2010). Health disparities are such an important topic that the U.S. Department of Health and Human Services launched the Healthy People 2020 initiative in December 2010. One of the four overarching goals was to establish health equality and eliminate healthcare disparities by the year 2020 (Healthy People 2020, 2017).

Implicit bias may contribute to health disparities (Zestcott, Blair, & Stone, 2016). Implicit bias is an unconscious negative reaction that occurs when a person is confronted with someone that does not fit into their social group. When confronted with new situations, people will depend on past experiences in similar situations to make decisions about the new situation. This reaction can lead to unconscious assumptions about that other person based on learned stereotypes (Ross, 2014). Implicit bias is different than explicit bias. Whereas implicit bias is unconscious, explicit bias is a conscious negative reaction to persons not fitting into their social group (Ross, 2014). Implicit bias is a ubiquitous phenomenon among mankind and healthcare providers are not immune to its effect (FitzGerald & Hurst, 2017). Like members of the general population, healthcare providers have been found to harbor implicit bias for many characteristics including race/ethnicity, gender, socioeconomic status (SES), age, mental illness, weight, drug abuse, and disabilities (FitzGerald & Hurst, 2017).

Implicit Bias in Healthcare

According to Zestcott et al. (2016), implicit bias can affect patient outcomes through two different pathways: directly, by influencing decisions about patient care and/or indirectly, by affecting communication between healthcare provider and patient (Zestcott et al., 2016). Examples of those two pathways were shown in two separate studies. Direct effects of implicit bias were shown in a study performed by Green et al. (2007). In this study, internal medicine and emergency residents were recruited via email to participate in an Implicit Association Test (IAT), a validated tool to measure implicit bias, and a randomized vignette questionnaire. Results showed that the higher the anti-black implicit bias of the physician, the less likely the physician would be to prescribe thrombolytics to African American patients when compared to Caucasian patients ($p = .009$) (Green et al., 2007). Indirect effects of implicit bias were shown in a study by Chae et al. (2012). This cross-sectional observational study of 91patients in a primary care setting showed that the combination of patient's perception of discrimination and provider's implicit anti-black bias was related to higher rates of hypertension in those patients ($\chi^2(1) = 4.89$, $p < .05$) (Chae, Nuru-Jeter, & Adler, 2012). See Figure 1 for a visual representation of Zestcott's model.

Zestcott et al. (2016) performed a narrative review to evaluate the role of healthcare provider's implicit bias in health disparities and evaluate if education about implicit bias would mitigate this bias in healthcare providers (Zestcott et al., 2016). There were approximately 64 articles included in this review dating back to 1990 and there were no inclusion or exclusion criteria described by the authors. Though there was mixed evidence in these studies that implicit bias negatively impacts patient outcomes, the investigators concluded that healthcare providers in the United States had implicit bias against stigmatized groups and more research is needed to

understand and test interventions to reduce implicit bias (Zestcott et al., 2016).

The negative effect of implicit bias on choosing appropriate treatment is exacerbated when the healthcare provider is constrained by time limits (Stepanikova, 2012) or when under a high cognitive load (Burgess et al. 2014). A healthcare provider with a history of role models who exhibit prejudice or role models who treat patients with a lack of respect increased the implicit bias of that healthcare provider (Phelan et al., 2015). Factors that appear to be protective against the effects of implicit bias in healthcare include: forming a relationship with patients as is found in primary care (Blair et al., 2014), following a rigorous treatment algorithm as is seen in acute care surgical situations (Haider et al., 2015), experiencing positive patient/provider interactions, and having role models that exhibit no bias against patient populations (Phelan et al., 2015).

Investigators in two studies proposed that effective interventions to reduce implicit bias in healthcare should take a long-term approach, such as training throughout a medical school program rather than a single education point (Gonzalez, Kim, & Marantz, 2014; Byrne & Tanesini, 2015). Gonzalez et al. (2014), proposed that education should begin with medical students and should be presented throughout the curriculum to reinforce learning about implicit bias (Gonzalez et al., 2014). Byrne and Tanesini (2015) stated that medical education is a lifetime commitment to improving practice through thoughtful critical self-evaluations and engaged practice (Byrne & Tanesini, 2015). While implicit bias is now being taught in medical and nursing schools, no studies were found that evaluated practicing healthcare providers knowledge about implicit bias.

One proposed intervention to combat implicit bias is perspective taking. Perspective taking is an intervention designed to help a person actively take the perspective of another person. People should ask themselves “how does that person feel” not “how would I feel in that person’s

situation" so as to feel more empathy toward others (Batson, Early, & Salvarani, 2016).

Considering the prevalence of implicit bias and evidence that implicit bias is associated with real or potentially adverse patient outcomes, interventions aimed at providers are needed to reduce implicit bias. Perspective taking interventions are one example, though the evidence base is equivocal. Studies had mixed results on perspective taking's efficacy in decreasing implicit bias (Matharu, Shapiro, Hammer, Kravitz, Wilson, & Fitzgerald, 2014; Devine, Forscher, Austin, & Cox, 2012) but perspective taking was found to decrease treatment bias (Drwecki, Moore, Ward, & Prkachin, 2011) and improved patient satisfaction (Blatt, LeLacheur, Galinsky, Simmens, & Greenberg, 2010) in controlled experimental environments. Thus, the purpose of this study was to evaluate the feasibility and utility of a perspective taking intervention, called BE KIND, on the Licensed Independent Practitioner (LIP)s' awareness of implicit bias in the Emergency Department of a community hospital.

Theoretical Framework

The theoretical framework used as the foundation of this project was Lewin's Change Theory (LCT), a theory proposed by Kurt Lewin in 1951. LCT consists of three-stages or phases that a person must proceed through to establish a change in the system. The stages are unfreezing, movement, and refreezing (Lewin, 1951).

During the unfreezing stage, the change agent educates participants about the importance of making a change. This stage can be difficult to accomplish. Lewin states that to bring change participants must find catharsis and he suggests appealing to the emotions of participants to accomplish unfreezing. The movement stage of LCT incorporates the change into everyday practice. During this phase there will be supportive and restraining forces that can interfere with the change. The final phase of the LCT is refreezing. In this stage, participants have become

comfortable with the change and it becomes the new normal practice. Participants that reach this phase can help others through unfreezing and movement phases and participants will maintain the change by supporting each other (Lewin, 1951).

During the unfreezing stage, study participants were educated about implicit bias and its potential role in healthcare disparities. The study appealed to the provider to make a change that had the potential to impact patient outcomes. By convincing healthcare providers that implicit bias is an important topic, and is worthy of making a change, the unfreezing portion was completed. The movement phase occurred when the provider incorporated BE KIND into their routine practice over the study period. Competing duties and a busy work environment were some of the environmental obstacles that worked against the movement phase and use of the BE KIND card was a supportive aid. The final phase, refreezing, was accomplished by providers that incorporated BE KIND into their practice and reported intention to use the intervention in the future.

Project/Research Question

What is the awareness of implicit bias among LIPs working in an emergency room setting in a community hospital? After participation in an online educational intervention about implicit bias, what is the LIP's evaluation of the feasibility and utility of the perspective taking intervention, BE KIND, in their environment?

Review of the literature

A systematic review of the literature was conducted, with no date limitations, to find studies on interventions designed to reduce implicit bias in healthcare providers with the intent of reducing implicit bias or improving patient outcomes. All searches were conducted using the key terms nested as follows: ("Implicit Bias" OR "Unconscious Bias" OR "Non-conscious Bias")

AND ("Providers" OR "Healthcare workers" OR "Physicians" OR "Doctors" OR "Nurses" OR "Nurse"). The database searches revealed a total of 64 articles from PubMed, 25 articles from CINAL, 77 articles from Web of Science, and 1 article from Cochran. After excluding all duplicate articles, 102 potentially relevant articles remained. Inclusion criteria included studies that: were peer reviewed and consisted of interventions performed on healthcare providers or healthcare students with a goal of reducing implicit bias, improving patient outcomes, or improving patient satisfaction. Exclusion criteria included studies that: recruited persons outside of healthcare, studied patients only, or did not test the outcomes of an intervention. The 102 articles were reviewed according to the inclusion and exclusion criteria resulting in four relevant articles. An ancestry search of these articles was conducted and one additional relevant article was discovered making a total of five articles included in this literature review.

Literature Review Results

The following provides the results of the five published studies conducted to evaluate interventions to reduce implicit bias.

Blatt et al. (2010) performed three randomized control trials using medical students and physician assistant students (n = 608) to test if the implementation of a perspective taking intervention had any effect on standardized patient (SP) satisfaction scores. In all three experiments, students were randomly assigned to a control or intervention group, according to gender and race, and the SP was blinded to which group the student was assigned. In experiment 1 (n = 245), third year medical students were randomly assigned to a control group (n = 123) or an intervention group (n = 122). Both groups received standard instructions in a preorientation class for the patient simulation. The intervention group received instructions to imagine what the patient is experiencing. The intervention group showed higher mean SP satisfaction scores than

the control group (effect size= 0.16, p = .01). In experiment 2 (n = 105), the effects of a perspective taking intervention focused on African American SPs. First and second year physician assistant (PA) students were randomly assigned to a control group (n = 53) or an intervention group (n = 52). Both groups received standard instructions in a preorientation class for the patient simulation; in addition, the intervention group received instructions to imagine how the patient is feeling during the encounter. The intervention group had a higher mean SP satisfaction score than the control group (effect size= 0.31, p = .001). In experiment 3 (n = 258), third year medical students were randomly assigned to a control group (n = 123) or an intervention group (n = 135). This experiment used the same study design as experiment 1 but had a different patient satisfaction tool. The intervention group had a higher SP satisfaction score than the control group (effect size= 0.13, p = .009). This study was limited by the fact that it was performed on standard patients rather than actual patients in a clinical environment (Blatt et al., 2010).

Drwecki et al. (2011) performed a randomized control trial to test the effect of a perspective taking intervention on pain treatment by healthcare providers. The study group was a cohort of 40 nurses enrolled in an advanced degree program. Participants were randomly assigned to either a control (N= 21) or intervention group (n = 19) and both groups received instructions to give the most accurate treatment for each patient. In addition, the intervention group received instructions to imagine, when making their treatment decision, how the patient feels. The participants were then shown one of four patient videos and asked how they would treat the patient's pain. The amount of treatment was rated using a Likert scale of 1 (none) to 9 (very strong amount). This treatment rating was then analyzed using the dependent sample t-test. The control group showed a racial treatment bias in favor of white patients (t [20] = 2.81, p = .01)

while the intervention group did not show a racial treatment bias (t [18] = 1.75, p = .10). This study was carried out in a controlled setting using patient vignettes, so the findings may not be generalizable to real world patients (Drwecki et al., 2011).

Matharu et al. (2014) performed a randomized control trial using 129 medical students from three universities to test the effect of a perspective taking intervention on explicit bias, empathy, and implicit bias. Participants were randomly stratified across sites and randomly assigned to either a control or intervention group. Both the control and intervention groups underwent pre- and post-testing to evaluate outcomes. To examine explicit bias, participants completed the Anti-Fat Attitude Questionnaire. To examine empathy, participants completed the Jefferson Scale of Physician Empathy. Finally, to examine implicit bias, participants completed the obesity-specific Implicit Association Test (IAT). The control group (n = 68) received an hour long standard lecture on the medial management of obesity currently taught in medical schools. The intervention group (n = 68) participated in an hour long dramatic reading of "the most massive woman wins" to induce empathy for obese patients. There was a significantly greater decrease in the explicit bias of the intervention group when compared to the control group. Both groups had increased empathy but there was not a significant difference between the two groups. There was no statistically significant difference in implicit bias for either the intervention or the control groups (Matharu et al., 2014).

Devine et al. (2012) performed a randomized control trial to test the effect of education regarding implicit racial bias followed by a 12-week habit-breaking intervention. The study was composed of 91 non-black introductory psychology students who completed the study for course credit. Participants were randomly assigned to either a control (n = 38) or intervention (n = 53) group. Both the intervention and control group were asked to complete a baseline Implicit

Association Test (IAT), a week 4 IAT, a week 8 IAT, a baseline explicit bias test, week 2 explicit bias test, and week 6 explicit bias test. The participants were given the results of the testing with feedback. The intervention group participated in a 45-minute interactive education presentation followed by habit-breaking intervention training. Habit-breaking interventions included stereotype replacement, counter-stereotypic imaging, individuation, perspective taking, and increasing opportunities for contact. The control group consisted of 38 individuals and they participated in the testing but did not undergo any education or intervention training. The results of the study indicated that the intervention group had a lower IAT score as compared to baseline than the control group (General Linear Models $p = .006$) (Devine, et al. 2012).

Clementz et al. (2017) performed a qualitative study to increase cultural competency of healthcare providers through anthropological education (Clementz et al., 2017). Overall, there were 30 learners that participated in the intervention between March and November 2015: 14 internal medicine residents, 5 nurse practitioner residents, 5 nurse practitioner students, and 2 health psychology residents. Four subjects did not indicate their profession. The intervention involved education about human origins, shared genetic heritage and culture, patient case studies, and group discussion. After the intervention, participants were asked to rate sessions on a 5-point Likert scale, how useful they found the information, their confidence using skills learned, and whether they would recommend the program to colleagues. They were also asked open-ended questions about tools and skills they had acquired through the intervention. Results showed high scores (4.2-4.6) on the Likert questions and multiple answers to the open-ended questions exploring how to avoid bias in the future. The themes of the open-ended questions were to be mindful of assumptions and gave examples of how they had observed bias in their clinical work (Clementz et al., 2017).

Gaps in the literature

The review of literature revealed the need for interventions to reduce implicit bias among practicing healthcare providers. While there are studies that suggest how to approach implicit bias in healthcare settings, few studies were found that tested interventions in an experimental or clinical setting. In this review of the literature, five studies tested interventions in healthcare providers. Four were quantitative and one was qualitative. Three of the studies employed case-specific perspective taking interventions. Blatt et al. (2010) found that perspective taking increased patient satisfaction scores (Blatt et al., 2010), Drewcki et al. (2011) found that perspective taking showed no race treatment bias when compared to a control group (Drwecki et al., 2011), and Matharu et al. (2014) found perspective taking decreased explicit bias but had no change on implicit bias (Matharu et al., 2014). Because these studies occurred in learning environments, they could not be generalized beyond the study participants. Devine et al. (2012) performed a study that employed education and habit-breaking interventions including stereotype replacement, counter-stereotypic imaging, individuation, perspective taking, and increasing opportunities for contact. Results of this study showed a measurable reduction in implicit bias among participants but it did not speak to how the intervention could affect patient outcomes (Devine et al., 2012). The fifth study (Clementz et al., 2017) used an anthropological education intervention to increase cultural competency of healthcare providers. Three of these studies discussed the use of perspective taking interventions (Blatt et al., 2010; Drwecki et al., 2011; Matharu et al., 2014), one discussed the use of education and habit-breaking (Devine et al., 2012), and one discussed the use of anthropological education (Clementz et al., 2017).

The purpose of this study was to evaluate the feasibility and utility of a perspective taking intervention, called BE KIND, on the LIPs' awareness of implicit bias in the Emergency

Department of a community hospital.

Methods

Due to the paucity of available literature concerning interventions to reduce implicit bias, this Quality Improvement (QI) project used a descriptive design to evaluate if LIPs found a perspective taking intervention to be feasible and useful in maintaining personal awareness of implicit bias when providing patient care. The proposed perspective taking intervention was called "BE KIND". This intervention stands for Be present, Engage the patient, Knowledge that implicit bias can affect patient outcomes, Inquire about the patient perspective/expectations, make No assumptions about the patient, and Determine a plan of care together. This intervention allowed providers to actively engage with the patient, avoid assumptions, and try to understand the patient's perspective.

To determine LIPs awareness of implicit bias, a pre-intervention survey was completed by participants. After the pre-intervention survey, participants completed a five-minute educational video that defined implicit bias, discussed the impact of implicit bias on patient outcomes, and educated participants about the BE KIND intervention. To evaluate LIP's perception of the feasibility and utility of the BE KIND intervention, a post-intervention survey was completed by the LIPs after they utilized the BE KIND intervention for thirty days in their primary clinical setting.

Definition of terms

BE KIND, a perspective taking intervention

Be present

Engage the patient

Knowledge that implicit bias can affect patient outcomes

Inquire about the patient perspective/expectations

No assumptions about the patient

Determine a plan of care together

Explicit bias: a conscious negative reaction that occurs when a person is confronted with someone that does not fit into their social group (Ross, 2014).

Implicit bias: an unconscious negative reaction that occurs when a person is confronted with someone that does not fit into his or her social group. This reaction can lead to unconscious assumptions about that other person based on learned stereotypes (Ross, 2014).

Perspective taking intervention: an intervention designed to help a person actively take the perspective of another person; to generate more empathy the person should ask themselves "how does that person feel" not "how would I feel in that person's situation" (Batson, Early, & Salvarani, 2016).

Description of the sample

The sample was obtained from LIPs that work in the Emergency Department of a community hospital in central Virginia. Inclusion criteria included employment at the main campus and credentialed status as a LIP (physicians, physician assistants, or nurse practitioners). Participants could have been full-time or part-time, have had any length of employment, and may have worked any shift in the Emergency Department. Exclusion criteria included employees that are non-healthcare personnel, registered nurses, licensed practical nurses, and patient care technicians. There were 23 eligible LIPs from the internal medicine group that admits from the ED (17 MD, 3 NP, and 3 PA) and 24 eligible LIPs from the ED group (19 MD, 3 NP, and 2 PA), for a total of 47 eligible LIPs (36 MD, 6 NP, and 5 PA).

Description of the setting

The setting was the emergency department of a large rural general medical and surgical hospital located in Charlottesville, VA, with a total of 158 beds. In 2016, there were 51,812 patients that visited the hospital's emergency room, 9,440 admissions to the hospital, 2,223 inpatient surgeries, and 5,790 outpatient surgeries (U.S. News, 2017). Institutional approval to conduct the study at this site can be found in Appendix A.

Procedures

IRB approval was obtained from the doctoral student's University and the practice site prior to the start of the study. There were three IRB addendums completed at the practice site due to alterations in the protocol. The first addendum was due to changes to the educational video that occurred after feedback from face validity testing. The second addendum was submitted due to changing the protocol start date from the day participants completed the pre-intervention survey to the day participants were consented. This is due to the fact participants could not receive emails generated from Qualtrics with individual links. This issue was resolved by creating individual links to the survey and embedding them in emails sent from the doctoral student's University email account. As this resolved the reason for changing the protocol, the third IRB addendum was completed to negate the second addendum. See Appendix B for copies of the IRB approval letters.

To recruit LIPs, the doctoral student attended two monthly staff meetings: the first in March 2018 with internal medicine providers that admit from the ED, and the second in May 2018 with providers that practice only in the ED. During these meetings, the doctoral student presented the concept of the BE KIND intervention project. The presentation included a description of implicit bias, the purpose of the study, and a description of the study outline. The doctoral student also asked for participating providers to discuss the project with any interested LIP in

their departments in an effort to recruit through snowball sampling. At the meetings, the doctoral student obtained interested LIP's preferred names and email addresses.

Interested LIPs were sent an email (see Appendix C) to determine a time to meet to obtain informed consent and give the participant the BE KIND laminated card to be attached to their ID badge (see Figure 2).

After obtaining informed consent, participants were sent an email (see Appendix C) with a link to a pre-intervention survey (see Figure 3) and a five-minute instructional video on implicit bias and the BE KIND intervention. The survey and the educational video were intentionally kept short to accommodate LIPs that had other demands on their time outside of participating in a study. The day that participants completed the pre-intervention survey acted as Day 1 of project participation. At the end of thirty days, participating LIPs were sent an email (see Appendix C) with a link to a post-intervention survey (see Figure 4). The post-intervention survey was used to evaluate the feasibility and usability of the BE KIND intervention.

A five-dollar gift card to a local coffee shop was offered to the LIPs for completing the post-intervention survey.

Measures

There were two primary outcomes for the scholarly project: the LIP's awareness of implicit bias and the LIP's opinion of the feasibility and usability of the BE KIND intervention. These measures were obtained from two separate surveys. The first was obtained from the pre-intervention survey (See Figure 3) using a Likert scale and the second was obtained from compiling data from several questions in the post-intervention survey (See Figure 4). Secondary outcomes for the scholarly project included the LIPs intent to change practice and use the BE KIND intervention in future practice. These data were obtained from one question in the post-

intervention survey (See Figure 7).

The pre-intervention survey was developed to collect demographic information about the study participants including age, sex, race, license type, years of practice as a LIP, and years of practice in the Emergency Department. This information was chosen because there is no strong evidence in the literature that correlates any specific demographic to implicit bias. The goal of colleting this data was to examine any connections between demographic information and survey outcomes.

The post-intervention survey was developed by the doctoral student using a combination of the survey developed by Clementz et al. to test the outcome of the anthropological study and the QQ-10 survey developed by Moores et al. to evaluate the feasibility and utility of a patient questionnaire (Clementz et al., 2017; Moores, Jones, & Radley, 2012). The post-intervention survey consisted of 8 questions. Two questions addressed the frequency the LIPs used the BE KIND intervention over the thirty days. Two questions used a Likert scale to evaluate the LIPs view of the usefulness of the BE KIND intervention. Two questions measured the feasibly of using the BE KIND intervention in practice. One question addressed the LIPs intent to use the BE KIND intervention in the future. The final question was open-ended and allowed the respondent to provide feedback on how to improve the BE KIND intervention.

The pre-intervention survey, educational video, and post-intervention survey were evaluated for face validity by three peer reviewers prior to implementation of the study. The reviewers included the author's clinical advisor, another academic professor, and the site mentor, all of whom were on the study advisory committee.

Protection of human subjects

The study was approved by the Institutional Review Board (IRB) at the practice site and the

IRB at the doctoral student's university. Approval letters can be found in Appendix B. Consent to participate in the project was obtained in person; see Appendix D for complete consent form. Names and email addresses were collected during LIP recruitment to communicate with participating LIPs and to send surveys. Names and email addresses are not included in the data analysis. It should also be noted that the focus of the study is on the utility and feasibility of the BE KIND intervention, not on LIPs attitudes about implicit bias. Any sensitive data was stored on University of Virginia firewall-protected databases.

Results

There were eight eligible LIPs in attendance at the March meeting, five of whom indicated interest to participate in the study and four of those were consented for the study. An additional LIP contacted the doctoral student and indicated interest in participating and was consented. There were six eligible LIPs in attendance at the May meeting, four of whom indicated interest to participate in the study and two of those were consented for the study. In total, 7 LIPs, or 14.9% of the target population, were consented (6 MD and 1 PA) to participate in the scholarly project.

Table 1 shows the sociodemographic characteristics of the sample obtained from the pre-intervention survey. The age range was 30-61 years with a mean of 45.14 years (SD 9.96) and median of 43 years. The gender was predominantly male at 71.4%. Reported race was 100% white/Caucasian. Licensure was 85.7% Medical Doctors and 14.3% Physician Assistants with no Nurse Practitioners participating in the study. The total experience for the group of LIPs ranged from 3-25 years with a mean of 14.14 years (SD 7.03) and median of 15 years, and the experience in their current role is 3-18 years with a mean of 12.57 years (SD 5.38) and median of 15 years. The self-reported awareness of implicit bias was 14.3% no awareness, 14.3% low,

71.4% moderate, and none reported having high awareness. None of the participants reported any prior education about implicit bias.

All seven of the participants completed the post-intervention survey. Of the seven, five reported using the BE KIND intervention and two did not use the intervention. Of the five participants that used the BE KIND intervention, two reported using BE KIND once a week, one reported using BE KIND once a shift, and two reported using BE KIND with most patients. Four participants agreed they would use BE KIND in future practice and one participant strongly agreed to use BE KIND in future practice. See Table 2 for full description.

For three of the questions measuring usefulness and feasibility of the BE KIND intervention (the BE KIND intervention helped me to be mindful of implicit bias during patient interactions, the BE KIND intervention was useful to my practice overall, and the BE KIND intervention is relevant to my practice), four participants agreed and one participant strongly agreed with all three statements. The fourth question (the BE KIND intervention was easy to use in my practice), one participant did not answer, one neither agreed or disagreed, two agreed, and one strongly agreed. See Table 3 for these results.

No relationships were found between demographic data and reported usage, perceived feasibility/usability, and intent to change practice though this was primarily due to the low power of the study.

One respondent indicated that they would recommend more education about implicit bias and have additional relevant examples of how implicit bias effects patient outcomes.

Discussion

Participants reported no awareness to moderate awareness of implicit bias. While BE KIND was not used by all participants, participants that used the intervention found it useful and

feasible in their environment. These providers also reported intent to use BE KIND in the future.

Recruitment for this project presented several challenges. First, the doctoral student encountered difficulty in contacting key individuals in the organization. The doctoral student was not an employee at the clinical site, so contacting the appropriate individuals to facilitate recruitment was difficult. There were also repeated attempts to contact key individuals before feedback was received. These delays lead to a shorter recruitment phase which could have negatively impacted recruitment.

This study was conducted in a clinical environment, so study participation competed with other daily tasks that LIPs must complete. This contrasts with the school environment from the five studies in the review of literature. In two of the five studies, participants were required to participate for course credit or testing purposes (Blatt et al., 2010; Devine et al., 2012). In the Clementz study, the participants were required to complete the study as part of the Primary Care Education Transforming Outpatient Care course (Clementz et al., 2017). In all three of these studies, the recruitment rate was 100% because of these factors. The Drwecki study recruited from a student population and offered extra credit to the psychology student group and $20 monetary incentive to the APN student group (Drwecki et al., 2010); they did not report on the size of the target population, so the recruitment rate is unknown. In the Matharu study, email was used to recruit from a study population of 994 with the promise of a $25 monetary incentive if they agreed to participate. They recruited a total of 136 participants (Matharu et al., 2014) or 13.7% of their target population. In the current study, the target population was 47. Given that seven LIPs participated, this recruitment rate of 14.9% was comparable to the Matheru study. Since this is a comparable percentage, recruitment should be opened to additional study settings, such as other emergency departments, to increase the sample size in hopes of obtaining

statistically significant outcomes.

No advanced practice nurses (APNs) participated in this study. This could be related to the fact that there were only six eligible APNs when compared to the 36 eligible MDs. It could also be related to the fact that there were no APNs in attendance at monthly meetings. The lack of face-to-face time for the doctoral student to discuss the project with the APNs most likely had an impact on the recruitment of APNs.

In this sample, no participant reported having any education about implicit bias in the last two years. In reviewing the literature, many authors state that education about implicit bias is needed but, of the five intervention studies, none asked participants about prior education related to implicit bias.

Strengths of the study included the clinical setting, recruitment of actual LIPs, testing of an innovative perspective taking intervention, and low respondent burden. This was a descriptive study that allowed LIPs to provide feedback to improve the BE KIND intervention. Limitations of the study were the use of a convenience sample, no control, no randomization, and no APNs. The results cannot be generalized to LIPs outside the Emergency Department of this medical center.

In reflection, it would have been helpful to ask a question about why LIPs did not use the BE KIND intervention. Future studies of perspective taking interventions should ask this question.

Nursing is committed to holistic evidence-based care that is free of bias. The effects of implicit bias are exacerbated by constrained time limits (Stepanikova, 2012) and a high cognitive load (Burgess et al. 2014), such as the type of environment typically found in the ED. One way to help avoid bias would be to form patient-provider relationships (Blair et al., 2014); however, this can be difficult in the ED environment where a provider has fifteen minutes to care for a

stranger. Perspective taking has the potential to help providers be more aware of implicit bias as a basis for treatment. Providers that utilized BE KIND in this study found it to be a useful and feasible perspective taking intervention in the ED environment. The use of perspective taking interventions, such as BE KIND, may reduce implicit bias in care settings such as EDs.

Conclusions

The low power of the study resulted in inconclusive findings about relationships between demographic data and reported usage of BE KIND, perceived feasibility/usability, and intent to change practice. While BE KIND was not used by all participants, participants that used the intervention found it to be useful and feasible. A larger study sample could yield more data that would be helpful in determining if BE KIND is a viable tool that LIPs can use to raise awareness and reduce or remove implicit bias in their practice.

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Table 1

Demographic Characteristics Survey (N=7)

	N	Percent (%)	Range	Mean (*SD*)	Median
Age (years)	7		30-61	45.14 (9.96)	43
Gender					
Female	2	28.6			
Male	5	71.4			
Race					
White/Caucasian	7	100.0			
License					
Medical Doctor	6	85.7			
Physician Assistant	1	14.3			
Experience					
Total	7		3-25	14.14 (7.03)	15
Current position	7		3-18	12.57 (5.38)	15
Awareness of implicit bias					
No awareness	1	14.3			
Low	1	14.3			
Moderate	5	71.4			
High	0	0.0			
Prior implicit bias education					
No	7	100.0			
Yes	0	0.0			

Table 2

Use of BE KIND (N=7)

	N	Percent (%)
Did you use BE KIND over the 30-day period?		
No	2	28.6
Yes	5	71.4
How often did you use BE KIND in the last 30 days?		
Only once	0	0.0
Once a week	2	40.0*
Once a shift	1	20.0*
With most patients	2	40.0*
With every patient	0	0.0
I plan to use the BE KIND intervention in future practice.		
Strongly disagree	0	0.0
Disagree	0	0.0
Neither agree or disagree	0	0.0
Agree	4	80.0*
Strongly agree	1	20.0*

* Percentage of those that completed the entire post-intervention survey, excluded those that did not use BE KIND or did not respond to the post-intervention survey.

Table 3

Usefulness and Feasibility of BE KIND (N=5)

	N	Percent (%)
BE KIND helped me to be mindful of implicit bias during patient interactions.		
Strongly disagree	0	0.0
Disagree	0	0.0
Neither agree or disagree	0	0.0
Agree	4	80.0
Strongly agree	1	20.0
The BE KIND intervention was useful to my practice overall		
Strongly disagree	0	0.0
Disagree	0	0.0
Neither agree or disagree	0	0.0
Agree	4	80.0
Strongly agree	1	20.0
The BE KIND intervention is relevant to my practice		
Strongly disagree	0	0.0
Disagree	0	0.0
Neither agree or disagree	0	0.0
Agree	4	80.0
Strongly agree	1	20.0
The BE KIND intervention was easy to use in my practice		
Strongly disagree	0	0.0
Disagree	0	0.0

Neither agree or disagree	1	20.0
Agree	2	40.0
Strongly agree	1	20.0
Did not respond	1	20.0

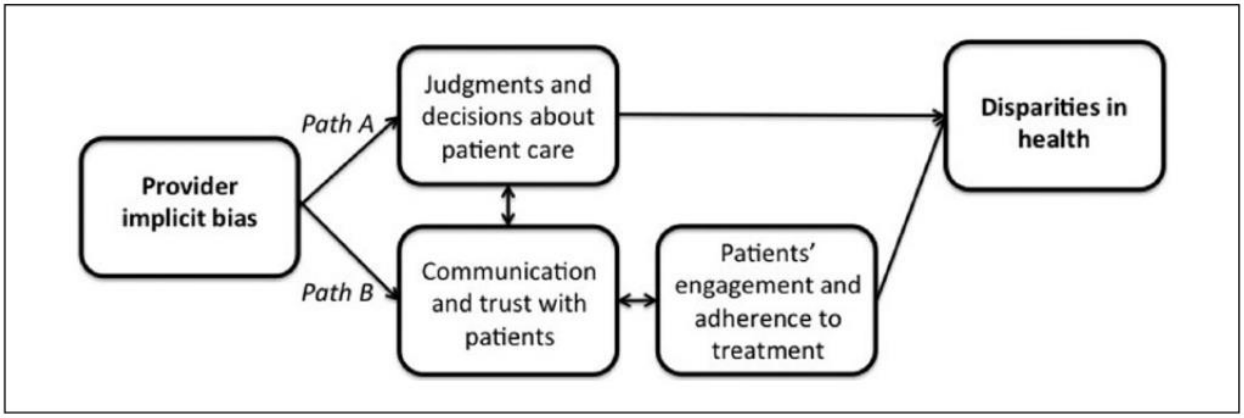

Figure 1. Model proposed by Zestcott et al., 2016 to describe how healthcare provider's implicit bias may cause healthcare disparities (Zestcott et al., 2016).

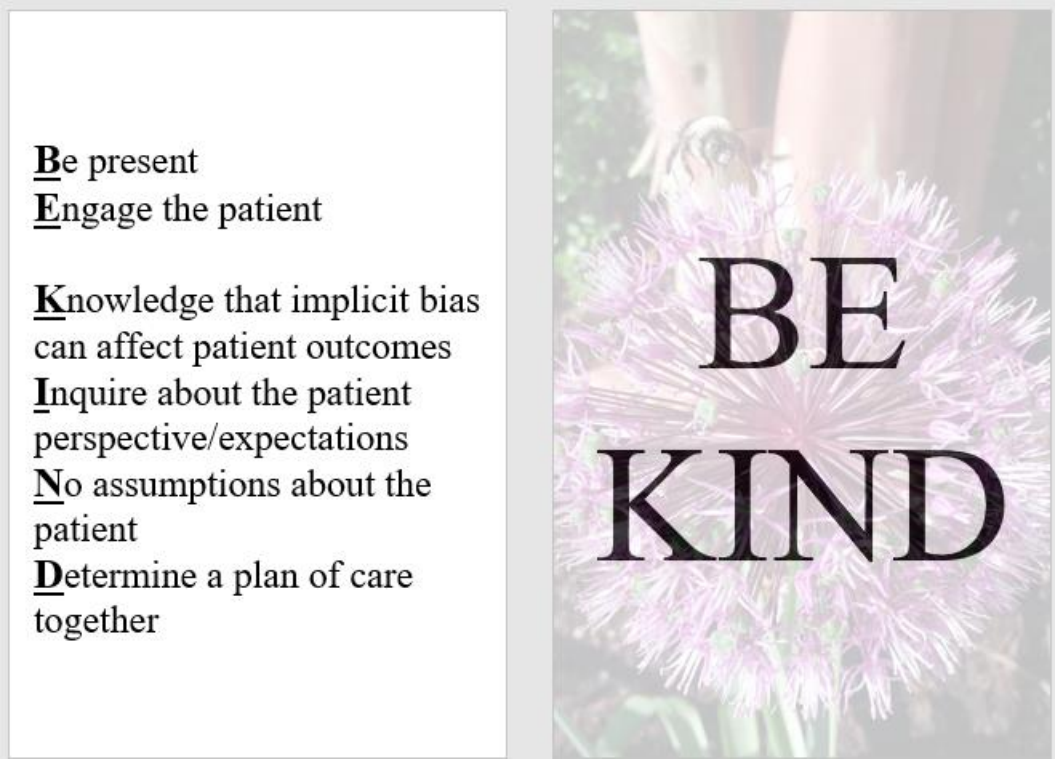

Figure 2. Image of the BE KIND perspective taking intervention card given to participants.

Pre-intervention survey

Thank you for participating in the evaluation of the feasibility and utility of a perspective taking intervention known as BE KIND. Completion of this initial survey is your consent to participate in this study. A post survey will be emailed 30 days from today. Please answer the following questions.

1. Age at the time of survey
2. Sex you identify as
3. Race you identify as
4. Current License(s) you posses
5. Years of practice as a provider
6. Years of practice at the Martha Jefferson Emergency Department
7. Use the following scale to rate your level of awareness of implicit bias:
No awareness (1), low (2), moderate (3), high (4)

8. Have you completed any type of education about implicit bias in the last two years?

If so was it mandatory?

Thank you for your participation.

Figure 3. Pre-intervention survey

Post-intervention survey

1. Did you use BE KIND over the 30-day period?
Yes.
No. If you answered no please stop here. Thank you for your participation

2. How often did you use BE KIND in the last 30 days?
Only once (1), once a week (2), once a shift (3), with most patients (4), with every patient (5)

3. BE KIND helped me to be mindful of implicit bias during patient interactions.
Strongly disagree (1), disagree (2), neither agree or disagree (3), agree (4), strongly agree (5)

4. The BE KIND intervention was useful to my practice overall
Strongly disagree (1), disagree (2), neither agree or disagree (3), agree (4), strongly agree (5)

5. The BE KIND intervention is relevant to my practice
Strongly disagree (1), disagree (2), neither agree or disagree (3), agree (4), strongly agree (5)

6. The BE KIND intervention was easy to use in my practice
Strongly disagree (1), disagree (2), neither agree or disagree (3), agree (4), strongly agree (5)

7. I plan to use the BE KIND intervention in future practice
Strongly disagree (1), disagree (2), neither agree or disagree (3), agree (4), strongly agree (5)

8. What if anything would you change about the BE KIND intervention to make it more useful in practice?

Thank you for your participation.

Figure 4. Post-intervention survey developed from Clementz et al. study (2017) and the QQ-10 survey (Clementz et al., 2017; Moores, Jones, & Radley, 2012).

Appendix A

Site agreement:

To whom it may concern,

Ashley Weimorts has permission to implement the BE KIND intervention at the Sentara Martha Jefferson Hospital Main Campus emergency department in the Spring of 2018.

Warm Regards,

Judy Kauffman, DNP, MSN, RN, CNN
Director, Patient Care Services
Sentara Martha Jefferson Hospital
500 Martha Jefferson Drive
Charlottesville, VA 22911
jckauffm@sentara.com
Office: 434-654-5226

SENTARA MAGNET RECOGNIZED AMERICAN NURSES CREDENTIALING CENTER

Appendix B

UNIVERSITY of VIRGINIA

OFFICE OF THE VICE PRESIDENT FOR RESEARCH
INSTITUTIONAL REVIEW BOARD FOR THE SOCIAL AND BEHAVIORAL SCIENCES

In reply, please refer to: Project # 2018-0084-00

March 15, 2018

Ashley Weimorts
Clareen Wiencek
Graduate Program
486 Rolkin Rd.
Charlottesville, VA 22911

Dear Ashley Weimorts and Clareen Wiencek:

The Institutional Review Board for the Social and Behavioral Sciences has approved your research project entitled "Provider Awareness of Implicit Bias and their Evaluation of the Feasibility and Utility of a Perspective Taking Intervention." You may proceed with this study. Please use the enclosed Consent Form(s) as the master for copying forms for participants.

This project # 2018-0084-00 has been approved for the period March 15, 2018 to March 14, 2019. If the study continues beyond the approval period, you will need to submit a continuation request to the Review Board. If you make changes in the study, you will need to notify the Board of the changes.

Sincerely,

Tonya R. Moon, Ph.D.
Chair, Institutional Review Board for the Social and Behavioral Sciences

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SENTARA

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INSTITUTIONAL REVIEW BOARD at MARTHA JEFFERSON HOSPITAL

CERTIFICATE OF APPROVAL
BY Expedited REVIEW

IRB #: 18-003

ABBREVIATED TITLE: Provider Awareness of Implicit Bias and their Evaluation of the Feasibility and Utility of a Perspective Taking Intervention.

PRINCIPAL INVESTIGATOR: Ashley Weimorts

REVIEWER ACTION DATE: 2.19.2018

IRB REVIEW STATUS: Expedited Review by IRB Chair

APPROVAL INCLUDES:
- Protocol Version 9.6.2017
- Consent 9.6.2017

STATUS OF PROTOCOL: Open

EXPIRATION DATE: 2.18.2019
(For continuing reviews ≤364 days)

This is to certify that the information contained herein is true and correct as reflected in the records of the Martha Jefferson Hospital Institutional Review Board. **WE CERTIFY THAT MJH IRB IS IN FULL COMPLIANCE WITH HHS RULES AND REGULATIONS**. Members of the IRB will abstain from voting when presenting a protocol for approval.

Faye Satterly 2/19/18

Faye Satterly, RN, BSN, MFA Date
Chair, Institutional Review Board
Martha Jefferson Hospital
Charlottesville, Virginia 22902
434-982-8405

For Use by IRB Office **Initial: 6/04; Revised 10/04**
MJH IRB Protocol File #:

SENTARA®

Sentara Martha Jefferson Hospital
500 Martha Jefferson Dr.
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Phone: 434.654.8390
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INSTITUTIONAL REVIEW BOARD at MARTHA JEFFERSON HOSPITAL Center

CERTIFICATE OF APPROVAL
BY Expedited REVIEW

IRB #: 18-003

ABBREVIATED TITLE: Provider Awareness of Implicit Bias and their Evaluation of the Feasibility and Utility of a Perspective Taking Intervention.

PRINCIPAL INVESTIGATOR: Ashley Weimorts

REVIEWER ACTION DATE: 3.19.2018

IRB REVIEW STATUS: Expedited Review by IRB Chair

APPROVAL INCLUDES:
- Protocol Version revision 9.6.2017
- Consent revision 9.6.2017
- Slide revision

STATUS OF PROTOCOL: Open

EXPIRATION DATE: 2.18.2019
(For continuing reviews ≤364 days)

This is to certify that the information contained herein is true and correct as reflected in the records of the Martha Jefferson Hospital Institutional Review Board. **WE CERTIFY THAT MJH IRB IS IN FULL COMPLIANCE WITH HHS RULES AND REGULATIONS**. Members of the IRB will abstain from voting when presenting a protocol for approval.

Faye Satterly 3/19/18

Faye Satterly, RN, BSN, MFA — **Date**
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For Use by IRB Office — **Initial: 6/04; Revised 10/04**
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INSTITUTIONAL REVIEW BOARD at MARTHA JEFFERSON HOSPITALter Center

CERTIFICATE OF APPROVAL
BY Expedited REVIEW

IRB #: 18-003

ABBREVIATED TITLE: Provider Awareness of Implicit Bias and their Evaluation of the Feasibility and Utility of a Perspective Taking Intervention.

PRINCIPAL INVESTIGATOR: Ashley Weimorts

REVIEWER ACTION DATE: 3.28.2018

IRB REVIEW STATUS: Expedited Review by IRB Chair

APPROVAL INCLUDES:
- Protocol Version revision #2 9.6.2017

STATUS OF PROTOCOL: Open

EXPIRATION DATE: 2.18.2019
(For continuing reviews ≤364 days)

This is to certify that the information contained herein is true and correct as reflected in the records of the Martha Jefferson Hospital Institutional Review Board. **WE CERTIFY THAT MJH IRB IS IN FULL COMPLIANCE WITH HHS RULES AND REGULATIONS**. Members of the IRB will abstain from voting when presenting a protocol for approval.

3/28/18
Date

Faye Satterly, RN, BSN, MFA
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For Use by IRB Office **Initial: 6/04; Revised 10/04**
MJH IRB Protocol File #:

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INSTITUTIONAL REVIEW BOARD at MARTHA JEFFERSON HOSPITAL

CERTIFICATE OF APPROVAL
BY Expedited REVIEW

IRB #: 18-003

ABBREVIATED TITLE: Provider Awareness of Implicit Bias and their Evaluation of the Feasibility and Utility of a Perspective Taking Intervention.

PRINCIPAL INVESTIGATOR: Ashley Weimorts

REVIEWER ACTION DATE: 4.18.2018

IRB REVIEW STATUS: Expedited Review by IRB Chair

APPROVAL INCLUDES:
- Protocol Version revision #3 9.6.2017

STATUS OF PROTOCOL: Open

EXPIRATION DATE: 2.18.2019
(For continuing reviews ≤364 days)

This is to certify that the information contained herein is true and correct as reflected in the records of the Martha Jefferson Hospital Institutional Review Board. **WE CERTIFY THAT MJH IRB IS IN FULL COMPLIANCE WITH HHS RULES AND REGULATIONS**. Members of the IRB will abstain from voting when presenting a protocol for approval.

Faye Satterly 4/18/18

Faye Satterly, RN, BSN, MFA **Date**
Chair, Institutional Review Board
Martha Jefferson Hospital
Charlottesville, Virginia 22902
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For Use by IRB Office **Initial: 6/04; Revised 10/04**
MJH IRB Protocol File #:

Appendix C

Emails:

Email to invite providers to complete informed consent:

> Thank you for your interest in participating in my scholarly project. I am very excited to be working with you. Prior to beginning, I need to obtain informed consent in person. Please let me know when and where it would be most convenient for me to come and meet with you.
>
> During the meeting I will also be providing you with a BE KIND intervention card that you can attach to your ID badge. After the meeting I will send you an email with a link to the pre-intervention survey and the educational video.
>
> Thank you,
> Ashley Weimorts

Email to providers with pre-intervention survey and educational video links:

> Thank you for agreeing to participate in my study to evaluate the utility and feasibility of a perspective taking intervention in the emergency department at Sentara Martha Jefferson Hospital.
>
> This is the email with the pre-intervention survey and a five-minute educational video. The video consists of information about implicit bias and a perspective taking intervention to combat that bias known as the BE KIND intervention. Please complete the survey prior to watching the education video.
>
> Qualtrics Survey Link: Individual link generated from Qualtrics
>
> Video Link: https://youtu.be/9zo5JC7WAZo
>
> Please attach your laminated BE KIND card to your ID badge for a quick reference while participating in the study.
>
> Thirty days after completing the initial survey and video I will send you a brief post-intervention survey designed to evaluate utility and feasibility of the BE KIND intervention.
>
> Participants will receive a five-dollar gift card from Greenberry's coffee shop after completing the post-intervention survey.
>
> Thank you for participating in this study.

Sincerely,
Ashley Weimorts

Email to complete post-intervention survey:

Please complete the following post-intervention survey.

Follow this link to the Survey: Individual link generated from Qualtrics

Thank you for your participation in this study. Please let me know a good time and place to meet so I can give you the five-dollar gift card from Greenberry's coffee shop.

Sincerely,
Ashley Weimorts

Appendix D

Provider Awareness of Implicit Bias and their Evaluation of the Feasibility and Utility of a Perspective Taking Intervention

Participant Consent

You are being asked to take part in a research study about implicit bias in the healthcare setting and trying to find an intervention that is useful in being mindful of this bias when interacting with patients. Your decision to participate in this research study is completely voluntary and you should take your time to make your decision about whether to participate. You should feel free to discuss it with your family and friends.

Why Is This Study Being Done?

The purpose of this study is to add to the literature by evaluating the feasibility and utility of a perspective taking intervention on the licenced independent practitioner's (LIP) awareness of implicit bias.

How Many People Will Take Part in the Study?

Up to 25 participants will be included in this study.

What Will Happen If I Take Part in This Research Study?

If you agree to participate, you will complete a pre-intervention survey and a brief educational video about implicit bias and the BE KIND perspective taking intervention. You will then use the intervention as needed over the next 30 days. At the end of the 30 day period you will complete a post-intervention survey to evaluate the feasibility and utility of the BE KIND intervention

How Long Will I Be in the Study?

Study participation is 30 days.

What Are the Risks of the Study?

The risk to participatant includes psychological discomfort related to discussing an emotional charged subject, implicit bias.

Are There Benefits to Taking Part in the Study?

There are no direct benefits to you for being in this research study. The results of this study may contribute to the development of strategies to reduce implicit bias.

What Other Choices Do I Have If I Do Not Take Part in This Study?

You have the option is to decline to participate in this study.

Will My Medical Information Be Kept Private?

The data about your participation in this study will be protected. It will be used only for research, as allowed by state and federal laws. Your information will not be connected to your name and will be saved on a secured University of Virginia server. Your name and any identity information will not be used in any reports. Efforts will be made to keep your personal information confidential. We cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law.

If the information learned from this study is published in a medical journal, you will not be identified by name or in any other way.

What Are The Costs of Taking Part in This Study?

Be specific about costs to the patient. Also be sure to include the following statement if there will be no reimbursement.

Participants who complete both evaluations will receive a five-dollar gift card from a local coffee shop as an incentive.

What Happens if I Am Injured Because I Took Part in This Study?

There is no risk of injury related to this project.

What Are My Rights as a Participant?

Your participation in the study is completely voluntary. You have the right to withdraw from the study at any time without penalty. If you decide to withdraw or not participate in the study it will have no effect on your treatment.

How to withdraw from the study:

If you want to withdraw from the study, there is no penalty to you for withdrawing. Please discuss your desire to withdraw with Ashley Weimorts. You will need to also send Ashley Weimorts your request to withdraw in writing. You may send your written request to:

Ashley Weimorts

Anw5sp@virginia.edu

(804) 426-5048

Who Can Answer My Quesitons About The Study?

You can talk to the researcher about any questions or concerns you have about this study. Her contact information is:

Ashley Weimorts

Anw5sp@virginia.edu

(804) 426-5048

For questions about your rights while taking part in this study, contact the Sentara Martha Jefferson Hospital Institutional Review Board Chair, Faye Satterly, RN. Her contact information is:

Faye Satterly, RN, BSN, MFA

Chair, Institutional Review Board

Sentara Martha Jefferson Hospital

500 Martha Jefferson Drive

Charlottesville, VA 22911

(434) 654-8405

(434) 654-4539 (fax)

Alternatively, for questions about your rights while taking part in this study, contact the Universtiy of Virginia Hospital Institutional Review Chair, Tonya R. Moon, Ph.D. Her contact information is:

Tonya R. Moon, Ph.D.

Chair, Institutional Review Board for the Social and Behavioral Sciences

One Morton Drive, Suite 500, University of Virginia

P.O. Box 800392

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After you agree to be in the study and sign the consent form, you will get a copy of the signed consent form. You may also request a copy of the protocol (full study plan).

Consent and Signature

You are deciding whether or not to take part in this study. If you sign, it means that you have decided to volunteer to take part in this study, and that you have read and understood all the information on this form.

I agree to participate in the study described above.

Printed Name of Patient Signature of Patient Date

Printed Name of Primary Investigator Signature of Primary Investigator Obtaining Consent Date

Appendix E

A draft of the manuscript submitted to The Journal for Nurse Practitioners.

Provider Awareness of Implicit Bias

Ashley Weimorts, DNP, ACNP-BC
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Abstract

Purpose: Evaluate the feasibility and utility of a perspective taking intervention, BE KIND, on providers' awareness of implicit bias.

Methods: A pre/post-intervention survey was administered to providers in the Emergency Department of a community hospital after completing a short web-based module.

Results: Of the seven providers who participated, awareness of implicit bias was low to moderate. None reported having any education about the topic. Five participants used BE KIND and agreed or strongly agreed to use it in the future.

Conclusions: Providers found BE KIND to be useful and feasible, but the low power of the study prevented additional analysis.

Key words: Implicit bias, health disparities, perspective taking, providers, BE KIND

Provider Awareness of Implicit Bias

The Institute of Medicine's (IOM) 2002 report, "Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care," stated that there are racial and ethnic health disparities even when the patient's age, income, illness severity, and insurance status are comparable.[1] In addition to this expert report, other studies have found similar disparities related to sex[2] and sexual orientation.[3] Health disparities are such an important topic that the U.S. Department of Health and Human Services launched the Healthy People 2020 initiative in December 2010. One of the four overarching goals was to establish health equality and eliminate healthcare disparities by the year 2020.[4]

Implicit bias may contribute to health disparities.[5] Implicit bias is an unconscious negative reaction that occurs when a person is confronted with someone that does not fit into their social group. When confronted with new situations, people will depend on past experiences in similar situations to make decisions about the new situation. This reaction can lead to unconscious assumptions about that other person based on learned stereotypes.[6] Implicit bias is different than explicit bias. Whereas implicit bias is unconscious, explicit bias is a conscious negative reaction to persons not fitting into their social group.[6] Implicit bias is a ubiquitous phenomenon among mankind and healthcare providers are not immune to its effect.[7] Like members of the general population, healthcare providers have been found to harbor implicit bias for many characteristics including race/ethnicity, gender, socioeconomic status (SES), age, mental illness, weight, drug abuse, and disabilities.[7]

Implicit Bias in Healthcare

According to Zestcott et al. (2016), implicit bias can affect patient outcomes through two different pathways: directly, by influencing decisions about patient care and/or indirectly, by

affecting communication between healthcare provider and patient.[5] An example of a direct effect is when providers choose to prescribe fewer thrombolytics to African American patients when compared to Caucasian patients.[8] An example of an indirect effect is the patient's perception of discrimination from providers with implicit anti-black bias causing the patient to have a higher incidence of hypertension.[9]

The negative effect of implicit bias on choosing appropriate treatment is exacerbated when the healthcare provider is constrained by time limits[10] or when under a high cognitive load.[11] A healthcare provider with a history of role models who exhibit prejudice or who treat patients with a lack of respect increased the implicit bias of that healthcare provider.[12] Factors that appear to be protective against the effects of implicit bias in healthcare include forming a relationship with patients as is found in primary care[13], following a rigorous treatment algorithm as is seen in acute care surgical situations[14], experiencing positive patient/provider interactions, and having role models that exhibit no bias against patient populations.[12]

Considering the prevalence of implicit bias and evidence that implicit bias is associated with real or potentially adverse patient outcomes, interventions aimed at providers are needed to reduce implicit bias. Perspective taking interventions and education are two interventions reported in the literature. Perspective taking is an intervention designed to help a person actively take the perspective of another person. People should ask themselves "how does that person feel" not "how would I feel in that person's situation" to feel more empathy toward others.[15]

Gaps in the literature

There is a gap in the study of interventions to reduce implicit bias among providers. While there are studies that suggest how to approach implicit bias in healthcare settings, few studies have tested interventions in a clinical setting. Three studies showed that perspective taking

interventions increased patient satisfaction scores,[16] effected race treatment bias,[17] and decreased explicit bias but not implicit bias.[18] However, these three studies were conducted with students not providers. Devine et al. (2012) performed a study on psychology students that employed education and habit breaking interventions including stereotype replacement, counter-stereotypic imaging, individuation, perspective taking, and increasing opportunities for contact. Results of this study showed a measurable reduction in implicit bias.[19] A qualitative study used an anthropological education intervention to increase cultural competency of healthcare providers.[20] Three of these studies relied on the ability of the healthcare provider to take the perspective of someone else[16, 17, 18], one used education and habit breaking,[19] and one discussed the importance of education.[20]

The purpose of this study was to evaluate the feasibility and utility of a perspective taking intervention, called BE KIND, on the Licensed Independent Practitioner (LIP)s' awareness of implicit bias in the Emergency Department of a community hospital.

Project/Research Question

What is the awareness of implicit bias among LIPs working in an emergency room setting in a community hospital? After participation in an online educational intervention about implicit bias, what is the LIP's evaluation of the feasibility and utility of a perspective taking intervention, BE KIND, in their environment?

Methods

Due to the paucity of available literature concerning interventions to reduce implicit bias, this quality improvement (QI) project used a descriptive design based on Lewin's Change Theory of unfreezing, movement, and refreezing.[21] The participants completed a pre-intervention survey, followed by a brief web-based module on the perspective taking intervention, BE KIND, and completed a post-intervention survey after 30 days. The proposed perspective taking intervention was called "BE KIND". This intervention stands for Be present, Engage the patient, Knowledge that implicit bias can affect patient outcomes, Inquire about the patient perspective/expectations, make No assumptions about the patient, and Determine a plan of care together. This intervention allowed providers to actively engage with the patient, avoid assumptions, and try to understand the patient's perspective.

Description of the sample/setting

The sample was obtained from LIPs that work in the Emergency Department of a large rural, medical-surgical hospital. Inclusion criteria included employment at the main campus and credentialed status as a LIP (physicians, physician assistants, or nurse practitioners). Participants could have been full-time or part-time, have had any length of employment, and may have worked any shift in the Emergency Department. Exclusion criteria included employees that are non-healthcare personnel, registered nurses, licensed practical nurses, and patient care technicians. There were 47 eligible LIPs (36 MD, 6 NP, and 5 PA).

Procedures

IRB approval was obtained from the author's university and the practice site prior to the start of the study.

To recruit LIPs, the author attended two monthly staff meetings. At these meetings, the

author described the purpose of the project, the study methods, and the use of perspective taking interventions to reduce implicit bias. Providers were asked to discuss the project with any interested LIP in their departments in an effort to recruit through snowball sampling. At the meetings, the author obtained interested LIP's preferred names and email addresses and arranged a time to obtain study consent.

Informed consent was obtained in person and the participating LIPs were given a BE KIND laminated card to be attached to their ID badge (see Figure 1).

After obtaining informed consent, participants were sent an email with a link to a pre-intervention survey and a five-minute instructional video on implicit bias and the BE KIND intervention. The day that participants completed the pre-intervention survey acted as Day 1 of project participation. At the end of thirty days, participating LIPs were sent an email with a link to a post-intervention survey. The post-intervention survey was used to evaluate the feasibility and usability of the BE KIND intervention.

A five-dollar gift card to a local coffee shop was offered to the LIPs for completing the post-intervention survey.

Measures

There were two primary outcomes of this project: the LIP's awareness of implicit bias and the LIP's opinion of the feasibility and usability of the BE KIND intervention. The first was obtained from the pre-intervention survey using a Likert scale and the second was obtained from the post-intervention survey. Secondary outcomes for the scholarly project included the LIPs intent to change practice by utilizing BE KIND in future practice. These data were obtained from a question in the post-intervention survey.

The pre-intervention survey collected demographic data: age, sex, race, license type, years

of practice as a LIP, and years of practice in the Emergency Department. This information was chosen because there is no strong evidence in the literature that correlates any specific demographic to implicit bias.

The post-intervention survey was developed by the author using a combination of the survey developed by Clementz et al. to test the outcome of the anthropological study[20] and the QQ-10 survey developed by Moores et al. to evaluate the feasibility and utility of a patient questionnaire.[22] The post-intervention survey consisted of 8 questions. Two questions addressed the frequency the LIPs used the BE KIND intervention over the thirty days. Two questions used a Likert scale to evaluate the LIPs view of the usefulness of the BE KIND intervention. Two questions measured the feasibly of using the BE KIND intervention in practice. One question addressed the LIPs intent to use the BE KIND intervention in the future. The final question was open-ended and allowed the respondent to provide feedback on how to improve the BE KIND intervention. See figure 2 for the complete survey.

Prior to implementation of the study, the pre-intervention survey, educational video, and post-intervention survey were evaluated for face validity by three peer reviewers. Slight revisions were made during this process.

Protection of human subjects

The study was approved by the Institutional Review Board (IRB) at the practice site and the IRB at the author's university. Consent to participate in the project was obtained in person per IRB requirements. Names and email addresses were collected during LIP recruitment to communicate with participating LIPs and send surveys but were not included in the data analysis. Any sensitive data was stored on secure, firewall-protected databases.

Results

Seven LIPs, or 14.9% of the target population, consented to participate in the project. The sociodemographic characteristics of the sample obtained from the pre-intervention survey can be found in Table 1. The age range was 30-61 years with a mean of 45.14 years (SD 9.96) and median of 43 years. The sample was predominantly male at 71.4% and 100% Caucasian. Licensure was 85.7% Medical Doctors and 14.3% Physician Assistants with no Nurse Practitioners participating in the study. The total experience for the group of LIPs ranged from 3-25 years with a mean of 14.14 years (SD 7.03) and median of 15 years, and the experience in their current role is 3-18 years with a mean of 12.57 years (SD 5.38) and median of 15 years. The self-reported awareness of implicit bias was 14.3% no awareness, 14.3% low, 71.4% moderate, and none reported having high awareness. None of the participants reported any prior education about implicit bias.

All seven of the participants completed the post-intervention survey. Of the seven, five reported using the BE KIND intervention. Of the five participants that used the BE KIND intervention, two reported using BE KIND once a week, one reported using BE KIND once a shift, and two reported using BE KIND with most patients. Four participants agreed and one participant strongly agreed that they would use BE KIND in future practice (Table 2).

For three of the questions measuring usefulness and feasibility of the BE KIND intervention (the BE KIND intervention helped me to be mindful of implicit bias during patient interactions, the BE KIND intervention was useful to my practice overall, and the BE KIND intervention is relevant to my practice), four participants agreed and one participant strongly agreed with all three statements. The fourth question (the BE KIND intervention was easy to use in my practice), one participant did not answer, one neither agreed or disagreed, two agreed, and one strongly agreed (Table 3).

No relationships were found between demographic data and reported usage, perceived feasibility/usability, and intent to change practice though this was primarily due to the low power of the study.

One respondent indicated that they would recommend more education about implicit bias and have additional relevant examples of how implicit bias effects patient outcomes.

Discussion

Participants reported no awareness to moderate awareness of implicit bias. While BE KIND was not used by all participants, participants that used the intervention found it useful and feasible in their environment. These providers also reported intent to use BE KIND in the future.

Recruitment for this project presented several challenges. First, the author encountered difficulty in contacting key individuals in the organization. The author was not an employee at the clinical site, so contacting the appropriate individuals to facilitate recruitment was challenging. These delays lead to a shorter recruitment phase which could have negatively impacted recruitment.

This study was conducted in a clinical environment so study participation competed with other daily tasks that LIPs must complete. This contrasts with the school environment from the five studies in the review of literature. Three of the studies had a 100% recruitment rate because participants were required to enroll in the study for course credit,[19] testing purposes,[16] or a course requirement as a newly-hired employee.[20] The Drwecki study did not report the size of the target population so the recruitment rate is unknown.[17] In the Matharu study, a 13.7% recruitment rate was attained using email and a monetary incentive.[18] This is comparable to the recruitment in this study (14.9%). Since this is a comparable percentage, recruitment should be opened to additional study settings, such as other emergency departments, to increase the sample size in

hopes of obtaining statistically significant outcomes.

No advanced practice nurses (APNs) participated in this study. This could be related to the fact there were only six eligible APNs employed at the study site and that no APNs were in attendance at the monthly meetings. The lack of face-to-face time for the author to discuss the project with the APNs most likely had an impact on the recruitment of APNs.

In this sample, no participant reported having any education about implicit bias in the last two years. In reviewing the literature, many authors state that education about implicit bias is needed but, of the five intervention studies, none asked participants about prior education related to implicit bias.

In reflection, it would have been helpful to ask a question about why LIPs did not use the BE KIND intervention. Future studies of perspective taking interventions should ask this question.

Nursing is committed to holistic, evidence-based care that is free of bias. The effects of implicit bias are exacerbated by constrained time limits[10] and a high cognitive load,[11] such as the type of environment typically found in the ED. One way to help avoid bias would be to form patient-provider relationships;[13] however, this can be difficult in the ED environment where a provider has fifteen minutes to care for a stranger. Perspective taking has the potential to help providers be more aware of implicit bias as a basis for treatment. Providers that utilized BE KIND in this study found it to be a useful and feasible perspective taking intervention in the ED environment. The use of perspective taking interventions, such as BE KIND, may reduce implicit bias in care settings such as EDs.

Strengths of the study included the clinical setting, recruitment of actual LIPs, testing of an innovative perspective taking intervention, and low respondent burden. This was a descriptive study that allowed LIPs to provide feedback to improve the BE KIND intervention. Limitations

of the study were the use of a convenience sample, no control, no randomization, and no APNs. The results cannot be generalized to LIPs outside the Emergency Department of this medical center.

Conclusions

The low power of the study resulted in inconclusive findings about relationships between demographic data and reported usage of BE KIND, perceived feasibility/usability of this perspective taking intervention, and the providers' intent to change practice. While BE KIND was not used by all participants, participants that used the intervention found it useful and feasible. A larger study sample could yield more data that would be helpful in determining if BE KIND is a viable tool that LIPs can use to raise awareness and reduce or remove implicit bias in their practice.

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Table 1

Demographic Characteristics Survey (N=7)

	N	Percent (%)	Range	Mean (*SD*)	Median
Age (years)	7		30-61	45.14 (9.96)	43
Gender					
Female	2	28.6			
Male	5	71.4			
Race					
White/Caucasian	7	100.0			
License					
Medical Doctor	6	85.7			
Physician Assistant	1	14.3			
Experience					
Total	7		3-25	14.14 (7.03)	15
Current position	7		3-18	12.57 (5.38)	15
Awareness of implicit bias					
No awareness	1	14.3			
Low	1	14.3			
Moderate	5	71.4			
High	0	0.0			
Prior implicit bias education					
No	7	100.0			
Yes	0	0.0			

Table 2

Use of BE KIND (N=7)

	N	Percent (%)
Did you use BE KIND over the 30-day period?		
No	2	28.6
Yes	5	71.4
How often did you use BE KIND in the last 30 days?		
Only once	0	0.0
Once a week	2	40.0*
Once a shift	1	20.0*
With most patients	2	40.0*
With every patient	0	0.0
I plan to use the BE KIND intervention in future practice.		
Strongly disagree	0	0.0
Disagree	0	0.0
Neither agree or disagree	0	0.0
Agree	4	80.0*
Strongly agree	1	20.0*

* Percentage of those that completed the entire post-intervention survey, excluded those that did not use BE KIND or did not respond to the post-intervention survey.

Table 3

Usefulness and Feasibility of BE KIND (N=5)

	N	Percent (%)
BE KIND helped me to be mindful of implicit bias during patient interactions.		
Strongly disagree	0	0.0
Disagree	0	0.0
Neither agree or disagree	0	0.0
Agree	4	80.0
Strongly agree	1	20.0
The BE KIND intervention was useful to my practice overall		
Strongly disagree	0	0.0
Disagree	0	0.0
Neither agree or disagree	0	0.0
Agree	4	80.0
Strongly agree	1	20.0
The BE KIND intervention is relevant to my practice		
Strongly disagree	0	0.0
Disagree	0	0.0
Neither agree or disagree	0	0.0
Agree	4	80.0
Strongly agree	1	20.0
The BE KIND intervention was easy to use in my practice		
Strongly disagree	0	0.0
Disagree	0	0.0

Neither agree or disagree	1	20.0
Agree	2	40.0
Strongly agree	1	20.0
Did not respond	1	20.0

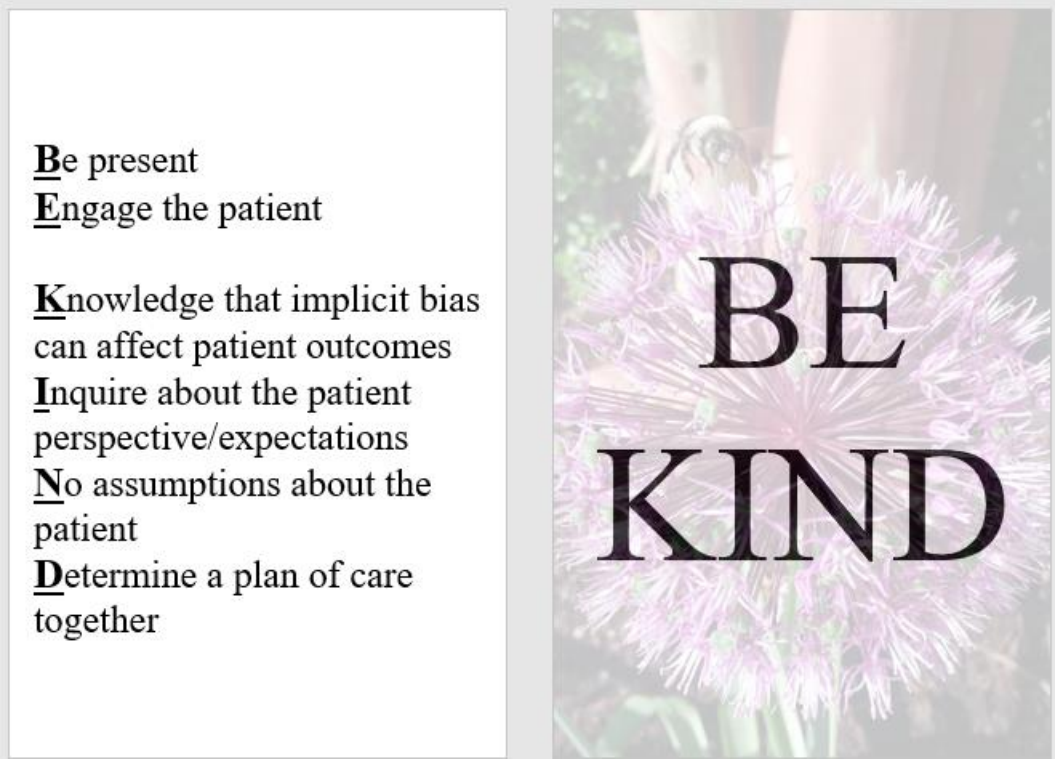

Figure 1. Image of the BE KIND perspective taking intervention card given to participants.

Post-intervention survey

1. Did you use BE KIND over the 30-day period?
Yes.
No. If you answered no please stop here. Thank you for your participation

2. How often did you use BE KIND in the last 30 days?
Only once (1), once a week (2), once a shift (3), with most patients (4), with every patient (5)

3. BE KIND helped me to be mindful of implicit bias during patient interactions.
Strongly disagree (1), disagree (2), neither agree or disagree (3), agree (4), strongly agree (5)

4. The BE KIND intervention was useful to my practice overall
Strongly disagree (1), disagree (2), neither agree or disagree (3), agree (4), strongly agree (5)

5. The BE KIND intervention is relevant to my practice
Strongly disagree (1), disagree (2), neither agree or disagree (3), agree (4), strongly agree (5)

6. The BE KIND intervention was easy to use in my practice
Strongly disagree (1), disagree (2), neither agree or disagree (3), agree (4), strongly agree (5)

7. I plan to use the BE KIND intervention in future practice
Strongly disagree (1), disagree (2), neither agree or disagree (3), agree (4), strongly agree (5)

8. What if anything would you change about the BE KIND intervention to make it more useful in practice?

Thank you for your participation.

Figure 2. Post-intervention survey developed from Clementz et al. study (2017) and the QQ-10 survey.[20,22]