Understanding Implicit Bias and Language Usage for the Healthcare Industry Among UWL Pre-Physician Assistant Students

Olivia Revels

Faculty Sponsors: Dr. Darci Thoune and Dr. Christopher McCracken, Department of English

ABSTRACT

Implicit biases are known to contribute to health disparities and influence how health professionals make decisions and communicate within their practice (Sukhera et al., 2020). Sensitive and culturally competent care go hand in hand with providing the best practice holistic care to all patients, yet there is a serious lack of knowledge and proper, empathetic language use in healthcare (Sukhera et al., 2020). The focus of this study is to understand how Pre-Physician Assistant undergraduate students understand and perceive implicit bias so an effective curriculum can be created to be used at the undergraduate level of university. This study focused on a sample of Pre-Physician Assistant students at the University of Wisconsin – La Crosse (UWL). The results found was the need that UWL and other undergraduate level universities should be constructing and implementing curricula that address the topic of implicit bias and educating on culturally competent/sensitive language usage for pre-health students, but most notably for Pre-PA students.

INTRODUCTION

Implicit biases are known to contribute to health disparities and influence how health professionals make decisions and communicate within their practice (Sukhera et al., 2020). Zestcott et al.'s (2016) study of implicit bias in healthcare fields found that white practitioners demonstrated implicit bias against many groups, including: BIPOC folks, people with disabilities, people with non-normative bodies, people from lower socioeconomic statuses, people with mental health issues, people struggling with addiction, etc. Several lab studies have shown that people with more implicit ethnic/racial bias have poorer interpersonal interactions with patients with marginalized identities, often in very subtle ways that lead to them feeling greater dissatisfaction from their visit with health professionals and feeling they could/would have received better care elsewhere (Zestcott et al., 2016). Implicit prejudice and stereotyping are present when students begin training in healthcare, and the level of implicit bias remains constant or increases as students matriculate through their training (Zestcott et al., 2016). The implicit bias training for future healthcare professionals seems to currently not be working and needs to be addressed.

Significance of Implicit Bias

One could even go so far as to say the phenomenon of unconscious bias is the virulent driver of the thinking, behavior, and interactions that produce health disparities (Matthew, 2015). Implicit bias more directly influences behavior than explicit or expressly held viewpoints (Matthew, 2015). Treatment choices such as withholding complex information and deferring expensive treatments, which are often the result of implicit bias, can have detrimental effects on those seeking healthcare (Matthew, 2015). Annually, implicit bias, such as racism, harms patient health, cuts short patient lives, increases health care costs, and diminishes health care quality (Matthew, 2015). Racial and ethnic minorities have considerable data from the Institute of Medicine in the U.S. showing the receival of less appropriate care for a multitude of diseases (Matthew, 2015). One study from Matthew 2015, showed that white people are more likely to be attributed with a genetic disease than Black people despite Black people being affected by them more. The scientific community has made some progress in understanding how implicit bias affects patient outcomes but nearly no progress in addressing how to prevent and eliminate the problem (Matthew, 2015). Physicians have shown they let untrue stereotypes surrounding implicit biases of minority groups override medical facts, their own good intentions, and medical training (Matthew, 2015). As pre-health students went through further training, they had more implicit biases showing up via the IAT test, and their results only worsened as they went through medical school (Matthew, 2015). Implicit bias affects how providers communicate with their minority patients by talking down to them, thinking of them as unknowledgeable or assuming negative

stereotypes, not providing as much information and detail surrounding a treatment, side effects, etc. (Matthew, 2015). Overall, implicit bias has led to providers being less informative, less supportive and less partnering with racial and ethnic minority patients (Matthew, 2015).

A factor that plays into how implicit biases impact a patient's experience in healthcare is the sensitive language usage and cultural competency of their providers. The LGBTQ+ community face disproportionate challenges regarding the quality, access, and outcome of their experience with healthcare (Aleshire et al., 2018). Some providers do not use the proper and/or preferred language with this patient population and may have very limited knowledge in relation to the specific healthcare they need. In an attempt to be more neutral, providers may dismiss or ignore sexual and gender identity to avoid causing insult and seem discriminatory via neutral professionalism, yet that presented the patient with the portrayal of a provider that is uncomfortable and reinforces heteronormativity (Aleshire et al., 2018). There is also the lack of diverse language that needs to be addressed not only in direct conversation with the patient, but also within the electronic health record to ensure more competent care is offered to the patient and available to the entire healthcare team (Aleshire et al., 2018). Since Shankle's study (2006), there has still not been a national, widely accepted cultural competency training framework created nor implemented for educating public health practitioners working with LGBTQ+ patients.

To create a change, healthcare providers need to establish trust and work towards eliminating barriers (Shankle, 2006). Emphasizing the role implicit bias plays and how being sensitive and competent will further the relationship between healthcare providers and oppressed patients. Sensitivity focuses on developing respect for that community and their culture (Shankle, 2006). Competency utilizes the desire of the provider and their ability to effectively serve the public health needs of this community (Shankle, 2006). Competency uses individual change and advocacy in an organization that can be carried into the future for better supporting patients (Shankle, 2006). Knowing one's own biases and assumptions is important for realizing how that affects the quality of the care each patient receives, and the services provided (Shankle, 2006).

Another disadvantaged group that faces staggering levels of implicit bias in the healthcare setting are "obese and overweight" patients. This patient population is in more contact with healthcare yet that is still not a sensitive space for them to be in where competent and high-quality care is provided (Brownell et al., 2005). Since Brownell et al.'s study (2005), today's practitioners still hold negative attitudes and beliefs about "obese" persons. Obesity experts rate genetic factors as the most important cause of obesity, while primary care providers rate physical activity as the most important cause (Brownell et al., 2005). There is a strong implicit assumption that the lack of weight loss is due to lack of motivation (Brownell et al., 2005). Due to negative implicit biases for "obese" people, primary care providers said they would spend 20% less time with mildly "obese" patients versus 30% less time with "moderately obese" patients based off body mass index (BMI) (Brownell et al., 2005). Obesity is related to receiving less preventative care and having primary care providers induce fear into making them lose weight, which has proven ineffective (Brownell et al., 2005). Obesity specialists have even reported after taking the IAT that they exhibit less anti-fat bias but still hold a significant amount of implicit anti-fat bias (Brownell et al., 2005). The usage of more sensitive language and awareness of anti-obese implicit bias needs to be a priority for helping patients who are "overweight" and attempting to lose weight.

Implications of the Implicit Association Test

The implicit association test (IAT) is a way to measure an individual's implicit bias for a variety of different types of isolated implicit biases created by a research group at Harvard University (Yen et al., 2018). Some of the implicit biases one can test include those toward: race, ethnicity, gender, sex, weight, LGBT, etc. The IAT is commonly used to measure implicit biases, yet there is much debate surrounding its accuracy. Some researchers argue that the IAT is in fact biased since the test itself was created by human beings with their own implicit biases affecting the IAT's system and, therefore, the results of the test-takers themselves (Yen et al., 2018). While other researchers that support the IAT and its accuracy have their own debate on what exactly the results themselves are saying in regard to the test-taker and how to interpret the results. One side states that the IAT directly measures the implicit bias and prejudice in an individual while the other side claims the IAT measures automatic associations and preferences for discriminatory behavior (Yen et al., 2018). The debate surrounding these results of the IAT begins to journey into how our society itself views, interprets and understands prejudice, which is beyond the scope of this study.

One study through the lens of the critical discourse theory looked at how the general population commented on the IAT after taking the test for at least one type of implicit bias (Yen et al., 2018). They found that those who distrusted the IAT and doubted its accuracy expounded upon explicit bias statistics and discredited or deprioritized the effect implicit bias has. In contrast, when those who took the IAT and trusted it received unexpected results, they described a moral dilemma (Yen et al., 2018). One example of this consisted of the

individual reflecting to themself on why they favored a certain group of people over others when they thought and promoted themselves as one for equal opportunity. Other instances of people who trusted the IAT after receiving unexpected results discovered a trend of bias absolution after admitting to their bias (Yen et al., 2018). When the test-taker admitted to having an implicit bias of some kind, they portrayed themselves as morally upright and not as an unreflective and with prejudice despite admitting to the presence of an implicit bias. They were seen as sincere and authentic that demonstrated their humanity as inherently flawed and were seemingly absolved of their sin(s) of implicit bias. It demonstrated an odd form of transcendence almost where individuals admitted to being biased and based on their results, racist, yet by claiming that they were, they were not seen as racist since true prejudiced individuals do not know they are prejudiced.

The results test-takers received led them to conclude that implicit bias is an inevitable cognitive limitation that we should not be held responsible for or a reprehensible psychological flaw we must atone for via confession (Yen et al., 2018). There seemed to be solely polarizing reactions. This study specifically looked at IAT results after test-takers were exposed to news media. However, there has been nearly no studies done regarding the medical field and implicit bias discourse that can be analyzed during and after patient interaction. Especially during the education of healthcare students earlier on, so they are aware of and have more time to practice and implement the strategies they have been shown to provide best practice, holistic care that is sensitive and culturally competent. This is relevant to the field I look into for Pre-Physician Assistant undergraduate students since no research has been dedicated to this population.

Physician Assistant Profession

Pre-Physician Assistant (Pre-PA) undergraduate students are more likely to be able to change their mindset and be more successful using strategies given to them for recognition and prevention of implicit bias. Implicit bias recognition and management is an underdeveloped and undertheorized area within the health professions education (Sukhera et al., 2020). However, that is why my research is so important for understanding how current Pre-PA students think of and understand implicit bias and the usage of sensitive and culturally competent language with patients. There has been no investigation into how Pre-PA students understand and therefore can carry out a curriculum earlier on where more humanities classes are offered, and more time can be afforded to important issues such as these while allowing for long-term implementation of the learned skills as they gain patient care experience before PA graduate school and future practice.

Past literature only focused on physicians and medical school over other healthcare professionals that also make diagnoses, give meds, etc.- like physician assistants (PAs) specifically or even nurse practitioners (NPs). Less students are pursuing an MD and more are pursuing becoming a PA, it's the one of the fastest growing professions inside and outside the healthcare field at 28% from 2021 to 2031 (AAPA 2023). Research currently being done is not focused on the new job growths and prevalence of other healthcare professionals doing nearly identical tasks and at risk for the same mistakes as physicians. It is best to intervene now since this is currently when the new generation of a majority of future PAs are going to school or entering it. This can provide an impact on how Pre-PA undergraduate education is understood and implemented. Specifically with a focus on best holistic practice that is conscientious and working against implicit bias, while implementing sensitive and culturally competent language with patients.

Given what we know about the effect of implicit biases on patient populations, more direct instruction on working through/preventing implicit bias is needed for Pre-PA undergraduate students. Especially since implicit biases can impact language usage when interacting with patients and needs to be analyzed and/or addressed at the undergraduate level. This is what led to the inquiries outlined below.

RESEARCH QUESTIONS

UWL and their Pre-PA Program

The University of Wisconsin- La Crosse (UWL) is a part of the UW- system that has approximately 10,500 students. UWL has three academic colleges and two schools: College of Business Administration, College of Science and Health, College of Arts, Social Sciences, and Humanities, the School of Visual and Performing Arts, and the School of Education. UWL is a Division III school that has 102 undergraduate academic programs with a 19:1 student to professor ratio (2023). UWL's mission is "to provide a challenging, dynamic, and diverse learning environment in which the entire university community is fully engaged in supporting student success." (2023). Their Pre-PA program is not a major but is defined as the intention to apply to PA programs (2023). It requires coursework from specific biology, biochemistry/chemistry, psychology, and mathematics and statistics courses.

However, any major or minor can be chosen by the student, as long as they still fulfill the specified Pre-PA coursework.

- How do University of Wisconsin- La Crosse Pre-Physician Assistant students understand and interact with implicit bias in their language and other healthcare professionals' language as culturally competent and/or sensitive?
    - How do they describe themselves and previous experiences regarding their own implicit bias, identities, etc.?
    - What effective and persevering intervention(s) can be taken to promote awareness of implicit bias and culturally competent language among UWL Pre-PA students?

METHODS

A survey was conducted to collect quantitative data on niche sampling of UWL Pre-PA students. The survey consisted of an introductory page describing the study and what data is being collected. It contained my contact information along with a short instruction on how by completing the survey the user has given consent for the responses they gave to be used as data. There were six survey questions generated relating to a scale of one to ten based on agreement or disagreement along with demographic data. For one set of questions, one will mean to reflect "least/never" and ten will be the "most/always" and for another set of questions, one means the "worst" and ten means the "best". The survey was sent to the entirety of the UWL Pre-PA Club roster.

These results offer a way to quantitatively measure how UWL Pre-PA students understand and interact with implicit bias and culturally competent language based on their own personal beliefs and reflection (Entnet, 2021). The survey questions consisted of:

1. Demographic data collection via open-ended responses
    a. Please answer the following demographic questions:
        i. Gender identity & preferred pronouns
        ii. Age
        iii. Occupation
        iv. Race/ethnicity (if mixed, please specify)
        v. Socioeconomic status
        vi. Sexual orientation
        vii. Sex assigned at birth (if comfortable sharing)
        viii. Year, Major(s) and Minor(s) at UWL
2. Understanding and importance of implicit bias and culturally competent/sensitive language in healthcare using a rating based on a scale
    a. Answer the following questions based on a scale of 1 to 10; with 1 being the least/never and 10 being the most/always:
        i. How much do you value language/wording in your own experiences for/from working in healthcare?
        ii. Do PAs use/d sensitive/culturally competent language with you?
            1. *Cultural competence in healthcare means demonstrating equitable and professional care toward patients with diverse values, beliefs, and feelings.*
        iii. How important do you think culturally sensitive/competent language is when interacting with a patient for best practice?
3. Preparation for practicing based on awareness of implicit bias and usage of culturally competent/sensitive language using a rating based on a scale and open-ended responses to clarify
    a. Answer the following questions based on a scale of 1 to 10; with 1 being the worst and 10 being the best:
        i. Do you believe you are being adequately trained and taught to use good/sensitive language use with patients to provide holistic care?
        ii. Rate the usage of culturally sensitive/competent language of your primary care provider(s) growing up.

1. This question will include three clarification questions asking the participant to write in what race and gender their primary care provider was, and if they were a PA, doctor (MD), or nurse practitioner (NP).

Semi-structured interviews were conducted with two individuals that consented to answering open-ended questions on this topic (Entnet, 2021). They were registered Pre-PA students and members of the Pre-PA Club. The interviews were conducted in a comfortable and quiet environment for the ease and accessibility of the participant. The interviews were recorded as audio files and later a transcript was written up for each audio file. There were four rounds with a total of 16 interview questions that each participant answered and can offer explanations. There may have been a need for clarification or further prompting for other reasons that will be stated as questions but were not considered a pre-written question. They were utilized as a way of probing into a response from a participant if necessary and may not be used with every participant as a result. The interviews lasted 45-60 minutes for participants to fully explain and answer the questions.

The interview questions consisted of:

RQ1 Implicit Bias Specific Questions:

- What is implicit bias, and do you believe it affects patient care outcomes?
- Have any of your classes discussed implicit bias and if so, what did they do?
- Have any of your orientations or trainings for jobs or certifications discussed implicit bias and if so, what did they do?

RQ2 Language Usage Questions:

- Did your upbringing impact how you plan on practicing in the future and your use of language specifically with patients?
    - Do you believe you are being adequately trained and taught to use good/sensitive language use with patients to provide holistic care?
    - How much do you value language/wording in your own experiences?
    - Do PAs use/d sensitive/culturally competent language with you?
    - How important do you think language is when interacting with a patient for best practice?

RQ3 Future Practice Questions:

- Do you believe that implicit bias will be discussed in PA graduate school, and if so, how?
- Do you believe that implicit bias will impact your experience learning in PA graduate school? With preceptors, professors during didactic year, etc.?

RQ4 Case Study:

Hector Jimenez is a 40-year-old with a history of substance use disorder. He has been in recovery for five years. He is 6'4" tall and weighs 250 pounds. He is covered from head to toe with tattoos. He also has a number of scars, including old track marks on his arms. He is a community activist and now works with youth in his community as well as being a business owner. He is well known in the community. Robin Jimenez is his wife. They have two children.

When their first child was born four years ago, Robin was admitted under her maiden name, Smith. Hector was present throughout both the prenatal period and at birth. The baby roomed in with the parents during the post-natal period. The baby was discharged one day after birth to home.

Hector and Robin recently celebrated the birth of their second child. They used the same hospital and same obstetrician. They had different nurses and a different pediatrician. Following the birth, which was uncomplicated, the baby was taken to the nursery. The baby was not allowed to room in, and they noticed the nurses were often nearby when the baby was in the room with Hector and Robin.

Hector and Robin thought it was due to a change in hospital policy. The baby remained in the hospital for three days after birth despite no issues presenting with Robin or the baby. After discharge, they were told by the obstetrician the delay in discharge and the inability to room in was due to concerns about drug use. The baby was tested for the presence of substances and monitored for neonatal abstinence syndrome (NAS). (Meadows & Sonoda, 2020).

- What do you notice that is different from the experience with their first child and second child?
- Why do you think there were differences/ what do you think contributed to those differences?
- How would you have done it instead?

RQ5 Clearing House Questions:

- Is there anything you'd like to expand on/discuss?
- Is there anything you have any questions about?

- Do you know any other UWL Pre-PA students who may be interested in participating in this study?

The content from the interviews offered a way to conduct a qualitative analysis of the language used surrounding implicit bias among UWL Pre-PA students. The analysis will explore and explain the experiences described by the participants to find language of an epiphanous reflection, intervention, or interaction to offer insight on implicit bias perceptions, interactions, trainings and usage of culturally competent/sensitive language among UWL Pre-PA undergraduate students.

RESULTS & DISCUSSION

Survey Results

The survey yielded three voluntary respondents that showed a variety of opinions despite the limited sample size. Correspondingly, the conclusions reached are based on whether this limited sample size can account for the general UWL undergraduate Pre-PA student population. The first content question (Q3) related to implicit bias and using competent/sensitive language asked about the value of language and wording in their own experiences with results of respondent one (*r1*) giving a ten, respondent 2 (*r2*) giving a ten, and respondent three (*r3*) giving a nine (see Figure 1, below).

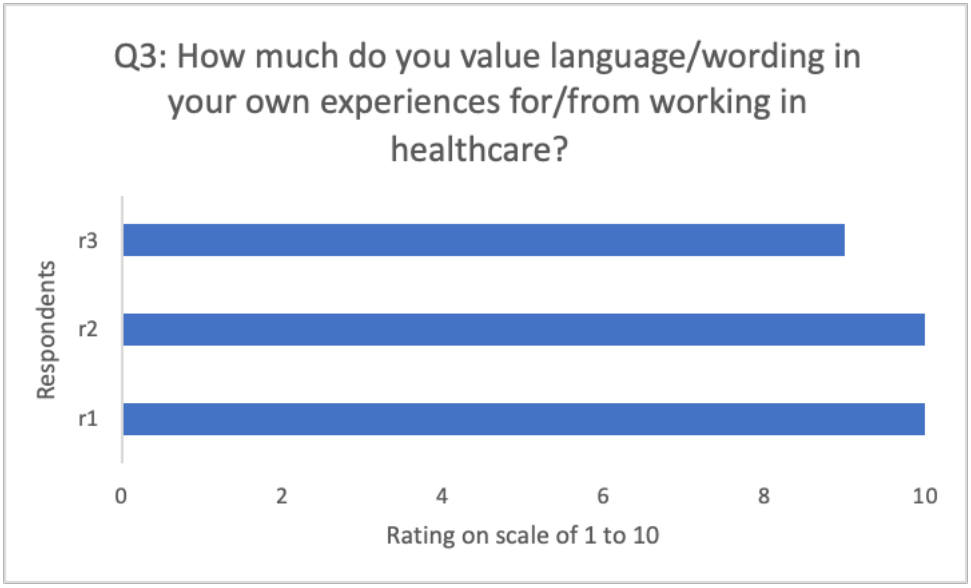

Figure 1. Bar graph denoting results from question three of the survey.

These responses show a clear high value for language and wording in healthcare since all three respondents placed themselves valuing this at a nine or higher.

The second content question (Q4) narrowed in to if PAs used sensitive and/or culturally competent language with the respondents regardless of context such as being a patient, on a job-shadow, etc. *r1* and *r2* placed their interactions with a PA's use of this language at a nine, while *r3* ranked their experience as a five in the figure (see Figure 2, below).

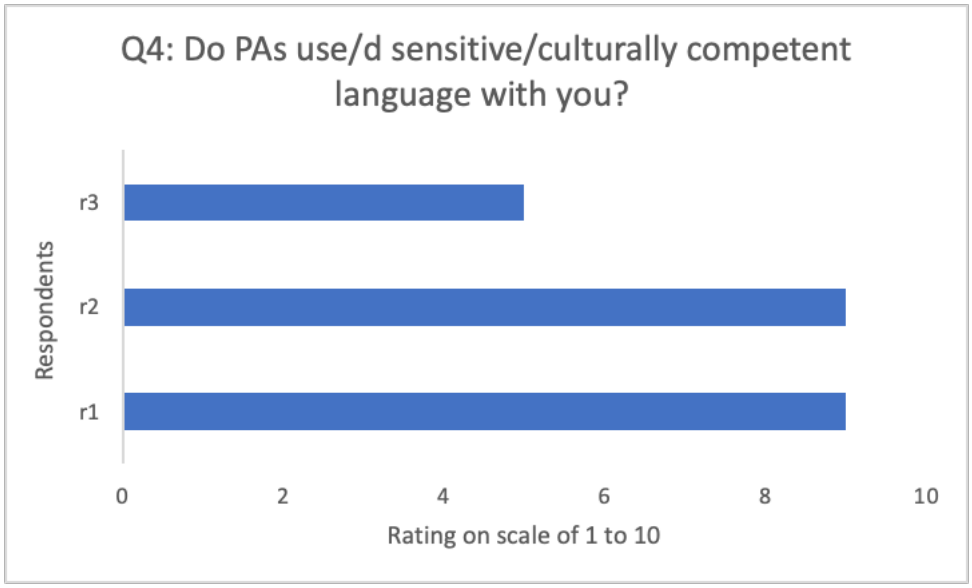

Figure 2. Bar graph denoting results from question four of the survey.

The responses to Q4 demonstrated more variability in the actual usage of language among PAs in healthcare. There was a majority of high usage of sensitive and/or culturally competent language among PAs; however, there was not a score of ten recorded showing a room for more growth here. The response of *r3* exhibits a nearly halving decrease in language competency and sensitivity in comparison to the experiences of *r1* and *r2*.

The third content question (Q5) branched into how important these Pre-PA students found culturally competent/sensitive language when interacting with a patient to provide best practice. *r1*, *r2*, and *r3* all responded with tens in the figure (see Figure 3, below).

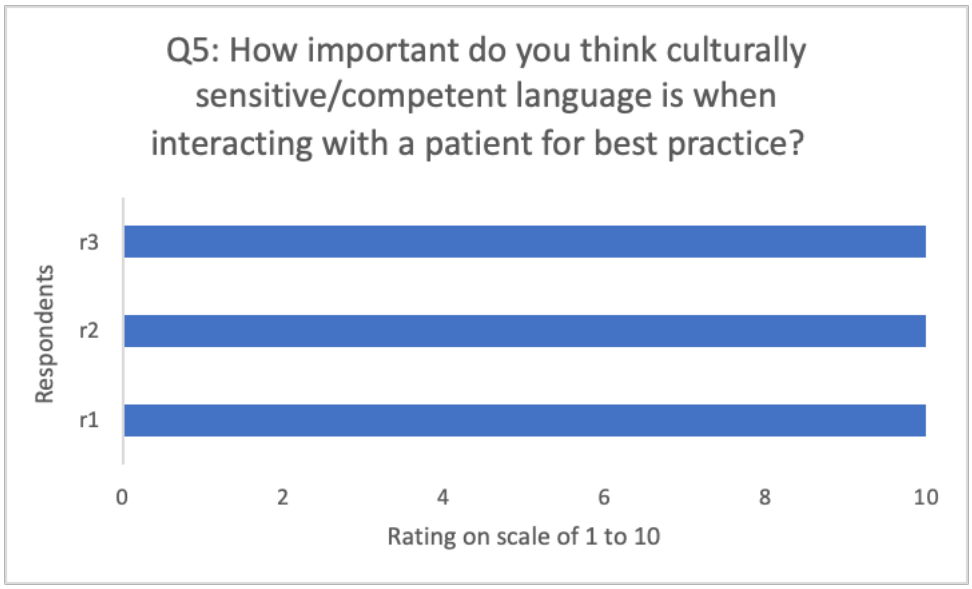

Figure 3. Bar graph denoting results from question five of the survey.

All respondents unanimously responded with tens placing the importance of this language usage as vital during patient interactions.

The fourth content question (Q6) probed into how UWL Pre-PA students feel about their own level training and competency using this type of language based on the education they are receiving currently for their future

practice. The responses here were mixed in the figure (see Figure 4, below). *r1* responded with a seven, *r2* responded with a ten, and *r3* responded with a three.

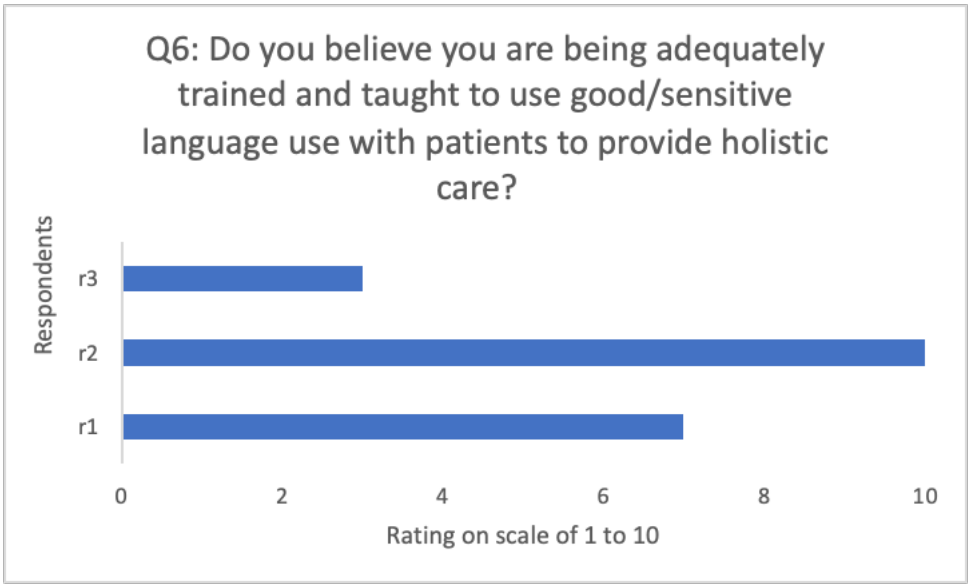

Figure 4. Bar graph denoting results from question six of the survey.

The ranging responses to Q6 show an inconsistency in how UWL Pre-PA students feel surrounding their adequacy at being prepared to practice and interact with patients regarding implicit bias and culturally competent/sensitive language usage. A possible explanation for these assorted results could be based on the respondents' majors and minors, along with their age from the demographic questions asked at the beginning of the survey. *r1* is a sophomore and a biomedical major with chemistry and psychology minors. *r2* is a freshman and a biomedical major with a chemistry minor. *r3* is a sophomore and a biology major with a Spanish minor.

Only *r2* responded with a strong belief that UWL is adequately training Pre-PA students at the undergraduate level for this aspect of patient interaction. *r2* is a freshman; however, *r1* and *r3* are sophomores, only a year more of school than r1 which could have influenced the clear difference. *r1* has a psychology minor and *r3* has a Spanish major, both are fields of study that discuss implicit bias and explore other cultures. Based on these results, there appears to be a strong relationship between non-science majors and minors of understanding more about these topics, while the coursework of only science courses demonstrated a clear lack of adequate preparation for best practice patient interaction with implicit bias and culturally competent/sensitive language.

The final content question (Q7) had the respondents reflect on the language usage of their own primary care provider(s) they had experience with. *r1* rated their providers' ability an eight, *r2* gave a nine, and *r3* gave a five.

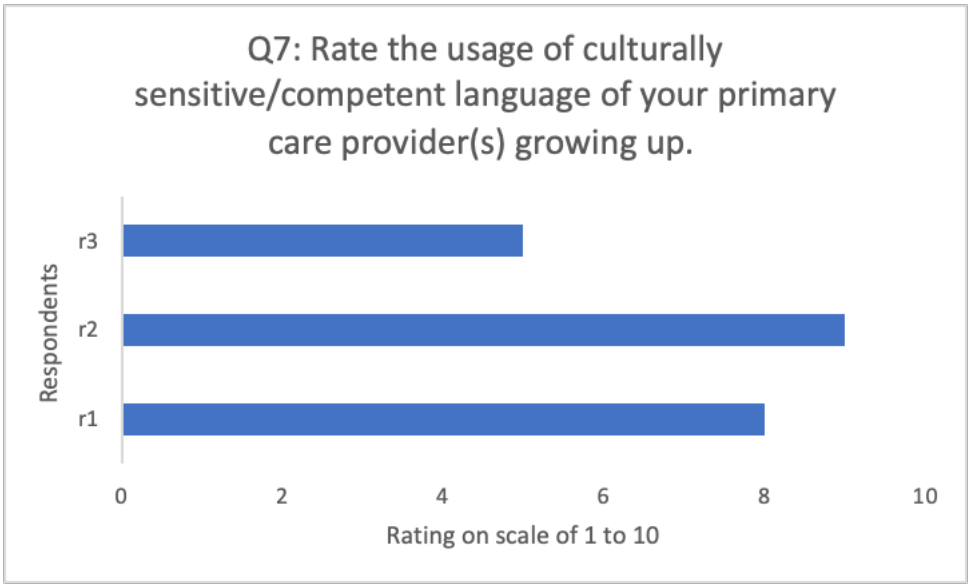

Figure 5. Bar graph denoting results from question seven of the survey.

The results presented in the figure to Q7 showed some variation but not to the same extent as the results from Q6 (see Figure 5, above). None of the respondents rated their primary care provider(s) with a ten, demonstrating a need and/or ability to still improve upon language usage with patients.

Interview Results and Discussion

Two interviews were conducted with respondents *r1* and *r3* from the survey results to gather more qualitative data surrounding the understanding of implicit bias and culturally competent/sensitive language usage among UWL Pre-PA students.

r1 described implicit bias as "things that you don't necessarily know that you're thinking that might affect the way that you view somebody for treat somebody or think about somebody based off of a variety of factors. That can include like, physical presentation, or sexual orientation or race, ethnicity, anything along those lines." *r1* gave a clear, accurate definition of implicit bias demonstrating a knowledge of the subject along with specific examples of biases we can have. When asked if implicit bias affects patient outcomes, *r1* responded "I think it affects patient outcomes, especially in like cultural things and stuff because you might not completely understand the cultural significance of something, somebody else's life. And so, if you don't understand that completely, then it's very easy to have your biases affect how you communicate with that person, and that can affect how close you are with the patient and the trust."

While *r3* began to explain they did not know "a ton about that second cause of bias" but goes on to say, "subconsciously like it exists and like, every decision you make, can be impacted by that whether you know it or not." There was no clear definition or explanation given on implicit bias, but they had a strong opinion on how it affected patient outcomes saying, "it can be really dangerous so definitely affects patient care outcomes on like their statistics with you know, the care people are receiving the questions that are asked, being affected by things that seem to be you know, the way that they look."

Both *r1* and *r3* agreed that implicit bias can affect patient outcomes; however, they described its effects and that impact on themselves in contrasting ways. *r1* brought up the lack of cultural competency and how implicit bias can add to that by creating a distrusting relationship between the patient and PA. On the other hand, r*3* referenced how implicit bias would affect the "statistics" of a patient regarding diagnoses and treatment of the patient from the PA and mentions the "dangerous" consequences implicit bias can have on patient outcomes.

To further understand where they have learned about implicit bias or discussed it, *r1* and *r3* explained their interactions with it in an academic or work setting. *r1* discussed hearing and learning about implicit bias in their psychology courses and in their CNA course where "they touched on it, it wasn't like super in depth, but it definitely did talk about like, racial differences and then just like, individual person like what they might say or do and ways to, like, navigate that and be very sensitive to the individual that you're working with." *r1* specifically mentioned only racial implicit biases being addressed and the need to be "very sensitive" with patients showing an awareness of what language usage is occurring.

r3 referenced their knowledge of implicit bias relating to the general education course, General Psychology (PSY100). They described watching videos on simulations of individuals testing their implicit biases via the IAT. *r3* also discussed their Spanish classes not specifically referencing implicit bias, but instead how they "talked a lot about, like mistreatment for you know, like different like cultures. And why they don't get them enough opportunities." There was a discussion surrounding discrimination-based biases with the word "mistreatment" used in their Spanish classes, specifically for the Latinx community and Spanish-speakers. Lastly, they remembered a short unit on implicit bias that was age-focused in their CNA course showing a targeted curriculum for an implicit bias based on the major patient population CNAs work with.

The interview progressed into a conversation about how their upbringing impacted how they plan to practice as future PAs. *r1* kept coming back to the word "perspective" and "understanding" often when describing their upbringing. They talked about how they grew up in a mainly white population and attended a private Catholic school growing up, so they recounted a heavy emphasis on the usage of those words by their parents when interacting with other cultures, etc. and being aware of their own biases. *r3* really homed in on their job at their mother's dentistry and their experiences working with patients and talking with them by being very aware of how things were worded. An example they gave was "instead of like, oh, we can't make that work. It's like, oh, there's no time slots available" and they emphasized how one says something influences how that person feels. *r3* discussed more specificities surrounding sensitive language usage rather than particular words and awareness of their implicit biases.

The next question went into if *r1* and *r3* felt that UWL Pre-PA students are being adequately trained to use competent and sensitive language with awareness of implicit bias. *r1* said "To an extent, yes, but I'm hoping to get more in PA school" and went on to describe how taking other classes like sociology and medical ethics in undergraduate level could be effective. However, they spoke of how they hoped that this content would be covered in PA graduate programs. Most Pre-PA students have science and medical majors and do not take social science, humanities, or global language courses where the topics of implicit bias and language usage are discussed in a cultural context. *r3* mentioned similar thoughts regarding how they learned about "cultural differences and how that impacts, like, particular people" in reference to their Spanish courses for their Spanish minor. They went on to say, "but if I wasn't in a Spanish thing, I would have no, like, opportunity to talk about that really," making the connection to what *r1* had discussed about how implicit bias and language usage are not taught about in science and medical courses yet impact patient encounters.

As *r1* mentioned previously in the above passage, they hope to learn more about providing best practice holistic care to patients in PA graduate school. However, without any consistent implicit bias and culturally competent/sensitive language curriculum for PA students, there is no guarantee the program any PA student attends will learn about this at all. Much less get actual practice implementing prevention strategies for implicit bias and using appropriate language with diverse patients in a simulated, learning and safe environment. *r3* similarly discussed how the lack of training and education in this area for future PAs at the undergraduate level would hopefully be addressed in graduate PA programs' curricula.

The interview continued into the topic of the personal experiences *r1* and *r3* as patients had with their own providers' language usage. *r1* spoke of how they identify as bisexual and "my provider had asked, like, oh, like, do you have a boyfriend? And I was like, no, I have a girlfriend." They described their providers as being very "nice" and "accommodating" but still demonstrating an implicit bias towards heterosexuality. *r3* had not noticed any specific nuances their providers used in their language with them.

r1 and *r3* were then asked to expand on their survey response on how important culturally competent/sensitive language usage is for their future patients. *r1* expounded, "I know that language is very powerful, and it can be used to hurt our health" showing the relevance language usage has in patient encounters when describing it as "powerful" and having the potential to "hurt" patients if used improperly. *r1* continued to tie this in with the effect implicit bias has by saying "It [Language usage] has to be something that you think about actively every time you have an interaction." *r1* is discussing a strategy to prevent implicit bias impacting a decision and/or statement made by being aware and hypervigilant during patient encounters with "active" thinking. They also said that to have more adequately trained PAs in this area more practice was needed. *r3* explained that "I think it's very important . . . definitely be careful what you say because these people will hear it, especially if it's something that they're like sometimes or used to be like history." *r3* brought up an interesting and important point of how "history" can impact a patient's reaction to insensitive language usage or implicit bias affecting their interaction. The communities that have been discriminated against in terrible ways for centuries and still have unfair treatment in healthcare will continue to be distrustful and hyperaware of any insensitivities directed their way from providers due to this history.

The final portion of the interview had *r1* and *r3* review an implicit bias case study. The case study reviewed the treatment of two babies from one couple. The first baby was associated with the mother's maiden name, "Smith," and was allowed to be with parents directly after birth and had no blood tests done outside of the normal set. With the second baby, they were associated with the father's last name, "Jimenez," a Hispanic last name. The father had clear track marks on their arm as well. After birth, the second baby was not allowed to be with their parents directly after birth and was subjected to blood-drug tests without the parents' consent nor awareness. After reading this, I probed into *r1* and *r3*'s thoughts on what they noticed was different, why they thought there was a difference, and how they would have acted instead. *r1* said they "wouldn't do anything different" with the treatment between the two babies of the patient in the case study based on the experience presented. By saying they "wouldn't do anything different," *r1* is showing how they would not let their own implicit bias impact and affect the care the patient received. *r3* specifically said they "would ask without having to be judgmental or something. I definitely will." For context, *r3* is describing a different approach to combating their own implicit biases at play by directly engaging with the patient in a non-confrontational and nonjudgmental manner rather than practicing hyperawareness like *r1* said they would. Both are good ways to prevent implicit bias interfering, yet I was looking for the utilization of multiple strategies at once since that is most effective, yet neither did since no education or training is offered at UWL for undergraduate Pre-PA students in this field.

Based on my research into how to offer training and education for Pre-PA undergraduate students for preventing and mitigating the negative effects of implicit bias, there is a focus on transformative learning theory being used (Sukhera et al., 2020). The transformative learning theory (see Figure 6, below) refers to how "learning involves a process triggered by disruption, followed by a revised interpretation of experiences that guide an individual's actions" (Sukhera et al., 2020). In the context of implicit bias, it has the learner facing something traumatic or a dilemma, such as realizing you have implicit bias, then recognizing it, and self-reflecting to change how you will encounter the same situation in the future but with a new, more consciously-monitoring behavior/language.

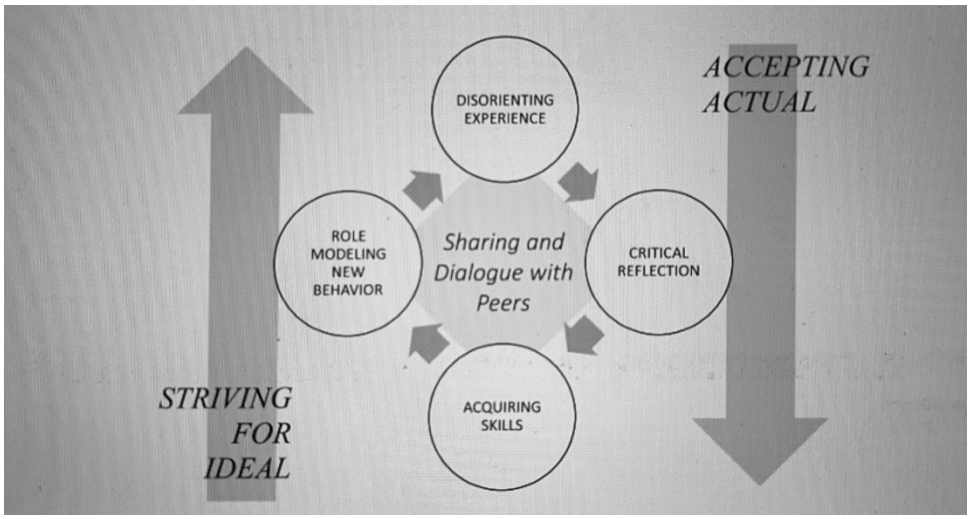

Figure 6. Flow chart explaining elements of transformative learning theory (Sukhera et al., 2020).

This is a really effective and practical way to teach undergraduate Pre-PA students, but also other types of health professionals/students. The reason being that they face traumatic instances and other dilemmas often and typically reflect on those experiences afterwards to think on how they could have handled that situation differently either due to a fixation on the trauma or from guilt if they handled it poorly. Even if certain undergraduate Pre-PA students have not had any personal healthcare work experience, they can take the IAT and if their results reveal strong implicit biases, that could be their disruptive dilemma. They are then faced with a new reality of themselves, which will lead to self-reflection and discussion.

Implicit bias trainings are used as a way to help eliminate disparities (Sukhera et al., 2020). They also improve and attain equity in healthcare; however, there have been mixed results and debate on how to teach and work with resistant learners (Sukhera et al., 2020). In certain studies done on medical students in their post-graduate medical school, they found that trainings and education on implicit bias were less effective and even worsened the implicit biases of these students when done in a clinical setting and solely focused on the education of implicit bias

(Sukhera et al., 2020). This is why the transformative learning theory applied to implicit bias would emphasize the prevention of implicit bias by learning about how bias works, other cultures, and- most importantly- how to implement strategies to prevent implicit bias impacting the care of patients negatively from a provider's standpoint. A medical student from a separate study described how valuable this reflection would be in the form of a debrief, they asked, "The treatment of patients in front of students is sometimes hideous. We could debrief with students about it, do a time out. We do debriefs for hemorrhage. Why can't we do debriefs for [bias]?" (Gonzalez et al., 2018).

Adding to these elements on teaching this type of curriculum for Pre-PA undergraduate students, the factor of time is vital. This type of learning following the transformative learning theory model requires long periods of time and smaller group sizes for trust to be gained and kept. This means that these strategies would be continuously reinforced and practiced throughout their undergraduate career and, hopefully, into PA graduate programs as well. The last most important element to consider is the atmosphere of the learning environment. This subject can become very uncomfortable and cause certain students to 'shut down' or be resistant to learning. The study by Sukhera et al. found that to counteract and resolve this was to ensure and enhance a culture of safety and to flatten hierarchies within the learning environment (2020). They recommend using seniors as cofacilitators with faculty to flatten the hierarchies and make connections between students to help. Leaders in this learning environment need to assure confidentiality of the discussions, set ground rules in a collaborative manner, and have facilitators role model times they themselves were biased and how they learned and changed after this type of experience (Sukhera et al., 2020).

LIMITATIONS & FUTURE RESEARCH

The sampling conducted for this study was limited to the niche sub-group of UWL Pre-PA undergraduate students. However, the results from the survey released came from individuals that chose to answer the voluntary survey, and the same applies to the interviewees being voluntary participants that opted in. As a result, the individuals that participated in the interviews and/or answered the survey may possess an inclination for this topic and other traits that may unrealistically reflect this sub-population's beliefs. Another factor related to the sampling conducted was the usage of snowball sampling that relied on the ease of accessibility to other potential participants despite the non-random nature of this style of sampling.

Further research needs to be conducted on actual measurements of implicit bias among Pre-PA undergraduate students after implementing a strategic curriculum on implicit bias and culturally competent and/or sensitive language usage. The parameters of this study solely focused on the understanding of implicit bias and producing strategies for execution of that curriculum in an undergraduate university. The application of this course will need to be monitored and assessed as effective or not, and a similar approach needs to be taken for other types of healthcare professionals at a variety of education levels.

CONCLUSION

This article sought to understand implicit bias and language usage for the healthcare industry among UWL Pre-PA students. Implicit bias has pervaded and continues to pervade the care patients receive in the medical field. There have been occasional curricula offered to educate medical students on this topic but none for undergraduate level pre-health students, nor anything specifically tailored for physician assistants. The job outlook for PAs has been growing significantly resulting in a need for PAs to be adequately trained and educated on all aspects of treating their patients. This means not only diagnosing and treatment from a scientific perspective, but also the impact their own unconscious biases have on patients and being able to utilize culturally competent/sensitive language. The results from the survey and interviews conducted demonstrated that UWL Pre-PA students believe this topic is important and need more education and preparation both at the undergraduate level, along with the graduate PA program level. Subsequently, UWL and other undergraduate level universities should be constructing and implementing curricula that address the topic of implicit bias and educating on culturally competent/sensitive language usage for pre-health students, but most notably for Pre-PA students. These curricula should follow the transformative learning theory and utilize the strategies and frameworks listed based on current research into teaching this subject to create incredible practicing PAs for their future patients and the betterment of themselves as culturally competent providers!

ACKNOWLEDGEMENTS

I want to thank Dr. Darci Thoune for her support and guidance throughout this process. I also want to thank Dr. Christopher McCracken for his advice and time during this research project. Both acting as my advisors were very supportive and great resources whenever I needed their assistance. I also wanted to thank my capstone project research group for their dedicated time and effort from our weekly meetings, discussions, and struggles for helping me create this article. So, thank you to Kaity Coisman, Andrea Julson and Jenny Serrano!

REFERENCES

2023. *What is a PA?*. AAPA. https://www.aapa.org/about/what-is-a-pa/.

About UW-La Crosse. (2023). UWLAX. Retrieved April 28, 2023, from http://catalog.uwlax.edu/undergraduate/aboutuwlax/#UW-La-Crosse-profile.

Aleshire, M. E., Ashford, K., & Hatcher, J. (2018). Primary care providers' attitudes related to LGBTQ people: a narrative literature review. *SAGE Pub*, *20*(2) 173-187. https://doi.org/10.1177/1524839918778835.

Brownell, K. D., Puhl, R. M., Schwartz, M. B., & Rudd, L. (Eds.). (2005). *Weight bias*. The Guilford Press.

Entnet. (2021). How to avoid implicit bias when avoiding . . . [Infographic]. CDN.Base.Paramter1.com. https://cdn.base.parameter1.com/files/base/ascend/hh/document/2021/10/Bulletin_October21_VideoSpread.6165fd742b8bd.pdf.

Gonzalez, C. M., Garba, R. J., Liguori, A., Marantz, P. R., McKee, M. D., & Lypson, M. L. (2018). How to make or break implicit bias instruction: implications for curriculum development. *Academic medicine: journal of the Association of American Medical Colleges*, *93*(11) 74–81. https://doi.org/10.1097/ACM.0000000000002386.

Matthew, D. B. (2015). *Just medicine* [ebook edition]. New York University Press. https://ebookcentral.proquest.com/lib/uwlax/reader.action?docID=4004183.

Meadows, P. and Sonoda. K. (2020, November 13). *Implicit bias, part 1 PAFP virtual CME Conference* [Powerpoint slides]. Pennsylvania Academy of Family Physicians Foundation. https://www.pafp.com/Images/112020PerryKentoPart1.pdf.

Pre-Physician Assistant Studies. (2023). UWLAX. Retrieved April 28, 2023, from https://www.uwlax.edu/academics/pre-professional/physician-assistant-studies/.

Shankle, M. D. (Ed.). (2006). *The handbook of lesbian, gay, bisexual, and transgender public health: A practitioner's guide to health*. Harrington Park Press.

Sukhera, J., Watling, C. & Gonzalez, C. (2020). Implicit bias in health professions: from recognition to transformation. *Academic Medicine, 95*(5), 717-723. doi: 10.1097/ACM.0000000000003173.

Yen, J., Durrheim, K., & Tafarodi, R. (2018). 'I'm happy to own my implicit biases': public encounters with the implicit association test. *British Journal of Social Psychology, 57*(3) 505-523. https://doi.org/10.1111/bjso.12245.

Zestcott, C., Blair, I. V., & Stone, J. (2016). Examining the presence, consequences, and reduction of implicit bias in health in health care: a narrative review. *SAGE Pub*, *19*(4) 528-542. DOI: 10.1177/1368430216642029.