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Diversity And Cultural Competence Theme Edition



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Cultural Competence for Serving Veterans: an Overview and Practical Considerations for Optometrists

Angelina Tran, OD, FAAO, and Yun-Ting Lisa Huang, OD, FAAO | *Optometric Education: Volume 47 Number 3 (Summer 2022)*

Abstract

As the demographics of the veteran population shift over time, it is our responsibility as optometrists to adapt to the different needs of our patients through trauma-informed care and cultural competence. We highlight aspects of caring for this specific population along with considerations and actions to take in an optometric setting to optimize outcomes and improve trust in us as healthcare providers.

Key Words: *veterans, cultural competency, cultural competence, trauma-informed care, optometric care, military culture*

Background

In 1976, the Veterans Health Administration (VHA) integrated optometry into its healthcare system to provide important eyecare services to veterans alongside ophthalmology. Since then, the VHA Optometry service has grown significantly and now provides most of the primary eye care and low vision rehabilitation services for the nation's 22.6 million veterans.¹⁻² More than 950 staff optometrists, 1,300 optometry students and 215 residents work and learn at more than 350 VHA facilities throughout the country.¹ Almost 70% of graduates from the accredited optometry schools in the United States have completed a rotation at a VHA medical facility.² Optometrists in the private sector may also deliver care to this population, as approximately 58% of veterans do not use VHA healthcare services.³ These veterans may opt to receive eye care outside the VA system and pay for their care using private health insurance, Medicare, Medicaid, the military healthcare program (TRICARE), the VHA Community Care program, or other means.³⁻⁴

Over the past 20 years, the demographics of the veteran population have dramatically shifted. Historically, the average veteran patient was older than 58, Caucasian and male.⁵ However, as with trends in the U.S. population overall, the demographic profile of veterans has changed and is expected to continue changing over the next 20 years.⁶ Projections indicate that the veteran population will be younger and more racially and ethnically diverse, with an increase in the number of female veterans from 6% (in 2001)⁵ to 18% in 2046.⁷⁻¹⁰ While data is limited, 6.1% of the current military population is estimated to be LGBTQ (lesbian, gay, bisexual, transgender, and queer).¹¹⁻¹²

With this shift in demographics comes an expanding scope of medical and socio-political concerns that healthcare providers should be aware of and equipped to address. Among these concerns are those more unique to the veteran population, including being mentally and physically affected by trauma and

increased comorbidities. Providing culturally competent care means being cognizant of the many issues relevant to veterans including, but not limited to, race, gender identity and sexual orientation. In addition, healthcare disparities in both access and quality of care have been shown to vary by sex, race, sexual orientation, age, socioeconomic status and other factors.¹³⁻¹⁸ As optometrists, we ought to be prepared to recognize these challenges, consider contextual information from a patient's background, and improve our ability to care through awareness, understanding and inclusion.

Considerations in the Care of the Veteran Patient

Trauma-informed care

Trauma affects the lives and health of many veterans before, during and after military service. Be aware of how to approach veterans with mental health conditions, including post-traumatic stress disorder (PTSD) and military sexual trauma (MST). Veterans have higher rates of mental health conditions including anxiety, depression and frequent mental distress compared with their civilian counterparts.¹⁹⁻²⁴ These rates are even greater among veteran women than among veteran men.^{19,21,23-24} These mental challenges may also be exacerbated by MST; approximately 1 in 3 veteran women and 1 in 50 men have experienced MST.²³⁻²⁴ Veterans affected by trauma may be overwhelmed by negative feelings and be prone to irritability and anxiousness.¹⁹⁻²⁴ Therefore, clinicians should proactively adopt a trauma-informed approach with all patients:

- Avoid possible triggers and escalating negative behaviors. Each veteran may have personal PTSD triggers that may cause disturbing thoughts, intense emotions or flashbacks.¹⁹⁻²⁴ Common triggers include certain conversation topics, confrontation, crowded areas, loud noises or unexpected physical touching.¹⁹⁻²⁴
- Prioritize consent and avoid any physical contact without permission. Explain an action, such as holding eyelids during tonometry and binocular indirect ophthalmoscopy, before performing it.
- Evaluate the clinic from the patient's perspective. Enter the office and go through the motions of an exam from the viewpoint of a patient. How are patients greeted? What do they see or hear in the waiting or exam room?

Unfortunately, some veterans have had negative provider interactions, which may influence subsequent healthcare experiences. Build trust by being dependable, caring and genuine. To facilitate a better exam experience:

- Acknowledge patient complaints and concerns. Answer all questions that may be asked without seeming dismissive or rushing the exam.
- Be transparent and flexible with regard to treatment options to help the patient make informed decisions. Incorporate the patient's view of the diagnosed condition, and tailor management plans to be realistic to the patient's lifestyle. For example, if a patient has erratic bedtimes, consider prescribing latanoprost to be used in the morning alongside other medications.
- Avoid confrontational language and tone when discussing non-compliance to avoid seeming accusatory or condescending. Instead of "You are going to go blind if you always miss your drops," say "I understand it's difficult for you to consistently use your drops because [you're really busy or you have other health concerns]. Let's try to figure out a game plan to get you back on track because it is really important for you to take them."
- If a patient becomes agitated or distressed, carefully try to determine what is causing this state. Respond in a calm manner: "Let's slow down and focus on helping you to feel safe. What can I do to help?"

Traumatic brain injuries

Traumatic brain injuries (TBIs) are unfortunately not uncommon in the veteran population. Exposure to blasts is one of the most frequent injuries suffered by those who served in Iraq and Afghanistan during Operation Enduring Freedom (OEF; 2001-2014) and Operation Iraqi Freedom (OIF; 2003-2010).²⁵⁻²⁸ From 2000 to 2021, the Department of Defense reported that more than 453,919 cases of TBI were diagnosed among U.S. forces.²⁵ It is estimated that 22% of all casualties from the OEF/OIF conflicts resulted from brain injuries. In contrast, 12% of Vietnam War-related casualties resulted from brain injuries.^{25,28-29} Other common causes of TBIs in the military include motor vehicle accidents, gunshot wounds and head injuries during training exercises.²⁵⁻²⁹

Issues resulting from TBIs can include headaches, photosensitivity, eyestrain, sleep and mood disorders, memory problems and slower thinking.^{25,27-28,30-31} These conditions can lead to long-term physical and mental health problems. To address eye-related concerns:

- Perform a comprehensive eye examination, including assessing visual acuity, pupillary response, intraocular pressure, and confrontation visual fields as well as examining the anterior and posterior segments.
- Assess for any possible oculomotor dysfunctions or visual discomfort for veterans who may have a history of TBI. This includes a more in-depth assessment of versional eye movements, vergence eye movements, accommodation, cover testing and photosensitivity. Patients may benefit from prisms, additional correction for near work, tinted lens coating and/or vision therapy to alleviate headaches and eyestrain.
- For veterans who are sensitive to bright and flashing lights, maximize visual comfort by using dimmer lighting when possible.
- Consider dilation with a lower-concentration mydriatic drop such as 0.5% tropicamide (or excluding 2.5% phenylephrine if using 1.0% tropicamide) when possible to lessen patient discomfort and improve tolerability. Be sure to educate the patient as to why dilation is important and on the possible side effects such as temporary blurry vision, photosensitivity, etc.

Comorbidities among veterans

Veterans have been shown to have a higher rate of comorbidities than the general population.³²⁻³³ This results in complex medical histories, which may involve physical, psychological and substance abuse that requires sensitivity. Consider:

- Being aware of the language used. An illness does not define a patient. Referring to a patient as “someone with diabetes” instead of “a diabetic” can go a long way.
- Being cognizant of the medical conditions associated with period of service in which the patient has served, as certain environmental exposures can lead to a higher risk for certain diagnoses. For example, veterans deployed to Vietnam between 1962 and 1975 and near the Korean Demilitarized Zone from 1967 to 1971 were potentially exposed to the toxic herbicide Agent Orange, which has been shown to cause cancers, diabetes, ischemic heart disease, Parkinson’s Disease and other illnesses.³²⁻³⁴ Veterans involved in the Gulf War (1991) and OEF/OIF have higher rates of photosensitivity and dry eye syndrome from the desert environment.^{27-28,31,35}
- Having an interdisciplinary approach with other specialties and referring veterans who also need to be seen by neurology, endocrinology, therapists and psychiatrists, audiologists, physical medicine and rehabilitation, etc.

Influences of military culture

Many aspects of military culture can impact a veteran’s beliefs, values, traditions and behaviors. The military ethos emphasizes the importance of group over self and respect of the hierarchical “chain of command” organizational structure.³⁶⁻³⁸ These values are carried throughout the rest of a veteran’s life.

As a result, some patients:

- May have a seemingly low priority on self-care.
- May have mixed feelings about receiving health care.
- May have concerns about perceptions and consequences from seeking care, especially mental health care (e.g., harming a career or being viewed as “weak” by peers).
- May feel that their symptoms and conditions are not as critical and may feel guilt (i.e., “someone else may need these resources more than I do”).³⁶⁻³⁸

Be mindful of these factors when examining a veteran patient and:

- Be considerate of any stigma as a barrier to truthful reporting of symptoms.
- Avoid making assumptions about experiences.
- Listen to the patient and avoid being condescending. Convey genuine concern and empathy through eye contact and body language. For example, avoid typing on the computer if the patient is discussing symptoms and concerns.

Diversity competence

Be cognizant of different racial and ethnic values among veterans that may impact how they approach suggestions for decision-making and treatment plans from healthcare providers. There is a history of racism in medicine towards people of color.¹³ Black and indigenous people in particular tend to receive lower-quality healthcare. This leads to worse medical outcomes and increased morbidity and mortality compared to that of their White counterparts.¹³⁻¹⁷ Cultural competence is crucial to closing the gap in the quality of health care.³⁹⁻⁴¹ Make sure your patients feel listened to and confirm that you have met their needs during the exam by:

- Using inclusive language when speaking and on health intake forms.³⁹ Note a patient’s pronouns in the chart, so you do not have to ask repeatedly over multiple visits.
- Being mindful of how you refer to a patient’s race and ethnicity. Do not make assumptions about the patient’s race and ethnicity, sexual orientation, gender identity, beliefs or concerns based on physical characteristics such as appearance, clothing, tone of voice or perceived masculinity or femininity.
- Asking open questions such as “How may I help you today?” (instead of including sir, ma’am”) and “What pronouns do you use?” Always use general wording such as “partner” rather than “husband” or “wife,” or “parents/guardians” rather than “mother” and “father.”³⁹
- Asking patients how they feel about their diagnoses and treatment recommendations. Some patients may have difficulty establishing trust toward their medical provider. If patients express resistance or an alternative solution against your recommendations, don’t immediately correct them. Instead, acknowledge their perspectives: “I understand you are concerned about your health. I want to make sure that we take the route that will be the most effective and convenient for you, and I hope that you will be open to considering these options with me.”⁴²

As a general rule, if there is any doubt or uncertainty as to a patient’s preferences, ask for guidance in a respectful manner. If it does not jeopardize the eye health plan, try to integrate one or more of the patient’s alternative solutions. The goal is to create a safe atmosphere for our patients, and these actions can be a small but meaningful step in establishing trust and improving their experience during an eye exam.

The importance of cultural humility

Cultural competence is essential to building diversity awareness and preventing errors due to lack of

cultural understanding. With the ever-evolving complexities of multiculturalism, healthcare providers must view it as a dynamic process, one that begins with an awareness of their own culture and beliefs. Tervalon and Murray-Garcia introduced the term cultural humility, which encourages personal reflection and growth around culture in addition to being culturally competent.⁴³

To effectively connect with those from other cultures, we must mitigate our implicit biases ? unconscious stereotypes and perceptions towards certain ideas or groups that can influence our behaviors and actions.⁴⁴⁻⁴⁵ To create a non-judgmental environment for patients:

- Do not let personal beliefs and prejudices affect your care; this includes racial, religious and cultural stereotypes.
- Recognize any implicit biases you may have, reflect on the social interactions that you have had, and learn from others who are socially dissimilar.^{42,44-46}
- Use local and online resources to gain personal and organization perspective on cultural competence and help you to find personal ways to improve.⁴² The U.S. Department of Health & Human Services Office of Minority Health offers a self-directed practical guide for culturally competent care for physicians.⁴⁶ For those who practice institutional optometry, your institution may offer training in cultural competence. For those who work or rotate through a VHA clinic, the VHA Talent Management System offers several courses on cultural competence.

Conclusion

The face of the VHA patient population will continue to change, and this increasingly diverse community of people all have different experiences, preferences, beliefs and values. We bear the responsibility to improve our own cultural competence to meet the needs of our patients. Patients' overall identity is a culmination of many factors ? gender identity, race, ethnicity, religion, socioeconomic status, sexual orientation ? which shape their perceptions of health care and potential barriers to care. Improving our cultural competence leads to better patient communication, increases compliance with treatment and follow-up care, and improves patient trust in healthcare providers. Ultimately, this will maximize health outcomes. Optometry, just as other healthcare professions, needs to shift its focus and priorities as our patient populations continue to evolve. Recognizing these challenges and adapting to each patient's needs may mean the difference between average and excellent care. This aligns with the VHA's core values of integrity, commitment, advocacy, respect and excellence.

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Dr. Tran [atran.opt@gmail.com] completed a primary care optometry residency at the Michael E. DeBakey VA Medical Center in Houston, Texas, where she is now on staff as an Attending Optometrist.

Dr. Huang completed a primary care and ocular disease residency at the Boston VA Medical Center, Brockton Campus. She is an Attending Optometrist at the Michael E. DeBakey VA Medical Center in Houston, Texas.

PEER REVIEWED

Justice and Disparity – a Defining Cause for Diversity, Equity and Inclusion in Optometric Education and Practice

Edwin C. Marshall, OD, MS, MPH, FAAO, FNAP | *Optometric Education: Volume 47 Number 3 (Summer 2022)*

Abstract

The populations most in need of vision and eye care are the populations least represented in optometry. Efforts to increase racial and ethnic diversity, equity and inclusion (DEI) often are justified from a representational perspective. A more defining justification builds from the historic context of social injustice at the intersection of health inequity and minority under-representation. The issues and factors that inform full acknowledgement and understanding of a contemporary DEI rationalization are complex and founded in history. This paper will focus on the Black American experience with racism and injustice within the frame of diversity, equity and inclusion in optometric education and practice. Strategies are provided to help address continuing challenges and shape optometry's journey toward a more diverse, equitable and inclusive future.

Key Words: *diversity, equity, inclusion, health disparity, social justice*

Introduction

Vision and eye care continue to be among the greatest unmet public health needs in the country, at a high cost to person and society.¹⁻⁷ Poor vision and eye health can result in impaired cognitive, social and physical development, low academic performance, employment and economic insecurity, loss of independence, environmental challenges and millions of dollars in unnecessary medical care and lost quality of life years.^{8,9} In spite of national health expenditures being at almost 18% of the gross domestic product, barriers to primary vision and eye care persist throughout our nation, most noticeably in underserved populations of color where the risk of eye disease and visual impairment is highest.^{5,10} A significant barrier to equitable care is the low representation of optometrists of color, predestined by the low representation of optometry students and faculty of color.^{8,11}

It is antithetical that the populations most at risk for disparate vision and eye health and in need of care are the populations least represented among eyecare practitioners and those training in the schools and colleges of optometry. The shifting U.S. demographics and associated health indices impose a continuing urgency for optometry to build a workforce that appropriately reflects the diversity of those it serves. Efforts to increase racial and ethnic diversity are justified mostly from a representational perspective. A more defining justification builds from the scaffolding of social injustice and health disparity at the intersection of inequity and under-representation and is “best understood in the context of the history common to minority health and minority health professionals in America.”¹² However, discussions of minority under-representation and disparate health and health care often fail to consider the historic context that helped shape their present state. One must look beneath the surface of casual familiarity with history and confront the historical arc of social injustice to comprehend its legacy on the complex nexus of issues that inform today's conscience. While cognizant of the negative social experiences and challenges impacting Latinx, Indigenous and other racialized people, this paper focuses on the Black experience of racism and injustice in the United States. Implications for optometric

education and practice will be considered within the frame of diversity, equity and inclusion (DEI).

A Year of Vision

The year 2020 was to be “The Year of Vision” with national attention fixed on achieving optimal clarity. The year turned out truly to be a year of vision, but not the one anticipated. Misinformation, distrust, a teetering and racially charged social climate and the invasion of the novel SARS-CoV-2 on a slowly responsive and ill-prepared healthcare system unveiled a pressurized society on the brink of ecologic decay. The syndemic of systemic racism, bigotry, brutality and the disproportionate and devastating health and economic impact of COVID-19 on the lives of Black, Latinx and Indigenous people laid bare the ugly and painful reality of racial injustice and inequity in health and health care in the United States.

The spotlight on the intersectionality of social injustice and the racialization of health exposed a healthcare system that often fails the needs of marginalized communities. This exposed failure also shed light on the compounding effect of overlapping burdens and vulnerabilities arising from converging systems of injustice (e.g., racism, sexism, ageism, ableism, cisgenderism) that synergistically discriminate and oppress along intersecting axes of multiple social inequalities and marginalized social identities.

The confluence of separate but related high-profile events in 2020 galvanized a national awakening of consciousness unparalleled since the 1960s Civil Rights Movement, compelling a public reckoning on systemic racism and social injustice.

The year witnessed global protests, candid exchanges about race and bias, publicized commitments to social justice, renaming buildings and removing imagery that reflect racist and oppressive histories (e.g., the American Medical Association archived the bust of Dr. Nathan Davis – the “father of the AMA” – and removed his name from an annual award for his role in “blocking integration and promoting and embedding racism in the AMA”).¹³ Dismantling the subtle and not so subtle residuals of racial injustice and discrimination should not be conflated with division, but seen as essential to creating a culture of inclusion and equity in a race-conscious society. The year 2020 made it clear that no longer can society look past the immorality and corrosive effects of racism and injustice across the spectrum of human engagement.

Race, History and Health Disparity

From early 1900 to today, racial health disparities have been well-documented at an estimated \$93 billion in excess medical care costs per year.¹⁴⁻¹⁸ Interlandi hypothesized that they are “as foundational as democracy itself,” implying disparities have always existed as part of the tapestry of U.S. history.¹⁹ Differences in how population groups access and experience health care are routinely stratified by race. Race then becomes a convenient social marker for categorizing disease risk, prevalence and outcome based on phenotype. While race may carry “significance as a sociopolitical lens through which to study racism and inequity,” its utility as an epidemiologic tool in population health is under challenge, particularly its employment in the flawed assumption that a socially, politically and legally constructed racial category tied to skin color reflects an innately discrete biology (racial essentialism) and is the putative cause of health disparity.²⁰⁻²⁴ Complex identities, such as self-identification as being of two or more races, further complicates race as a discrete biology and the causative factor in racial disparities.²⁴ It has been posited that racial health disparities often are clinical manifestations of enduring social and economic inequities and more likely the result of the experience of historically entrenched racism, not biology, where race exists as a “social construct that precisely captures the impacts of racism” on health.^{21,22,24-27} The American Public Health Association and a growing list of cities and counties in 41 states and the District of Columbia have declared racism a “public health crisis,” and the American Medical Association identified it as a “serious threat to . . . the advancement of health equity and a

barrier to appropriate medical care.”^{21,28} The Centers for Disease Control and Prevention also affirmed racism to be a “serious public health threat” and launched a “Racism and Health” web portal.²⁹

As Black, Latinx, Indigenous and other racialized communities struggle disproportionately and unnecessarily with undiagnosed and/or untreated vision and eye morbidity, projections of increasing disparity illuminate a less than optimistic trajectory toward racial and ethnic vision/eye health equity.^{5,30} The incongruity between health inequity and social justice places an unnecessary, avoidable and unjust, but often unexamined, social tax on the most vulnerable populations. It is customary to teach about associations between race, ethnicity and ocular morbidity and the downstream effects on such life events as learning, employment and recreation. Yet, in pondering interventional strategies for racially, ethnically and culturally diverse patients, how often do we acknowledge that health and illness have – in addition to a biomedical context – a social, cultural, behavioral, environmental, political and legal context? That is, how often do we take a population health approach to understanding the non-biomedical drivers (e.g., systems, policies and practices) of health inequity and attack population gaps by looking upstream at the primordial (e.g., environmental, social, cultural) determinants of vision and eye health and their attendant ill effects on quality of life in racialized communities? Do we attempt to understand the root causes of the sociodemographic conditions that predetermine disparate vision/eye health or how cultural beliefs and patient-provider discordance play on the risk ratio of disproportionate morbidity? How often is health equity in the context of the social determinants of disparate health – including racial discrimination and bias – critically analyzed from the perspective of comorbidity, social epidemiology and patient-centered care?

Discussions about racism and the upstream insults that drive health and healthcare inequities in racially minoritized communities are often omitted from the health professions classroom, where educators may pathologize race without acknowledging the effect of racism on minority health.^{25,27,31} A 2021 paper in *The New England Journal of Medicine* (NEJM) suggests, “Faculty and students need a more complete view both of U.S. history and of the ways in which medicine and public health have participated and continue to participate in racist practices.”³² A myopic view of racial history and its effects on the health of minoritized communities contributes to a failed understanding of the upstream roots of morbidity and disregards the social experiences and environmental conditions that affect health outside the conventional model of clinical care.³³ Where a person is born, lives, learns, works and plays influences the receipt and outcomes of health care.³⁴ Educators and providers cannot afford to continue focusing only on the downstream, micro- (individual) level consequences of disparate health care while disregarding their upstream, meso- (health community) and macro- (policy) level drivers.³¹ Responsible training is incomplete without a discussion of the social determinants of health as “historical roots of contemporary health disparities.”^{35,36}

Acknowledging the vestiges of racial inequity in the epidemiology of ill health may be new for some in the academy, but not for the descendants of the physical, emotional and social damage inflicted by centuries of discrimination and abuse. One cannot deny without applying revisionist history to the conversation that the Black experience with racialized health inequities in America started 400 years ago with the introduction of chattel slavery during European colonization. An ill-founded belief in a fabricated racial hierarchy of human value based on skin color disenfranchised and discounted enslaved Black people to three-fifths of a person and excluded them from the unalienable right of life, liberty and the pursuit of happiness, including good health. The racist ideology held by much of the dominant group at the time, including the Eurocentric medical community, buttressed the stage for years of non-consensual, exploitive, unethical, immoral and in many cases sadistic medical procedures and non-therapeutic, pseudoscientific experimentation. It was an era replete with such abject indignities as degrading, painful and unanesthetized surgical experiments and “Mississippi appendectomies” on Black women, exploitation of the harvested cervical cancer (“HeLa”) cells of Henrietta Lacks and the infamous and relatively recent (1932-1972) U.S. Public Health Service-sponsored “Tuskegee Study of Untreated

Syphilis in the Negro Male.³⁷⁻⁴³

Non-factual myths about the anatomy and physiology of Black people were articulated to justify slavery, sanction exploitation and oppression and sustain convenient, but false, narratives about their biological inferiority (such as having smaller brains, thicker skin, less sensitive nerve endings, blacker blood, harder bones, weaker lungs, stronger sight and seldom need for spectacles).^{37,38,44} Complicity by the medical community in promoting specious ideologies of an inferior racial biology and lower intelligence erroneously “validated” the fallacious and egregious claim that enslaved men and women were ideally suited for servitude in the sunbaked cotton and tobacco fields of slave masters.³⁸ The May 1851 issue of *The New Orleans Medical and Surgical Journal* claimed, “The field of vision is not so large in the negro’s eye as in the white man’s. He bears the rays of the sun better, because he is provided with an anatomical peculiarity in the inner canthus, contracting the field of vision, and excluding the sun’s rays.”⁴⁴ Harriet Washington peeled away the layers of medical racism to reveal that, “Slavery created a medical partnership between physician and planter that eclipsed the patient-physician dyad” and that medical schools and hospitals were thought of by Black Americans as “places of terror, violence and shame, not of medical care.”³⁷ A 2020 *NEJM* editorial opined that slavery’s “legacy of racism, injustice and brutality runs from 1619 to the present and infects medicine as it does all social institutions.”³³

The toll in lost health and lost trust levied by scientific racism and exploitation continued across generations to weigh on the present-day bodies and minds of Black and Brown Americans and refuel deep-seated skepticism about the interest and integrity of the U.S. healthcare system.^{25,37} Commenting on racism in systems of care, Doubeni et al. state, “Even when deemed unintentional, well-documented structural inequities are evident within the healthcare ecosystem that span the entire prevention-to-treatment continuum.”⁴⁵ Biased risk assessments, faulty race-norming algorithms and persistent discriminatory beliefs influence healthcare decisions and, as recently as 2020, 20% of Black adults reported experiencing unfair treatment in getting health care in the previous 12 months because of their race.^{38,46,47} Former U.S. Surgeon General David Satcher and Daniel Dawes wrote recently that, “medicine still struggles with how to advance health equity, quash racist beliefs and biases in the profession, and reform racist systems and structures that have created, perpetuated, and exacerbated the health inequities that continue and are experienced by many in US society.”⁴⁸

Diversity, Equity and Inclusion

Diversity, equity and inclusion are essential attributes of social justice and represent investments in educational and clinical excellence, thereby commanding a strong presence on both sides of the classroom podium, in clinical practice and research and in the corporate suites and boardrooms of ophthalmic corporations and professional associations. **Figure 1** models the role of DEI in creating social climates that channel health equity and social justice through positive interactions and outcomes to facilitate culturally mindful care and enhanced quality of life.

Diversity

Patients and providers are more likely today, and in the future, than at any time in the past to bring to the clinical encounter a wide cross-cultural array of clinically relevant needs, attitudes, customs, values, beliefs, preferences, assumptions, expectations, practices and fears that decode experiences, shape perspectives, affect decisions and drive behavior. Intercultural encounters in discordant patient-provider dyads can introduce non-traditional variables into the traditional biomedical paradigm of clinical care and create obstacles to productive communication and interaction. A lack of concordance could curb expectations, widen the health disparity gap and generally limit the quality of the patient-provider relationship.^{8,18,49}



Figure 1. Creating diverse social climates that foster health equity and social justice through attributes of diversity, equity and inclusion in vision and eye care. [Click to enlarge](#)

In a modern society, healthcare professionals are ethically and professionally obliged to provide the best possible care that supports the health and well-being of all patients, irrespective of personal identities and characteristics. It is important for optometrists and optometry students to understand how diversity influences care and affects outcomes in order to achieve optimum vision and eye health for everyone. The Institute of Medicine acknowledged that “greater diversity among health professionals is associated with improved access to care for racial and ethnic minority patients, greater patient choice and satisfaction, better patient-provider communication, and better educational experiences for all students while in training.”⁵⁰ Racial and ethnic diversity also promotes culturally mindful care, trust in the healthcare system, participatory decision-making, timely treatment decisions, patient compliance and different ways of contextualizing solutions to enhancing quality of life.⁴⁹⁻⁵²

Equity and inclusion

Diversity is necessary, but insufficient as a climate-changer in the absence of equity and inclusion. Equity implies fundamental fairness, grounded in the ethical principles of distributive justice and is both a means and an end.⁵³ Racial equity, where outcomes are unaffected by race and all people have the opportunity to achieve their full potential, requires eliminating discriminatory inequalities that negatively affect the life course of racialized groups. Equity is different from equality in that equality assumes same treatment in a meritocracy, without necessarily acknowledging and responding to historical social inequities and structural barriers impacting marginalized groups. Racial equity is central to health equity – the overarching goal of “Healthy People 2030” – and both are foundational to meeting the moral obligation and public health imperative of eliminating avoidable and unfair racial and ethnic disparities in health and health care.⁵⁴

Inclusion is a sense of belonging through welcomed engagement and valued participation. It is an intentional and continuous process to combat racial isolation, “othering” and the feeling of being invisible, overlooked, unacknowledged, undervalued and dismissed in a racially or culturally alienated and otherwise diverse, but White-defaulted, environment. Diversity and inclusion strategist Vern? Myers states, “Diversity is being invited to the party; inclusion is being asked to dance.”⁵⁵ Inclusion in optometry also encompasses culturally responsive mentorship of students and faculty who may not yet know how to “dance” gracefully in the unfamiliar ballroom of academic optometry. Institutions and individuals that practice cultural humility with an orientation and a lack of superiority toward others are more apt to be open and respectful of diverse cultural backgrounds and experiences.⁵⁶ The Vision Council’s 2020 Diversity, Equity and Inclusion Survey of the ophthalmic industry found that less than 75% of non-White students (68%) and non-White respondents from academia (72%) reported feeling “comfortable bringing their authentic ‘whole self’ to their institution/work,” while only 58% of non-White student and academic respondents feel they have “the ability to voice concerns about diversity, equity and inclusion without fear of negative consequences.”⁵⁷ Inclusive excellence requires that everyone has the ability to speak, learn and succeed without fear. Seeing others through their personal lenses and valuing their perspectives are necessary qualities of an inclusive social and professional environment.⁵⁸

Unconscious Bias

Each of us presents as a blend of cultures conditioned by the collective and diverse places and spaces of our age, race, ethnicity, gender identity, sexual orientation, education, religion, socioeconomic status, geographic residence, national origin and occupation. Mediated through our composite cultures and lived experiences are our conscious (explicit) and unconscious or automatic (implicit) biases. Not all biases are bad, but those based on erroneous premises, fabricated negative beliefs and the baggage of narrow intercultural experiences pose real challenges to equity and inclusion. Eliminating negative biases

through constructive interactions with diverse communities and reassessing assumptions and behaviors through objective exposure is fundamental to cultivating inclusivity.

Consciously, one may deplore harboring negative biases, but “implicit attitudes often exist outside of conscious awareness,” and implicit measures of bias like the Implicit Association Test may unveil previously unaware dissociations between conscious and unconscious attitudes.^{59,60} Greenwald and Krieger advise that implicit biases are “especially problematic because they can produce behavior that diverges from a person’s avowed or endorsed beliefs or principles.”⁶⁰ For example, socially sensitive (e.g., inter-racial) interactions could constrain persons from consciously acting on negative beliefs or stereotypes with overtly discriminatory attitudes or behaviors, while subconsciously veiling beliefs dissonant from their outward expression. Although healthcare providers may be well-intentioned, research has demonstrated that the implicit attitudes and behaviors of healthcare providers are among the factors that affect decisions, interfere with participatory, patient-centered care and contribute to racial health disparities.⁵⁹ Because health professions students may demonstrate implicit biases similar to those of practitioners and subsequently carry them forth into clinical practice and patient care, it is essential that faculty and all other actors within the student-to-practitioner pathway self-interrogate their own biases and subtle messaging to ensure equitable and safe learning spaces.^{23,59,61} Wilson asserts, “The more we consciously think about the things we normally do without thinking, the more we can become better healthcare providers and medical educators who can effectively shepherd a system toward greater health equity.”⁶² Providing opportunities for medical students to learn to recognize and address biases, in both themselves and others, is an accreditation standard for U.S. medical education programs.⁶³

It is not unusual for clinicians to apply “cognitively beneficial” associations based on race (e.g., glaucoma risk) – albeit potentially reinforcing race as a biological factor – as shortcut hypotheses about patients and their conditions.^{23,64} But a preconceived judgment about the success potential of an aspiring student based on phenotype and acting on that judgment is like making an across-the-room, race-centered diagnosis about the health posture of a minority-presenting patient without further clinical assessment. Such practices, whether in the admissions process or during didactic and clinical training, disadvantage minoritized students at two levels: 1) differential assumptions about the abilities of “others” based on their race (personally mediated racism); and 2) assent to the negative stereotypes and assumptions about one’s abilities (internalized racism).^{25,26,65,66} Internalized racism can cause minoritized students to become discouraged and lose faith in their own capabilities (imposter syndrome). Additionally, the internal response to chronic racism, the hyper-vigilance of a racially marginalized identity and the emotionally burdensome struggle to cope, be accepted and belong can lead to cumulative toxic stress (allostatic load) and the psycho-social strain of “racial battle fatigue.”^{25,67,68} The need to justify one’s qualifications and presence against stereotype threats arising from an insidious undercurrent of unchecked biases and assumptions, unfair generalizations, lowered expectations, macro- and microaggressions, invalidation, tokenism, coded messages and perceived discrimination can contribute to feelings of alienation, anxiety, depression and low self-concept that undermine the educational experience for minoritized students and faculty.^{25,66-68}

“Social Indifference or Blatant Ignorance” Revisited

Ever since William H. Lawson graduated from the Toronto School of Optometry in 1912 and became the first Black optometrist licensed to practice in the United States, Black Americans have been under-represented in optometry. In an unpublished 1960 paper, Charles Comer – the first Black graduate of the Indiana University School of Optometry – estimated Black representation at 0.6% with a ratio of 0.7 Black optometrists per 100,000 Black population.⁶⁹ Almost 50 years ago and 12 years after Comer’s paper, Marshall estimated a minority (including Asian) presence at 1.3% of practicing optometrists and a ratio of 1.1 minority optometrists per 100,000 minority population – and an even lower Black presence (0.5% of optometrists and 0.5 Black optometrists/100,000 Black population) than what was estimated by

Comer.⁷⁰ Marshall's 1970-71 academic year survey of the then 12 schools and colleges of optometry indicated that the enrollment of Black students also was at 0.5%.

Citing "social indifference or blatant ignorance," Marshall challenged those in the profession who were insensitive to the under-representation of Black and Hispanic optometrists and/or refuted the need for special efforts to increase diversity, hiding behind claims that minority recruitment programs necessitate remedial courses, extended time in school, reduced admissions standards and extensive tutorial programs.⁷⁰ Fortunately, such views were not in the majority. Marshall's survey revealed that two-thirds of U.S. optometric institutions had programs to recruit minority students. From 1972 to 1980, the National Optometric Association (NOA) "Project to Increase Minority Optometric Manpower," with support from the federal Health Careers Opportunity Program (HCOP), worked closely with the schools and colleges of optometry to increase under-represented minority (URM) student enrollment. In the 1970s and 1980s, HCOP supported a number of pre-health professions summer enrichment programs, including the Indiana University School of Optometry Summer Institute in the Health-Related Professions. The Institute, which ran from 1973 to 1990, was strategic in attracting large numbers of URM students for whom optometry was relatively unknown and not part of their original career horizon, but who discovered it during the 6-week program. Through its "Developing a Diverse Applicant Pool in Optometric Education Mini-Grant Program," the Association of Schools and Colleges of Optometry (ASCO) provided seed money from 2006-2015 to assist schools and colleges with programs to recruit and retain URM, financially disadvantaged and first-generation college students. A number of optometric institutions continue to host, either separately or in collaboration with other health professions schools, pre-optometry summer camps directed at URM and first-generation students. ASCO's 2004 "Road Map for Diversity in Optometric Education and the Profession" and its "2005-2006 ASCO Diversity Action Plan" called on member institutions to foster climates that welcome and embrace diversity by making it a core value in their missions, goals and objectives. Despite these efforts, there has been little change in Black student diversity in the 60 years since the Comer estimates.



Table 1. [Click to enlarge](#)



Table 3. [Click to enlarge](#)



Table 2. [Click to enlarge](#)



Table 4. [Click to enlarge](#)

A statistician could argue that by 2015, the percentage of Black optometrists had increased three-fold and the ratio of Black optometrists to the Black population had increased two and a half-fold (three and a half-fold from the Marshall estimates). However, at 1.8% of the profession and 1.7 Black ODs per 100,000 Black population (compared to 15.2 White ODs per 100,000 White population), Black optometrists remain woefully under-represented and least available to Black patients (**Table 1**). The ratio of the percent of Black optometrists to the percent of the Black population yields a Black diversity ratio of 0.1 (1.0 = parity), a further expression of severe under-representation. Similarly, Hispanic optometrists were under-represented at 3.9%, with a Hispanic optometrist to Hispanic population ratio of 2.6 per 100,000 and a Hispanic diversity ratio of 0.2. Reliable data were not reported for Indigenous optometrists; however, it is reasonable to expect comparable levels of under-representation. Despite being 30.7% of the population, under-represented minorities comprised only 5.7% of optometrists and 6.0% of ophthalmologists (**Table 2**). Black and Hispanic practitioners fall at the low end of representation across the range of health professions, with ophthalmology showing a slightly greater Black practitioner representation than optometry. Black and Hispanic faculty in the schools and colleges of optometry increased modestly from 2.9% and 5.3%, respectively, in 2015 to 3.6% and 5.7% in 2020 (**Table 3**). The continuing low presence of URM faculty can present a structural barrier to attracting and recruiting URM students and assuring inclusive excellence in optometric education.



Figure 2. Numerator derived from Association of Schools and

Colleges of Optometry. Annual Student Data Reports [cited 2021 June 1]. Available from: <https://optometriceducation.org/data-reports/data-surveys/>; denominator derived from U.S. Census Bureau. ACS Demographic and Housing Estimates [cited 2021 May 29]. Available from: <https://data.census.gov/cedsci/table?d=ACS%201-Year%20Estimates%20Data%20Profiles&tid=ACSDP1Y2015.DP05>. [Click to enlarge](#)

Hispanic optometry student enrollment increased from 4.5% to 7.2% during the past 10 years, but Black enrollment stayed relatively flat – increasing by only seven-tenths of a percentage point from 2.7% to 3.4% (**Table 4**). There were 89 more Black students and 258 more Hispanic students enrolled in 2020-21 than in 2010-11, while Asian and White student enrollment jumped to 444 and 336 more students, respectively.¹¹ The 2020-21 first-year matriculant/applicant ratio was 0.5 for Black students and 0.4 for Hispanic students, compared to 0.7 and 0.8, respectively, for Asian and White students, but only 6.0% of the year's applicants were Black with 12.6% being Hispanic. At 0.3 and 0.4, the 2020 Black and Hispanic OD graduate diversity ratios appear insufficient to effect meaningful positive change in the diversity of the optometry workforce (**Figure 2**). Based on the total number of OD graduates in 2020, 174 more Black optometrists and 193 more Hispanic optometrists would have had to have graduated in 2020 to begin to approach representational parity in the profession. In 2016, the National Academies of Sciences, Engineering, and Medicine reported that “diversity in the eye and vision care workforce is important to address some of the inequities in eye and vision outcomes,” but “the lack of diversity in schools and colleges of optometry is a substantial problem.”⁸ The ASCO “Optometry Gives Me Life” campaign, which showcases optometrists from diverse backgrounds, has begun to show promising results. The number of Black and Hispanic applicants using the Optometry Centralized Application Service (OptomCAS) increased by 14.3% and 19.4%, respectively, between the application cycles of 2019-20 and 2020-21.^{71,72} The increase in applications in 2020-21 resulted in Black and Hispanic enrollment increasing by 17.6% and 8.3%, respectively, to 4.0% and 7.8% in 2021-22.⁷³

The Response to 2020

The year of vision exposed unanswered questions, tremendous challenges and troubling uncertainty, while at the same time provided clarity about the need to accelerate efforts for achieving a social atmosphere framed in justice, diversity, equity and inclusion. Olayiwola et al. acknowledged that a shift in culture is needed and it “must begin in health professions education, where we bear the responsibility of training the very clinicians who will treat maladies that are caused by and reinforce racial injustice.”³¹ Concerned about systemic racism and its impact on Black representation in the profession, students from the SUNY College of Optometry class of 2020 and signatories from across the country in a letter to ASCO called upon optometry educators and leaders to make Black representation a priority with a more diverse and welcoming academic community. Organized optometry, its ophthalmic cousins and the schools and colleges of optometry reacted to the year 2020 with a resolve to imbue racial equity throughout the vision and eyecare space.



Table 5. [Click to enlarge](#)

The Black Eyecare Perspective (BEP) Open Your Eyes video and the SUNY College of Optometry webinar series on Race in Optometry increased awareness of the discrimination and anxiety experienced by Black optometrists in the U.S.^{74,75} The personal stories and honest, open and sometimes uncomfortable conversations provided unfortunate but informed testaments to the realism of ongoing racism and the continuous threat of a “racial hierarchy that, although officially abolished, remains deeply embedded in our social fabric and unconscious attitudes.”⁵² A number of the schools and colleges of

optometry and optometric organizations hosted profession-wide webinars and virtual town halls to further discussions about race and the importance of DEI. Many also created DEI task forces, committees and/or staff positions to advance diversity and inclusion strategies and facilitate a culture of understanding and inclusiveness. The American Optometric Association (AOA) resolved to build a diverse profession with “a renewed effort to address gaps in access to professional education in optometry for members of under-represented minority groups due to the ongoing impact of past discrimination.”⁷⁶ The year of vision also prompted growth in new scholarship commitments for increasing Black student enrollment in the schools and colleges of optometry. **Table 5** provides an overview of some of the recent actions implemented to promote a more diverse, equitable and inclusive optometric profession.

Recommendations for the Ophthalmic Community

Optometry’s schools and colleges, with support from the professional community at-large, must lead the way with intentional, collaborative and sustained action through vested commitment, delineated plans, accountable infrastructures, sufficient resources, institutional will and a “woke” social posture. The following recommendations are suggested to help shift the profession toward being more responsive, representative, equitable and inclusive.

Schools and colleges/ASCO

Climate initiatives

- Provide a welcoming and reassuring public face through webpages populated with mission statements, images and resources that communicate an institution that embraces and lives diversity, equity and inclusion
- Display an ambience of inclusive excellence with visible celebrations of distinguished alumni and faculty of color (e.g., wall of recognition)
- Explore and assess (e.g., via climate surveys) the intent vs. impact of behaviors and perceptions, the presence of biases in policies and practices that impede an equitable and inclusive learning/working environment and formulate culturally responsive mitigation strategies with clear and accountable metrics and dashboards
- Decolonize the curriculum by critically addressing the manner in which race and ethnicity are used in didactic and clinical teaching with intentional inclusion of population-representative narratives and references, culturally responsive case studies and simulations and objective challenges to race-based assumptions, biases and norming while explicitly characterizing race as a sociopolitical construct
- Create opportunities to educate on the social determinants of health, health disparities and cultural beliefs and practices in the context of delivering quality health care
- Foster health as a building block of social justice through cultural humility, patient-centered care and community education and service
- Structure faculty performance evaluations to value: 1) scholarly activity on racial and ethnic vision/eye health disparities; 2) the effects of racism on quality care and vision/eye health; and/or 3) research on evidence-based interventions for improved minority vision/eye health
- Sponsor annual faculty lectures or interdisciplinary summits on vision/eye health equity
- Establish an administrative position with institution-wide authority, leadership and expertise for DEI advocacy, programming, goal attainment and assessment
- Conduct dean/president-led annual intra-institutional town halls for faculty, staff and students to share, listen, assess and respond to DEI concerns, issues and plans
- Form alumni diversity affinity groups and employ advancement offices to advocate endowments for minority student scholarships and minority faculty professorships

Student recruitment and support initiatives

- Partner with federal programs, foundations, academic centers and the corporate community to support summer enrichment and bridge programs for undergraduate STEM and health professions career-seeking students of color
- Establish relationships with academic/career advisors and STEM faculty at minority-serving institutions and invite them to “Introduction to Optometry” virtual meetings
- Sign on to the BEP “13% Promise” with the goal of attaining a Black student enrollment of 13%
- Partner with the NOA “Visioning the Future” historically black college and university (HBCU) mentorship program and the BEP “Impact HBCU: If You See It, You Can Be It” initiative to provide HBCU students with career planning, resource guidance and social, academic and financial support to become optometrists
- Facilitate optometry student and alumni support of the BEP Pre-Optometry Club and expand connections with student organizations, pre-health professions clubs and advisors to build URM pre-optometry cohorts
- Support the National Optometric Student Association/American Optometric Student Association (NOSA/AOSA) Diversity Optometry Program in its efforts to expose optometry to Black and other minority undergraduate students by encouraging alumni to volunteer as undergraduate student mentors
- Appoint URM members to the admissions committee and apply transparent, holistic reviews in a socially accountable admissions process that balances objective metrics (e.g., grades, test scores) with personal attributes (e.g., persistence, leadership skills) and diverse lived experiences that reflect institutional goals for enrollment diversity
- Host a reception/dinner with the local NOSA chapter and minority alumni at the start of the academic year to welcome new incoming URM optometry students
- Develop and support a web-based, interactive, virtual network among the national cohort of optometry students of color (i.e., NOSA members across ASCO institutions) and alumni of color to create a platform of culturally responsive mentor/peer support, belonging and engagement
- Publicize to URM pre-health professions students the institution’s curricular and research attention to health disparities, the social determinants of health and vision/eye health equity

Faculty development initiatives

- Encourage, sponsor and mentor optometry students of color to undertake a residency after graduation with the goal of pursuing a career in academic optometry
- Implement processes to attract optometry students of color to graduate study in vision science, basic science or public health (via combined degree or postgraduate programs) through one-on-one mentorship and shadowing opportunities, laboratory experiences, financial assistance and directed guidance toward an academic career
- Establish a loan forgiveness path for URM optometrists who enter the optometry professoriate
- Recruit faculty of color in the basic sciences through collaborative research bridges with graduate programs at minority serving institutions
- Provide mentoring and leadership opportunities to support the career development and advancement of faculty of color to administrative positions (department chair, dean, president)

Optometric associations and regulatory bodies

- Implement an aggressive and collaborative multimedia and in-person recruitment program targeting elementary (starting in the third grade), high school (health science magnet schools) and undergraduate (HBCUs and other minority-serving institutions) students of color and involving optometrists of color from the American Academy of Optometry, AOA, ASCO, NOA and the optical industry to increase exposure to the optometric profession and generate awareness of vision/eye

health disparities and the need for a racially and ethnically diverse workforce

- Showcase the profession with recruitment narratives that speak to diversity via “Stories from the Community” about the merits and joys of culturally-centered optometric practice
- Identify a geographically broad cadre of practitioners of color to serve as local mentors and role models to optometry and health professions career-seeking students of color
- Engage optometric associations in a “Bridge to Optometry” program where URM undergraduate students (e.g., “Visioning the Future” and “Impact HBCU” participants) are invited and sponsored to attend lectures and visit exhibit halls at national, regional and state optometric conferences to connect with mentors and cultivate insight into optometry
- Seek ophthalmic industry allies for increasing the visibility of optometrists of color in industry-sponsored product ads, sponsoring health fairs in communities of color and providing paid pre-optometry summer internships and endowed optometry scholarships for students of color
- Expand use of optometric practitioners and faculty of color as key opinion and thought leaders and decision-makers in industry, on governing, advisory and editorial boards and as presenters at professional meetings
- Encourage national, regional and state credentialing and accrediting bodies to incorporate DEI-conscious practices (e.g., cultural competency/humility training) as quality of care measures in their assessment standards
- Embed social justice into organizational policies and practices, make health equity a strategy to quality care and introduce it as a repetitive theme at professional conferences and work collaboratively with other health and non-health sectors to explore interprofessional approaches to eliminating social and structural barriers that contribute to the persistence of racial/ethnic health disparities

Conclusion

As we continue to live in challenging times, in many respects the issues and opportunities of today are not new. It was in 1972 when Marshall wrote, “It is appalling to think it took over 300 years for the souls of the masses of this great nation to be touched by the social concern that is so prevalent today.”⁷⁰ What may appear like new conversations are essentially extensions of more than 5 decades of dialogue along the justice, diversity, equity and inclusion journey. “Marathon” often is cited as a metaphor for the DEI process that lies before us, but let us not lose sight of the fact that the optometry diversity marathon started decades ago and continues today as a slow race to progress.

The year 2020 left us with what Martin Luther King Jr. referred to as “the fierce urgency of now,” placing us at a critical inflection point for positive change toward reconciling our history and advancing racial justice and health equity. Status quo is not an option. The only choice before us is to catalyze and enhance the energy and momentum from “The Year of Vision” to effect meaningful, sustainable change with audacious goals and industry-wide clarity based on a common platform of accountability. The 2020 wake-up call re-established the social justice agenda under a renewed consciousness of overdue urgency. It is beyond time to push forward in solidarity with enhanced mindfulness and humility, socially conscious and just values, clearly focused and purposeful intention and transformative action to achieve a profession with a racial, ethnic and cultural complexion that mirrors the U.S. population and one that is prepared to advance equitable care and remedy the vision and eye health disparities so prevalent among racialized communities.

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Dr. Marshall [marshall@indiana.edu] is Professor Emeritus of Optometry and Public Health at Indiana University (IU). He was Associate Dean for Academic Affairs and Student Administration in the IU School of Optometry and the university's Vice President for Diversity, Equity and Multicultural Affairs.

PEER REVIEWED

Training Implicit Bias and Awareness of the Impact of Systemic Racism on Health: a Preliminary Study of Second-Year Optometry Students

Melissa Zarn Urankar, OD, FAAO, Gregory S. Wolfe, OD, MPH, FAAO, FNAP, and Janette D. Pepper, OD, FCOVD, FAAO | *Optometric Education: Volume 47 Number 3 (Summer 2022)*

Abstract

Background: Heretofore, the impact of formal diversity, equity and inclusion training have not been evaluated in optometric education. Poor health outcomes have been linked to inequities centered on race and socioeconomic status. **Methods:** Coursework was developed to integrate diversity, equity and inclusion principles in two courses. Activities for the courses focused on communication skills, empathy and implicit bias awareness to improve optometry students' ability to connect with diverse patients and ultimately improve health outcomes. Learner perspectives were assessed before, during and after the coursework was presented. **Results:** Learners demonstrated statistically significant improvement in understanding the impact of race on health outcomes and increased confidence in discussing race with peers ($p=0.003$ using paired two-tailed t-test). Learner confidence in providing fair and equitable care was initially statistically significant in each category of race, sexuality, gender and religion (responses evaluated using the Wilcoxon signed rank test). However, in assessing confidence 6 months after the course ended, there was a noted decrease in confidence, which was not statistically significant. **Conclusion:** The results of this implementation are promising, yet the effects appear to be transitory. These results reinforce the need for further attention and development in this area.

Key Words: public health; empathy; implicit bias; diversity, equity and inclusion; interprofessional education; optometric education; health disparity; health equity

Introduction

In 2003, an Institute of Medicine report found that racial and ethnic health disparities are associated with worse health outcomes. The report also noted that provider bias, stereotyping, prejudice and clinical uncertainty may contribute to racial and ethnic disparities in health care. Thus, it was recommended that future health professionals be educated in cross-cultural education.¹ In 2008, the Association of Schools and Colleges of Optometry released "Guidelines for Culturally Competent Eye and Vision Care" to assist educators with training of students in the delivery of such care to patients.²

Racial and ethnic health disparities have increased despite health professions community efforts to counter their effects.³ A 19-year serial analysis of National Health Interview Survey data, which included 596,355 adults, showed that although access to health care has improved across all racial groups, racial health disparities remain.⁴ Furthermore, the COVID-19 pandemic illuminated glaring health disparities in which marginalized populations were affected more severely and had higher morbidity rates compared to White counterparts.⁵⁻⁷ These facts underline the extent of the gaps in the healthcare system for minority populations.⁸⁻⁹ In 2021, Mendez, et. al stated that racism has been cited as a key driver of racial health inequities.¹⁰ Dr. Camara Jones, Past President of the American Public Health Association (APHA), defines racism as "a system of structuring opportunity and assigning value based on the social interpretation of race, that unfairly disadvantages some individuals and communities, unfairly advantages

other individuals and communities, and saps the strength of the whole society through the waste of human resources."¹¹ Furthermore, Mendez et al. noted that racism has three components: institutionalized, interpersonal and personally mediated, and internalized, concluding that structural racism is the sum of which racism operates in a society.¹⁰⁻¹¹ Additionally, in 2020, the APHA, declared structural racism a public health crisis.^{1,10,13-16} This position was highlighted with the parallel events of the COVID-19 pandemic and attacks on civility, inciting racial unrest including marches and riots in support of the Black Lives Matter movement.

Integrating training to address the underlying cause for health disparities into a health professions curriculum is not an easy feat. The benefits thereof have the potential to be profound in the care of patients. Unpacking the remarkable source of health disparities that the APHA has identified as racism, not only gives one pause, but also warrants awareness and reflection. With this in mind, public health curriculum instructors at Southern College of Optometry (SCO) collaborated with the Coordinator of Student Diversity and Inclusion prior to the 2020 summer semester to determine impactful methods to acknowledge the current social unrest and the role that healthcare practitioners have in reducing health disparities. Several options were considered, such as reasons for and effects of medical mistrust, implicit bias in health care, and the intersection of optometry and social justice. By embracing racism as an etiology of reduced patient outcomes and understanding contributing factors of health disparities with our patient population, the approach we embarked upon was to highlight empathy, implicit bias and communication in two of our courses: Interprofessional Education (IPE) Series and Clinical Communication & Patient Care. We hypothesized that after student exposure to this curriculum, students' overall understanding of racial bias and the direct influence on health outcomes would improve.

Southern College of Optometry and the Memphis Community

SCO is located in Memphis, which is the second largest city in Tennessee with approximately 650,000 residents. Memphis is the county seat for Shelby County, which has a population of approximately 930,000. Memphis has a significant minority population with African Americans constituting approximately 64% of the population.¹⁷⁻¹⁸ According to Julian, income is highly correlated to health disparities in Tennessee.¹⁹ The city of Memphis has a longstanding struggle with poverty. In 2019 Memphis ranked fifth in overall poverty rate and second in child poverty rate out of 36 cities in the United States with a population greater than 500,000. This statistic was noted in the University of Memphis Poverty Fact Sheet for 2020 along with the following poverty rate data for 2019: city of Memphis 21.7% overall poverty rate compared to 12.3% nationally, 13.9% in the state of Tennessee, and 16.8% for Shelby County. Child poverty rates were stated as 35.0% for Memphis, 16.8% nationally, 19.7% for the state, and 25.9% for the county.²⁰ Life expectancy (LE) is a notable health disparity in Shelby County. In 2018, using 2015-2016 census and death rate data, Lilian (Ogari) Nyindodo investigated the impact of economic conditions on health outcomes within Shelby County using LE as the key metric. Initially, Dr. Nyindodo saw a 9.1-year gap in LE between Black (75.4 years) and White (84.5 years) constituents of Shelby County (Nyindodo L. Life expectancy and economic hardship index per ZIP code in Shelby County. Virtual presentation at Southern College of Optometry; 2020; Memphis). In 2015, the difference in life expectancy between the Black and White populations in the United States was 3.4 years.²¹ Using Shelby County data through 2016, Dr Nyindodo investigated this discrepancy between national and Shelby County averages and identified a 14-year spread in LE within the county. She further refined the data to ZIP-code level and correlated LE to the Economic Hardship Index (EHI). EHI includes six social determinants: unemployment, dependency, education, income level, crowded housing and poverty. She demonstrated an inverse relationship between EHI and LE: The ZIP code (38106 + 38126) with the highest EHI (98) had the lowest life expectancy (69), and the ZIP code (38017) with the lowest EHI (16) had the highest life expectancy (83) (Nyindodo L. Life expectancy and economic hardship index per ZIP code in Shelby County. Virtual presentation at Southern College of Optometry; 2020; Memphis).



Table 1. [Click to enlarge](#)

Our clinic, SCO's The Eye Center (TEC), is located in the Medical District on the edge of downtown and midtown. More than 62% of the patient population are persons of color. An analysis by ZIP code was run to examine the patient population in more depth (TEC database query results provided by Mark Irving, Compulink Database Manager). The poverty levels in two of the four major TEC patient population ZIP codes provide more context to risk factors affecting our patient population (**Table 1**). The ZIP code that ranks second in highest levels of poverty in the city at 43% is also the ZIP code where the clinic receives the second highest number of patients. Interestingly, the ZIP code with the fourth highest poverty level, 42%, is also fourth in patient numbers for our clinic. We note anecdotally that many of our patients have significant ocular and systemic health issues.

In contrast to the demographics of Memphis and TEC patient populations, 23% of SCO students are considered minorities, with less than 4% identifying as Black or African American.¹⁸ As the patient population and student population are not racially concordant, other approaches to improve health outcomes must be incorporated.

Methods

The SCO curriculum currently includes seven courses for a total of nine credit hours that highlight concepts in public health. The courses span first-year spring through third-year spring.²² These course offerings address concepts of cultural competence and working with and within the social and professional healthcare community, thus providing a continual unifying theme throughout the curriculum. Communicating with individuals who may not share your perspective and background is a skill addressed in Foundations of Service Learning, IPE Series and Clinical Communication & Patient Care.

A sudden shift to remote learning due to the 2020 pandemic offered an opportunity to introduce significant changes to course delivery for several courses. In-person events such as onsite observations of other health professions working with patients/clients and vision screenings in the local school systems were cancelled leaving openings to develop new projects. In consultation with our Coordinator of Student Diversity and Inclusion, new activities were created for two courses. The IPE Series (OPT204) activities were designed to raise awareness of implicit bias and its impact on patient care. The Clinical Communication & Patient Care (CLN216) course activities were designed to highlight the impact of systemic racism on health and health disparity. The intent in highlighting implicit bias in the first course and systemic racism's impact on health in the second course was to allow students to connect to how they are personally impacted by the structures that create systemic racism and to understand that they play a role in helping or hindering their future patients' path to health. 134 students were enrolled in the selected courses. Their perspectives were assessed before, during and after the coursework. Responding to the assessment surveys was tied to participation grades for the courses; however, participants could elect to have their responses removed from analysis if there were any potential risk to anonymity of the data.

Quantitative analysis involved paired t-test for data with a normal distribution and Wilcoxon signed-rank test for data without a normal distribution. The CLN216 pre- and post-course questionnaire was evaluated with paired t-test method. The comparison of different survey results for OPT204 used Wilcoxon signed-rank test. Qualitative analysis was performed on data collected in the reflection assignments. To complete the qualitative analysis, an initial review of the data sets was conducted to establish initial themes. Codes were created and the data was reviewed to assign codes to each response. Themes and codes were refined with further review of the data and with comparison of the results for each data set. A final review of the data was completed to assign each response a code and to count the number of responses assigned to each code.

Additional details of methodology specific to each course are described below.

Course 1 OPT204 Interprofessional Education Series

A significant portion of the IPE Series course focused on investigating personal biases and reflecting on how that could impact caring for patients. The activities assigned are listed in **Table 2**, items 1-7. Online resources used for these activities were the Harvard-based Implicit Association Test (IAT) website²³ and The Ohio State University Kirwan Institute Implicit Bias Module Training.²⁴ Survey participation was tied to the grade for the assignment; however, respondents were asked at each survey point if they authorized use of their responses in presentation of the results. If a respondent answered no at any of the three collection points during the course, their responses for all surveys were excluded from analysis. Some respondents did not complete all three surveys; if they did not ask to be excluded from analysis, their responses were compared where available. Some duplicate responses were also excluded from analysis. We developed the survey instrument for this study to assess the impact of class assignments on student perceptions.



Table 2. [Click to enlarge](#)

Survey 1 asked about previous exposure to IPE, implicit bias and implicit association as well as self-reported demographics. Survey 2 asked about IAT topic, comfort with and skepticism of IAT results. Survey 3 asked about changes in awareness of bias and self-reflection. The following question was posed on each of the three surveys: How concerned are you with your ability to provide fair and equitable care to your patients based on any of their identifying features? The four identifying features were race, gender/gender presentation, sexuality and religion. Response options were Not at All (1), Minimally (2), Moderately (3) and Very (4). A fourth survey was administered after the course was completed to assess carryover of the impact of the course and included the question noted above. Survey 4 completion was voluntary, which resulted in fewer responses. All surveys are summarized in **Appendix A**.

With Survey 2, IAT options were categorized into three broad topics. Students were asked to select one topic area for which they felt they were biased and one topic area for which they felt unbiased. For the implicit bias training modules, students were asked to complete the entire training module with check-ins (self-assessment for training modules) for the introduction, module 1, module 3 and module 4. For module 2, they were asked to complete lesson 4 only as this module involves taking an IAT, which students had already done. The small-group reflections addressed overcoming biases held by self and biases encountered in others.

Course 2 CLN216 Clinical Communication & Patient Care

While the IPE Series focused on the identification and self-awareness of implicit bias, the second course, CLN216 Clinical Communication & Patient Care, sought to deepen the students' understanding of the environment in which racial healthcare disparities exist, as well as the disproportionate effect of race on clinical health outcomes. Additionally, the course sought to assess student comfort level in engaging in discussions regarding race with patients and other healthcare professionals.

For this intervention, 134 second-year optometry students were asked to complete a voluntary and anonymous pre-assessment questionnaire, then view two recorded modules: one on cultural competence and the other on the impact of race and health outcome. Following completion of the recorded modules, the same voluntary and anonymous questionnaire was administered as a post-assessment survey. Finally, at the conclusion of the entire assessment, students were asked to provide a 250-word self-reflective essay. The first module, "Cultural Competence & Health Literacy" (a recorded

lecture provided by SCO Associate Professor Wil McGriff, OD, MPH) discussed how patients' understanding of their own health, willingness to accept treatment recommendations, and varying treatment outcomes are associated with the cultural context in which the information is provided. The second module was adapted from the American Public Health Association's (APHA), "Naming and Addressing Racism: a Primer."²⁵ This module explained how racism impacts public health and how race is associated with varying health outcomes.

Data were collected via a 10-question survey; participation was anonymous and voluntary. The survey measured students' comfort and knowledge of race and racism and specifically their understanding of how race affects health. Because a validated survey to measure our desired outcomes could not be identified in the literature, we chose to adapt a previously developed survey instrument by Bright, et al.,²⁶ which posed similar questions to a medical student population.

After completing the post-assessment questionnaire, learners completed a post-activity reflection assignment. Participation in this reflection assignment was mandatory and tied to the course grade. The assignment required the learner to write a 250-word essay that answered: "What did you learn that surprised you?" and "How will this knowledge impact how you will interact with patients?" This exercise encouraged learners to think about what strategies they may invoke as future clinicians to address the information they had learned through completing this module.

Results

Course 1 OPT204 Interprofessional Education Series



Figure 1. On a scale of 1 (no concern) to 4 (very concerned), responses to the question "How concerned are you with your ability to provide fair and equitable care to your patients based on any of their identifying features?" [Click to enlarge](#)

The following question was asked on each of the four surveys: "How concerned are you with your ability to provide fair and equitable care to your patients based on any of their identifying features?" The level of concern was analyzed for each of the following identities: race, gender/gender expression, sexuality and religion. Survey 1 was before the implicit bias test; Survey 2 was administered after the implicit bias tests; Survey 3 was administered at the end of the course; and Survey 4 was administered the following spring semester, more than 3 months after completion of the course. A graphical representation of responses can be found in **Figure 1**. Wilcoxon signed-rank test was used to analyze the change in survey responses at each data point. There was a statistically significant reduction in concern about providing fair and equitable care to patients from Survey 1 to Survey 2 in each identifier category except sexuality. The only statistically significant reduction in concern for the category of sexuality was from Survey 1 to Survey 3. Concurrently, this decline in concern from Survey 1 to Survey 3 was noted for identifiers gender/gender expression and religion. Comparing the level of concern responses for race, the change from Survey 1 to Survey 3 was not statistically significant; however, there was a statistically significant decrease in concern from Survey 2 to Survey 3. Survey 4 was administered in the spring of 2021, approximately 6 months from the end of the course. The level of concern to provide fair and equitable treatment increased in all four categories; however, none of the comparisons with Survey 4 results was statistically significant. Statistically significant changes with p-value information are listed in **Table 3**.

Survey 1 (after exclusions, n=119) revealed the students' experience with IATs. Survey 2 (after exclusions, n=119) examined which categories the students selected and how they felt about the results. With respect to identifying as a minority, 26% of participants identified as a minority race, 9% identified

as a minority gender or gender presentation, 2% identified as a minority sexuality, and 16% identified as a minority religion. Prior to this course, 80% of respondents had some exposure to implicit bias training, and 16% had taken an IAT. Appendix A provides details about the surveys. For the first IAT, students chose a topic on which they felt unbiased: 45 chose a race topic, 42 chose a gender/sexuality topic, and 31 chose other topics. For the second IAT, students chose a topic for which they had a bias: 38 chose a race topic, 33 chose a gender/sexuality topic, and 47 chose other topics. Students were asked following completion of the IAT about their level of comfort with and skepticism of the IAT results for each test they chose. With respect to comfort with their IAT results, 86 were moderately to very, 23 were minimally, and 10 were not comfortable at all with results of the test selected for which they felt unbiased. For the second IAT (for which they felt a bias) 90 were moderately to very, 19 were minimally, and 10 were not comfortable at all. With respect to skepticism of their IAT results, 78 were not at all or minimally, 29 were moderately, and 12 were very skeptical of results of the test selected for which they felt unbiased. For the second IAT (for which they felt a bias) 83 were not at all or minimally, 27 were moderately, and 9 were very skeptical. No detailed statistical analysis was performed on this data.



Table 3. [Click to enlarge](#)



Table 4. [Click to enlarge](#)

Survey 3 (after exclusions, n=102) emphasized feelings regarding awareness of the bias and the likelihood for self-reflection and inquired about recommendations to improve awareness of issues that impact patients and how optometric care is provided. Sample responses to the individual reflection question, “What would you recommend to improve you and your classmates’ awareness of issues which impact our patients and how we provide optometric care?” are included in **Table 4**. Major themes of the responses were applying cultural competence concepts, practicing empathy, proactively gaining exposure to others who may be different, self-awareness, sharing personal stories, and acts of service/volunteering.

Survey 4 (n=46) was administered in the spring of 2021, at least 6 months from the end of the course to determine whether confidence about administering fair and equitable treatment of patients had been maintained from the end of the IPE course. Level of concern for providing fair and equitable treatment increased in all four categories. As described previously, this increase was not statistically significant.

For the small-group reflection, students were asked to meet virtually in pre-determined groups of approximately five. Each group was asked to reflect on the following questions.

- How can you interact with individuals in a way that “interrupt(s) the biases” people may carry with them? (**Table 5**)
- How can you interact with individuals in a way that “interrupt(s) the biases” you may have? (**Table 6**).

Tables 5 and 6 show themes identified along with representative comments among the responses. Common themes were awareness, communication, education, cultural competence training, and professionalism.

After addressing bias, in the next semester, Clinical Communication & Patient Care examined the personal role that students can play to improve health outcomes.



Table 5. [Click to enlarge](#)



Table 6. [Click to enlarge](#)

**Table 7.** [Click to enlarge](#)

TABLE 8
Patient Communication Course Reflection Assignment Summary

Category	Search Terms	Frequency N (%)	Representative Comments
Awareness of	aware, awareness		
Cultural Differences	culture, culture, different, differences	n=62 (53%)	"To provide culturally competent care we must be mindful of cultural differences and that the way one individual perceives their health may not be the same as what we as doctors may identify. Simply saying 'I treat everyone the same' somewhat falls short of providing culturally competent care."
Racism	racism, discrimination	n=61 (52%)	"What a sobering topic about the different kinds of racism in a way that I had never heard before and it truly moved me."
Implicit Bias	implicit bias, biases	n=49 (42%)	"A big surprise I had was being implicit bias tests. They made my implicit biases known to me, even though I thought they didn't exist. This is an important first step down on my path to becoming a less competent Doctor of Optometry who really cares I care for."
Prejudice	prejudice, prejudice	n=34 (29%)	"I now have a greater appreciation for how many dimensions there are to racism in health care. It is more than just prejudice that influences health outcomes. However, it is still important to be aware of these prejudices that we may have as an individual or culture."
Understanding of	understand, understanding		
Health Disparities	health disparities, unequal outcomes, unequal exposure, unequal risk	n=52 (44%)	"While I was aware of racial disparities in health care, I did not know the extent of the effects from inequality such as lower life expectancy, lower birth weight, and higher infant mortality."
Health Literacy & Education	health literacy, health education, health understanding	n=48 (41%)	"To realize that 80,000 people could have been saved simply with the right amount of healthcare education is absolutely mind blowing."
Health Outcomes Related to Race	health outcomes, related to race, effects of race on health outcomes	n=50 (43%)	"I previously knew that not everyone has equal access to quality health care, and I realize that this can affect an individual's health outcomes. However, I never realized or grasped the magnitude of the disproportionate number of minorities affected by certain diseases (such as cardiovascular disease) for reasons not related to genetic predisposition, but rather for reasons related to poverty, systemic racism, living in food deserts, etc."
Modification of	modify, implement, change, start		
Patient Interaction	patient interaction, delivery of care, doctor-patient interaction, understanding	n=50 (42%)	"This knowledge will impact how I interact with patients as I will try to make a conscious effort to make sure that my patients are getting the best care not only from me but other doctors as well."
Language	language, native, foreign	n=42 (36%)	"I knew that in *** we have a diverse group of individuals, but I did not really think about the language barrier that may exist. I will be conscious of hearing paraphrases that are in other languages so that people who are not primary English speakers can have the necessary information regarding their health. When I am a promising optometrist, I will have interpreting services readily available for my patients that need them."
Communication Delivery	way of communicating, style of communication, body language	n=34 (29%)	"I was also surprised at the statistics showing that the vast majority of patients don't have enough health literacy which affects how we should ask questions and give instructions."

Table 8. [Click to enlarge](#)

Course 2 CLN216 Clinical Communication & Patient Care

Pre-discussion questionnaire and post-discussion questionnaire data were analyzed using a paired two-tailed t-test. The results showed an overall statistically significant change in attitudes, with the most statistically significant changes in belief that discussions on race have a place in optometric education, understanding how race impacts health outcomes, talking about race with patients, discussing race with other healthcare professionals, and the belief that optometry school should provide a forum to discuss race. **Table 7** provides full survey analysis and p-values. Comparative analysis of pre- and post-discussion on cultural competence, health literacy and racial bias in health care showed significant overall agreement that this activity was a worthwhile addition to the optometric curriculum with the greatest agreement and significance in understanding how race impacts medical care and health outcomes.

The results of the qualitative analysis on the reflection essays are summarized in **Table 8**. Upon review, the themes identified fell into three categories: awareness, understanding and behavioral modification. The categories of awareness and understanding were broken down into subcategories for the question "What did you learn that surprised you?" The themes identified under the category of "awareness" were cultural differences, racism, implicit bias and prejudice. The themes identified under the category of "understanding" were health disparities, health literacy and health outcomes related to race. The final question was "Will this knowledge impact how you will interact with patients?" The themes identified were modification of patient interaction, language and communication delivery.

Discussion

In examining the IPE Series course, we concluded that implicit bias awareness has the potential to increase learners' confidence in providing fair and equitable care for patients with identifiers in race, gender/gender expression and religion. Also, to achieve a statistically significant reduction in concern

(increase in confidence) for the category of sexuality, other activities such as the IAT modules and group reflection were beneficial. With race, the decrease in concern, or increased confidence, for providing fair and equitable treatment was salient with awareness of implicit bias, but after more student-centered activities, there was an even more pronounced reduction in level of concern from understanding their bias to the completion of the course. To assess whether time affected the level of concern, Survey 4 was administered 6 months after the end of the course. Interestingly, when assessing this same question in Survey 4, confidence decreased in all four categories instead of maintaining or increasing, implying that although the effects of implicit bias awareness and training had an impact, the effect was transient. The number of participants responding to Survey 4 (46 responses) was significantly less than for the other three surveys (119 for Survey 1 and 2, 102 for Survey 3); this likely resulted in the lack of statistically significant changes between Survey 4 and the previous surveys.

Concerning the patient communication course, optometry students overwhelmingly believed that discussions on race, cultural competence and personal bias have a place in optometric education. These results are consistent with results found in medical student education by Bright and Nokes 2019; however, our study did not have a non-learner control group. In addition, our methodology differed slightly from Bright and Nokes in that our study did not contain an active, in-person discussion with an outside trained facilitator. Our data might have been biased because students did not have the opportunity to have open, frank and honest discussions with an outside trained facilitator. In that scenario, students may be more apt to discuss feelings that may be uncomfortable to share with a faculty member with whom they have an ongoing relationship. Students felt comfortable discussing race with patients and other health professionals. Learners were also content in discussing how race impacts health outcomes. Not only did optometry students agree that these discussions are meaningful, they also displayed an initial quantifiable increase in their level of understanding on these topics.

Two items in the surveys ? experience with racial microaggressions and incidents of institutional racism ? were notable. According to Sue, "Racial microaggressions are brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults toward people of color."²⁷ We investigated the item on the students' experience with racial microaggressions, and it was not statistically significant. In contrast, these two survey items were statistically significant in the study conducted by Bright and Nokes, 2019. However, it is important to note the differences in the participant groups between Bright and Nokes and our study. 61% of the participant group in the Bright and Nokes study identified as a racial minority, while 26% of the participant group in our study identified as a racial minority, which may have lessened the effect of the survey item. Additionally, the item regarding encountering institutional racism is salient to our study. The impact of the modules doubled the number of students who reported experience by themselves or others with institutional racism in optometry school. Thus, our students may suffer angst in some optometry school situations, but not conceptualize that it is in fact a form of racism. This item was not statistically significant, but the raw numbers increase from pre-to post-survey is remarkable. This suggests that an increase in knowledge about institutional racism is required to begin taking steps to reduce it.

For each course, self-reflection was integral in understanding how students assimilated the material and applied their understanding to mitigating biases and improving patient communication. This form of learner-driven learning is beneficial with concepts such as addressing the cause of health disparities.²⁸

Limitations on external observations and community outreach typically required for these courses imposed by the COVID-19 pandemic created an opportunity to investigate these concepts in the selected courses. To accommodate these curricular requirements for future class cohorts, course instructors are investigating how to streamline course objectives and create a more cohesive assignment set spanning the four academic terms prior to students starting their third academic year and clinical rotations.

A limitation of these results is that the survey questions were created for this intervention and had not been validated prior to this intervention. Validating the survey or using a validated study that addresses the study questions would strengthen the data. This work would benefit from additional survey points. All surveys were conducted during the second academic year, and this cohort began their clinical exposure as third-year students. A survey conducted after students have been involved in patient care may yield additional insight into retained impact of the material covered. Additionally, the course design could benefit from inclusion of cases that allow for the application of communication and empathy skills as well as further training on structural competence. Some changes have been incorporated into the subsequent version of the courses. A comparison between cohorts involved in the course in summer 2020 and summer 2021 may provide insight into the value of additional components. In assessing the impact of this intervention on health outcomes, this study would benefit from monitoring patient data over time.

Conclusion

Understanding racial and ethnic health disparities and the factors that influence health outcomes in patients is vital for optimal patient care. The task of educating students on such matters is not a small endeavor. This paper examined topics of implicit bias awareness, empathy and patient communication to influence learners' appreciation of how race impacts the health outcomes of patients. Students believe that race should be discussed throughout the optometric curriculum. With the use of learner-driven techniques such as self-reflection, students' understanding of the role race has in health disparities increased throughout each course along with confidence in providing fair and equitable treatment for patients. This improvement has the potential to enhance provider-patient interaction and ultimately health outcomes. Unfortunately, the gains achieved were short-term, underscoring the need to weave diversity, equity and inclusion concepts throughout the optometric program. This will not only facilitate understanding but also reinforce concepts to aid retention.

An unexpected component to note is that as student consciousness around the health effects of racism increased, so did the number of students who reported experience with racism. This awareness is not a negative, but a critical first step in addressing the issues. Overall, discussing racism and its effects on racial health disparities is important in optometric education to equip our students to provide the best patient care.

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Appendix A. [Click to enlarge](#)

Dr. Zarn Urankar [mzarn@sco.edu] is an Associate Professor and Director of Interprofessional Education at Southern College of Optometry. She teaches the Interprofessional Education Series course and precepts in the pediatrics and vision therapy clinics.

Dr. Wolfe is an Associate Professor and Director of the Center for Eye & Health Outcomes at Southern College of Optometry. He teaches courses in optometric practice, clinical communication and patient care, and systemic health and precepts in the primary care and ocular disease clinics.

Dr. Pepper is an Associate Professor and the Coordinator of Diversity and Inclusion at Southern College of Optometry. She teaches pediatrics and vision therapy laboratory courses and precepts in the pediatrics and vision therapy clinics.

PEER REVIEWED

Use of a Town Hall Focus Group to Assess Mentorship, Sense of Belonging and Self-Efficacy in Black Students in Optometry School

Ruth Y. Shoge, OD, MPH, FAAO, James M. Caldwell, OD, EdM, EdD, and Anne Frankel, PhD |
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Abstract

Background: Education institutions need to better understand the experiences of their current students to recruit and retain more under-represented minority prospects. This study surveyed the social experiences of Black optometry students. **Methods:** A town hall-style focus group was used to explore experiences with mentorship, sense of belonging and self-efficacy. **Results:** There were 18 participants and all identified as Black. Facilitators to success included peer mentorship, and barriers included cost and lack of study strategies. **Conclusion:** Pairing incoming students with peer mentors, timely discussions about financial obligations and study strategies may increase positive experiences for Black students and likely students at large.

Key Words: optometry, Black, student, belonging, mentorship

Background

The term under-represented minority (URM) refers specifically to Black, Hispanic/Latino and Native groups that remain under-represented in education attainment and the science and engineering workforce.¹ Research has demonstrated that when a critical mass of URM students is present within an education setting, the civic, cultural and intellectual development of all students benefits due to the racially and ethnically diverse learning environment.² Also, students who are educated within a diverse student population find it easier to relate to patients from diverse populations.³ This relating, contemporarily described as empathy in the health and social care professions, has been shown to enable healthcare providers to better understand the needs of their patients and more effectively and efficiently elicit therapeutic change.¹⁷ To increase the recruitment and retention of URM students, education institutions need to better understand the perceptions and experiences of their current students. In a study by Formicola et al., URM students who wanted to attend dental school cited three perceived barriers to their success: taking on a high level of education debt, lack of social support from peers, friends, teachers and family members, and little promotion of the profession during their undergraduate education.³ Snyder et al.⁴ found several barriers that prevented a more diverse health workforce, including financial concerns, academic preparation, unwelcoming campus climate and lack of social and emotional support. The purpose of this study was to assess the social experiences of URM students in optometry school along the themes of mentorship, sense of belonging and self-efficacy. Mentorship was loosely defined as a more senior person offering guidance and advice to a less experienced person. Sense of belonging was described as feeling secure, supported, accepted and included. Self-efficacy was defined as one's belief in one's ability to succeed in specific situations or accomplish a task.

The lack of access to knowledge, accomplished individuals, formal and informal relationships and networks limits social capital.⁵ Social capital are those intangible resources provided by interpersonal

relationships, (e.g., immediate and extended family, peers, teachers, religious leaders, neighborhood businesses) that educate, influence and support students' decision-making in their education and occupation pursuits.¹⁸ Fortunately, education institutions can enhance social capital through their ability to serve as an alternate network of diverse, learned individuals who can provide access to information, resources and shared norms affording opportunities to students who otherwise lack the requisite knowledge to advance in the education system.⁶ Stanton-Salazar⁷ supports this theory of social capital development, noting that meaningful social ties within an education community between students and staff can advance both individual and group goals. The role of mentorship cannot adequately be underscored when considering the needs and success of URMs in optometry school specifically and health professional school in general. Cascading mentorship, which starts with faculty mentoring more senior students who in turn mentor their peers or more junior students (near-peer), was built upon the demonstrated effectiveness of near-peer mentoring for learning and teaching.⁸ Successful outcomes were attributed to active participation of student mentors in the design and implementation of the overall program. Researchers concluded that failure within URM groups is less likely to occur among those students who are positively oriented to both the dominant culture and their own without feeling alienated from their personal values. Students empowered by their school in this manner develop the motivation, confidence and ability to academically succeed. Having confidence in their cultural identity and a command of appropriate school-based knowledge allows them to fully participate in instructional activities.⁸

A profession greatly benefits from enhancing the diversity of its graduates because they are likely to serve as mentors who will play an important role in welcoming other URM students and future providers into the healthcare environment where there may be a limited number of role models.⁹

Study Design/Methods

A town hall focus group (THFG) was used to collect information from current students about their experiences on campus. A THFG is a hybrid style first described by Zuckerman-Parker and Shank¹⁰ as a way to have larger groups form into smaller teams (two to three people) to allow each person to contribute within the framework of their team and then each team contribute to the larger group discussion. The THFG was recorded and later transcribed and thematically coded to look for emerging themes. Thirty students were invited to participate via their student leaders. They were told in advance the purpose of the survey and THFG and that participation was voluntary. The THFG asked participants questions (**Appendix A**) about their social experiences on campus, including mentorship and its quality, sense of belonging (did they feel part of their education community), if they have felt supported academically and socially, and their perception of self-efficacy (did they have the tools/skills to execute what is needed to be academically successful).

Questions for the THFG were created based on a literature review for instruments measuring self-efficacy and sense of belonging. Only questions that were found to be relevant to the purpose of the interview were selected, modified and included. **Table 1** lists the variables and categories of questions that were asked in the THFG. Appendix A contains the open-ended questions that were asked. Thematic coding and analysis were used for the THFG based on the thematic variables presented in Table 1: mentorship, sense of belonging, self-efficacy and demographic information.



Table 1. [Click to enlarge](#)



Table 2. [Click to enlarge](#)

Results

Eighteen students participated in the town hall focus group. Fourteen (77.8%) of the participants

identified as female and four (22.2%) identified as male. The average age was 26.06 years (SD 3.5 years) with the youngest being 22 and the oldest being 35. All participants identified as Black.

During the THFG participants were asked questions about barriers and facilitators to their academic success and social well-being along the themes of mentorship, sense of belonging and self-efficacy. These pre-determined themes included subthemes: mentorship – mentors past and present, preparation for optometry school, and participation in a pipeline or a summer preparatory program; sense of belonging – feeling welcomed on campus, comfort with asking questions in class, ways to increase sense of belonging or comfort on campus; self-efficacy – class attendance and study habits, academic distress, motivation to succeed, and the use of counseling services. **Table 2** lists themes and corresponding questions.

Theme 1: mentorship. What are the perceptions and experiences of current optometry students regarding mentorship?

During the THFG, participants were asked about who mentored them, and many reported they benefited from peer mentorship. One participant mentioned faculty as a source of mentorship, and one mentioned a parent. Participants were asked what would have helped them feel better prepared for optometry school, and a large portion of the discussion centered around two subthemes – money and faculty involvement in effective study strategies. Participants reported that lack of money was a major issue and not worrying about it would make a huge difference. Much of the stress about money reportedly came from having to purchase mandatory equipment for their coursework – the timing, amount and expectations. Several participants mentioned they were given short notice to purchase expensive equipment and were not given the opportunity to shop for more cost-effective alternatives. One participant stated: “They give us an estimate for cost-of-living, equipment, but they divide the amount [loan reimbursement] equally over three semesters whereas they may ask for all of it [equipment purchase] in the Fall, so where is the rest of the money coming from?”

Regarding faculty involvement in effective study strategies, there was a general consensus that faculty should do more than say “graduate school is not like undergrad.” Faculty should provide tangible suggestions on how best to approach mastering the material for each course. When asked about participation in pipeline or summer preparatory programs, many of the respondents mentioned they had participated in pipeline programs, with one respondent mentioning being involved in them since middle school. Several respondents said they had participated in summer programs offered by other optometry schools and commented on the strengths and weaknesses of them. Didactic simulation and workshops in which prospective students met with financial aid advisors and had mock interviews were seen as strengths because they provided the opportunity to “know what it’s like to be a student in optometry school.” Others commented that other programs only gave tours of the school, which were not beneficial if one did not end up going to that school.

Theme 2: sense of belonging. What are the perceptions and experiences of current optometry students regarding sense of belonging?

The questions used to examine sense of belonging during the THFG were modified from Hoffman et al.’s Sense of Belonging Survey.¹¹ Participants were asked about whether they felt welcome on campus, their comfort with asking questions in class, and ways to increase sense of belonging or comfort on campus. They mentioned that while they initially felt welcomed on campus, particularly during the interview process, the feeling wasn’t sustained, and they felt their classes were segmented into “cliques and clusters.” While participants responded that they felt comfortable asking their teachers questions, most said their preferred method of communication was email or during office hours. When asked about ways to increase the sense of belonging on campus, participants said having more Black and Latino faculty would help as well as more awareness about issues that affect the student body. Race and ethnicity

weren't the only social identifiers that affected sense of belonging; rather, the intersectionality of many cultural and social identifiers impacted experience. One participant mentioned the following as an example of lack of awareness: "There are a few tone-deaf things with LGBT issues. Earlier today they gave a prize, a Chick-fil-A gift certificate, to a gay student as a prize for a contest. There's been a very tenuous [relationship] between the LGBT community and Chick-fil-A because they support groups that want you to lose rights, and that's a reminder, when given to a gay person, that there's a huge section of people that, for religious reasons, don't want you here."

Theme 3: self-efficacy. What are the perceptions and experiences of current optometry students regarding self-efficacy?

The questions used to examine self-efficacy during the THFG were modified from Zimmerman et al.¹² and Chemers et al.¹³ Academic Self-Efficacy and Efficacy for Self-Regulated Learning Survey. Participants were asked about their class attendance and study habits, what they did and who they turned to in times of academic distress, what motivated them to succeed, and the use of counseling services on campus. Some participants mentioned they did go to class, while others said they did not, preferring other methods of review such as watching the lectures as recordings. When it came to study habits, most said a combination of studying by oneself and then studying with a group was efficacious as well as studying in the library. When in academic distress, participants responded that they would seek the help and counsel of their peers first and then go to their teacher if needed. When asked about the use of the counseling services, particularly during time of academic distress, some said they had used it and found it helpful, while others had used it and did not find it helpful. Many of the participants were not aware of this service on campus. When asked what motivated them to succeed in this program, participants gave a variety of responses including "graduating," "lifestyle" and "for the youth."

Discussion

Formicola et al.³ and Snyder et al.⁴ reported that URM students cited several perceived barriers to their success, including the high level of education debt, lack of social support, academic preparation and an unwelcoming campus climate. The results of these studies support what participants in this study reported as facilitators to success, which were the importance of pairing incoming students with peer mentors, timely discussions about financial obligations, and discussing and implementing study strategies to help students succeed.

The role of mentorship cannot be underscored adequately when considering the needs and success of URM students. Cascading mentorship, which starts with faculty mentoring more senior students who in turn mentor their peers or more junior students (near-peer), was built upon the demonstrated effectiveness of near-peer mentoring for learning and teaching.⁸ During the THFG, participants were asked about who mentored them, and many reported that they benefited the most from peer mentorship, while only one participant mentioned faculty as a source of mentorship, and one mentioned a parent. Participants mentioned that they were matched with a near-peer mentor based on shared personalities, gender, geographic location or a combination of factors. Those who chose to participate in near-peer mentorship found the process easy and successful. There was no mention of a similar process for faculty-student mentorship, and perhaps a more formal structure for faculty mentorship would help facilitate faculty-student mentorship.

Participants were asked what would have helped them feel better prepared for optometry school, and one of the main factors discussed was money and financial security. Minority students have often cited concern over how they would fund their education as an obstacle to their success in becoming a healthcare provider.¹⁴ Participants reported that lack of money was a major issue and not worrying about it would make a huge difference. Much of the stress about money reportedly came from the timing, cost and expectations of having to purchase mandatory and expensive equipment for coursework with little

warning and no opportunity to shop for more cost-effective alternatives. The direct (tuition) and indirect (room, board, equipment) costs of higher education are prohibitive for many students, particularly minority and underserved students. Students from under-represented backgrounds are more sensitive to tuition increases and indirect costs of education, which can negatively influence their enrollment and attendance decisions.¹⁵ Ensuring that URM students have access to optometry schools and the health profession in general is important, and robust evidence indicates exposure to diversity and diverse peer interaction on campuses leads to positive psychosocial and education outcomes.¹⁵ Thus, the demand for college students from diverse sociodemographic backgrounds only heightens the need to provide cost-effective ways to educate students because it would not only benefit URM students, but also the student body at large.

Another major concern that emerged from the THFG was faculty involvement in effective study strategies and exam preparation. There was a general consensus that faculty should do more than say “graduate school is not like undergrad” and they should provide tangible suggestions on how best to approach mastering the material for each course. This goes against historical assumptions about a professor’s role in the classroom. In the old paradigm, professors expected to transmit a body of knowledge for which they are a content expert, students were expected to absorb the information, and if the students failed it was their fault.¹⁶ Those assumptions and paradigms are shifting to student-centered teaching, or learner-centered teaching (the former term has been found to create resistance among faculty who worry about coddling students). Faculty members are now expected to become “guides on the side instead of sages on stage.”¹⁶ It was accurately predicted that by 2020 a true paradigm shift would occur as more senior faculty retired from academic life and junior faculty became responsible for the bulk of the lecturing.

Strengths and limitations

One of the major strengths of this study included its sampling of first-, second- and third-year students, which created good representation of experiences as well as robust conversation about near-peer mentorship. The data were collected, transcribed and analyzed by one reviewer, which provided benefit on two counts. The reviewer felt confident that information shared by students was accurate and unfiltered, and there was limited variability in interpretation of the qualitative data.

One major limitation was that only Black students participated in the study. Future studies should include a diverse representation of URM students as well as non-URM students to provide insight about differences in perception of social experiences and differences in strategies used to achieve academic and social success. Additionally, more in-depth questions should be asked about faculty mentorship to better understand the existing disconnect between students and faculty.

Conclusion

The findings of the town hall focus group support current knowledge regarding the effects of money, mentorship and academic support for URM students in graduate school. Preparation for the future success of URM students in a health professional setting should begin well before they apply to optometry school, and perhaps before they are in college. Changes in mentorship, financial support and appropriate pre-emptive academic support may improve academic success as well as cultivate better social experiences for students as they adapt to their environment and find appropriate faculty and near-peer mentors to help guide them through their new environment.

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Appendix A. [Click to enlarge](#)

Dr. Shoge [rshoge@berkeley.edu] is an Associate Clinical Professor and the Director of Diversity, Equity, Inclusion, and Belonging at the University of California Berkeley School of Optometry in Berkeley, CA. She earned her Doctor of Optometry degree from the Pennsylvania College of Optometry and her MPH from the Department of Social and Behavioral Sciences, College of Public Health at Temple University. In addition to her clinical expertise in pediatric care and binocular vision, her research interests include mentorship and social experiences of under-represented minority students, bias

awareness and cultural competence training, recruitment and retention strategies and curriculum reform.

Dr. Caldwell is the Dean of Student Affairs and an Assistant Professor at Salus University in Elkins Park, PA. He earned his Doctor of Optometry degree from the Pennsylvania College of Optometry and his EdM and EdD from the Department of Policy, Organizational and Leadership Studies, College of Education and Human Development at Temple University. In addition to primary care optometry, his interests include strategic planning, assessment of institutional effectiveness and student learning and understanding the lived experiences of students in their education program.

Dr. Frankel is an Associate Professor in the Department of Social and Behavioral Sciences, College of Public Health at Temple University in Philadelphia, PA. She earned her PhD in public health at Florida International University. Her research interests include the scholarship of teaching and learning, particularly in online settings, and how classroom-based community-building can contribute to positive social, emotional and environmental outcomes.

Features

Editorial

Learning and Teaching about Diversity and Cultural Competence: a Continuum

Aurora Denial, OD, FAAO, DAAO (OE) | Optometric Education: Volume 47 Number 3 (Summer 2022)



Aurora Denial, OD, FAAO, DAAO (OE)

It is projected that by 2050, the minority population in the United States will increase to the point of representing the majority.^{1,2} Additionally, a growing number of Americans identify as lesbian, gay, bisexual, transgender/transsexual, queer/questioning (LGBTQ).³ Along with recognition of these changes, our awareness of disparities in health care and systemic racism has been heightened by the recent COVID-19 pandemic and other events of the past few years.

As the population continues to become more diverse, the profession of optometry must be able to meet the cultural, ethnic, racial, gender and linguistic needs of its patients. We must not lose sight of the fact that each patient is unique and presents with an individual worldview influenced by culture, life experiences, age and other attributes. As clinicians and educators we are not only responsible for providing the highest level of care to our patients but but also for teaching and modeling this care to our students.

Learning and teaching about diversity, cultural competence and cultural awareness is a continuum. This themed edition of the journal is intended to move educators along in the journey. It touches on many of the topics that arise in our day-to-day work. It includes scholarly papers as well as hands-on, practical guidelines.

In This Edition of the Journal

In this edition of the journal:

- **Justice and Disparity – a Defining Cause for Diversity, Equity and Inclusion in Optometric Education and Practice.** Edwin C. Marshall, OD, MS, MPH, FAAO, FNAP, Professor Emeritus from Indiana University School of Optometry, focuses on the Black American experience with racism and injustice within the frame of diversity, equity and inclusion in optometric education and practice. He provides strategies for addressing continuing challenges and shaping optometry's journey toward a more diverse, equitable and inclusive future. In his correspondence with the journal, Dr. Marshall reflected on his manuscript, which “takes an in-depth look at the rationalization for diversity, equity and inclusion (DEI) from the context of a history of racial injustice and its effect on racial disparities in health and health outcomes. My intent is to connect the past with the present in setting the rationale for contemporary efforts around DEI from the perspective of both representational diversity and the elimination of racial/ethnic health disparities. I also provide an overview of what currently is occurring in the eyecare world to promote a more diverse, equitable and inclusive profession along with a series of recommendations for optometric education and the profession.”

- Cross-Cultural Communication in Optometry: a Teaching Case Report. Meng Meng Xu, OD, FAAO, and Crystal Lewandowski, OD, FAA, present two cases, which demonstrate optometrists' daily challenges in diagnosis and management in relation to providing culturally competent patient care. They address implicit bias and provide practice models to help with communication and providing culturally responsive care.
- Cultural Competence for Serving Veterans: an Overview and Practical Considerations for Optometrists. Angelina Tran, OD, FAAO, and Yun-Ting Lisa Huang, OD, FAAO, discuss diversity in the military veteran population. This diversity includes racial and ethnic diversity alongside increases in the number of younger veterans and LGBTQ veterans. They provide many practical guidelines for properly addressing the unique concerns of the veteran population, such as trauma, post-traumatic stress disorder and traumatic brain injury.
- Use of a Town Hall Focus Group to Assess Mentorship, Sense of Belonging and Self-Efficacy in Black Students in Optometry School. This study by Ruth Y. Shoge, OD, MPH, FAAO, James M. Caldwell, OD, EdM, EdD, and Anne Frankel, PhD, provides insight into the experiences of under-represented minority students, which can lead to better recruitment and retention rates.
- Training Implicit Bias and Awareness of the Impact of Systemic Racism on Health: a Preliminary Study of Second-Year Optometry Students. For this study, Melissa Zarn Urankar, OD, FAAO, Gregory S. Wolfe, OD, MPH, and Janette D. Pepper, OD, FCOVD, FAAO, integrated principles of DEI, including communication skills, empathy and implicit bias awareness, into coursework. They assessed students' perspectives ? understanding of the role of race in health disparities and confidence in providing fair and equitable treatment ? before, during and after completion of the coursework.
- Navigating the Gray Area of Mental Illness in Health Care. The winning entry in the 2021 ASCO Cultural Competency Case Study Competition, by Quan Dao, OD, is featured, along with a link to the compilation of previous winning case studies, which is a useful resource for faculty.
- On Diversity in Optometry, Progress, but More Work to Be Done. Keshia S. Elder, OD, MS, MS, FAAO, reviews the state of diversity in optometric education and the profession.

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Dr. Denial [deniala@neco.edu], Editor of *Optometric Education*, is a Professor and Chair of the Department of Primary Care at New England College of Optometry and a Clinical Instructor at a community health center in Boston.

Announcement

Cultural Competence Case Study Resource and 2021 Competition Winner

– | *Optometric Education: Volume 47 Number 3 (Summer 2022)*

ASCO and its member institutions embrace the concepts of diversity and multiculturalism in optometric education and in the profession. Led by the Diversity and Cultural Competency Committee (DCCC), ASCO has been implementing a multiyear project focusing on cultural competence to assist the schools and colleges of optometry in the preparation of a diverse pool of optometric clinicians who will be ready to address the vision and eyecare needs of a diverse, multicultural and global community.

In 2014 the DCCC launched the ASCO Cultural Competency Case Study Competition. Optometry students and residents were encouraged to submit case studies in cultural competence that could be utilized during on-site workshops and in the curricula of the schools and colleges of optometry. In an effort to expand the case compilation and ensure current material, the competition has been conducted in 2014, 2015 and 2021.

The latest competition was open to optometry residents during the 2020-2021 residency year. Entrants were asked to describe how cultural competence played a role in a patient-based encounter during their clinical education. The case studies augment the [ASCO Guidelines for Culturally Competent Eye and Vision Care](#), and faculty members and institutions are encouraged to use the case studies as tools to help educate students about cultural competence and promote it in the clinical setting and across the curriculum.

You can find the [case study compilation at ASCO's website](#).

The winning entry from the 2021 competition, *Navigating the Gray Area of Mental Illness in Health Care*, by Quan Dao, OD, appears below.

Navigating the Gray Area of Mental Illness in Health Care

By Quan Dao, OD



Quan Dao, OD

Poor mental health has become one of the leading causes of disability in the United States. Prior to the COVID-19 pandemic, it was estimated that 1 in 4 Americans had a mental-health disorder, most commonly anxiety or depression.¹ During the pandemic, mental health was tested even more. Mental illness has been shown to be closely linked to conditions such as hypertension, diabetes, cancer, and other chronic diseases.² Although optometrists primarily treat and manage ocular conditions, we must take into consideration the patient as a whole person.

Getting “a Good Night’s Rest” was the Wrong Prescription

In my first month of residency, a 53-year-old White male was added to our medical eye clinic schedule as an “urgent care” case. He was complaining of eye pain and irritation. His records showed multiple visits to our dry eye clinic during the previous year, and his medical history included prior antidepressant use, recurrent skin lesions on his face and neck, and high blood pressure. Immediately after we walked into the exam room, the patient rustled through his backpack and pulled out an assortment of items, including a thick notepad and a plastic baggie filled with eye sprays and over-the-counter artificial tears, all previously unsuccessful at relieving his symptoms. His first question was to ask my name. He wrote my name and drew a dark line underneath. He took attentive notes throughout the exam.

I asked questions about his pain, the duration, context, positive symptoms, negative symptoms, etc. He proceeded to pull items from his baggie one by one and explained when and how he’d been using all of the drops, eyelid sprays, and warm compresses with little improvement in symptoms. He was extremely anxious and uncomfortable throughout the whole case history. His incoming visual acuities were 20/20 in each eye. Upon examination, his eyes were white, quiet, had no corneal fluorescein staining, and had adequate meibomian gland expression on palpation with just a few capped glands. The non-mydriatic 90D examination was unremarkable. His Schirmer test results were 3 mm OU, suggesting aqueous-deficient dry eye, which had not been documented previously. After discussing my findings with him, I dispensed a 30-day sample supply of a prescription cyclosporine eye drop and told him to continue his current dry eye regimen and we could follow up in 1 month.

Two weeks later, while I was on call, he called our emergency line and I immediately recognized the name. He reported “severe eye pain” that had been keeping him up for the past three nights. The only things that helped were taking melatonin and a medication for anxiety, but even then, he slept for only about 30 minutes the night before. He seemed extremely distressed on the phone and said he was almost ready to “check himself into a mental-health facility.” While I was on the phone, I asked myself many questions, wondering whether I had missed something serious during his exam. What could possibly cause such severe eye pain that the patient is unable to sleep through the night? But after further questioning, it just seemed like his eyes were dry. He denied any photophobia, decrease in vision, or eye redness. He described what he was experiencing as extreme grittiness and dryness that had been causing him extreme distress. After reassuring him that it was not an ocular emergency, I encouraged him to try to get a good night’s rest and we could meet the next morning.

He arrived with his notepad and baggie in hand. Once again, his incoming visual acuities were 20/20 in each eye. His eyes were white and quiet, his corneas were clear, and his posterior segments were unremarkable. At this point, I felt like I’d exhausted all my options. I knew he wanted an answer, but I couldn’t attribute any ocular signs to his severe symptoms. After lengthy discussion and constant reassurance that his eyes were healthy, I suggested that instead of exploring the idea that the dryness was the reason for lack of sleep, that he should contact his primary care physician to consider medication for insomnia or anxiety. That conversation did not go well. He called me dismissive and pointed out that I was downplaying his symptoms. He called me out on exactly what I was thinking: that his eyes were not dry at all, that instead he had obsessive-compulsive tendencies, or that underlying anxiety, stress, or depression could be the cause for his insomnia. I felt terrible about these assumptions.

The Toll of Mental-Illness-Related Stigma

Mental-illness-related stigma in health care has been proven to create barriers to access and care to many patients.³ Patients with mental illness commonly report feeling “devalued, dismissed, and dehumanized” by health professionals.⁴ Healthcare providers have rated patients with mental illness to be “difficult, manipulative, and less deserving of care.”⁴ As cited by Corrigan et al., studies show that

people with serious mental illness experience a higher rate of health conditions and die on average 15-30 years younger than other people their age.⁵ Also, patients with mental illness are less likely to be referred for specialty testing (e.g., hospitalization, mammography, cardiac catheterization) and significantly less likely to be admitted to the hospital compared with people with no mental illness.⁵

Studies have also shown that healthcare providers are guilty of having “implicit biases,” which are unconscious stereotypes and attitudes that we develop toward certain groups of people, that can affect doctor-patient relationships and care decisions.⁶ For example, one study demonstrated physicians were less certain of the diagnosis of coronary heart disease for middle-aged women, who were then twice as likely to receive a mental-health diagnosis than their male counterparts.⁷ Another study surveyed medical residents about their attitudes toward patients with and without a label of “psychiatric illness” and their willingness to treat them. Residents who were told their patient had a psychiatric illness were less likely to want to treat the individual and be involved with them in various ways.⁸ While characteristics such as age, gender, race, and prior medical history are necessary to paint a patient’s history, they should not alter the kind of care a patient receives.

“Diagnostic overshadowing” is a process by which physical symptoms are misattributed to mental illness.⁹ I found myself overshadowing, assuming that my patient’s symptoms were less than what they could be and that his mental health was the main contributor to his insomnia. Although it is often unintentional, discrimination remains a major hurdle to quality care, treatment, and recovery. Discrimination occurs not only in cases of mental illness, but also in cases where others have different identifying factors than us, including race, ethnicity, religion, sexual orientation, or socioeconomic class. I took a step back and asked myself how I could be failing my patient and displaying my implicit bias regarding mental illness.

I felt that I owed something to my patient, so I researched other potential causes for his ocular condition. I began reading case-study articles, discussing with my mentors, and asking ophthalmologists for their opinions on this case. My attending printed out a paper published in 2017 by Dieckmann et al. studying patients with “neuropathic corneal pain.”¹⁰ The condition exactly mimics the signs and symptoms of my patient, a pain that was out-of-proportion to the signs. After reading more about this condition, I regretted brushing off my patient’s symptoms as anxiety-related. I felt guilty about it and knew I would for a long time.

He came back to the office for another follow-up appointment, and his signs and symptoms were unchanged. This time, I had a different attitude. I excitedly presented him with some new possible causes for his symptoms and explained there could be an alternative solution to his pain. I proposed the Proctor Group Foundation, an interdisciplinary team of ophthalmologists that specializes in investigating rare, atypical ocular diseases. He was ecstatic at the idea. It validated his feelings, and he finally felt a sense of hope and direction. He had shared his frustrations with doctors who were unable to give him answers to his questions, and instead cycled him through temporary symptom relief and a refusal to investigate further. This was the first time in years he felt listened to.

Eliminating Unrecognized Assumptions is a Doctor’s Duty

It takes mental effort to unlearn implicit bias, to make it a habit, to build discipline, and to be more inclusive. Many of us will go through continuing education, diversity and inclusion training, sexual harassment training, and more, but are we putting in the mental effort to consciously dismiss stereotypes and eliminate assumptions about others? As doctors, it is our duty to deliver impartial care to all, and we should be aware of any negative associations that are linked to a particular group. We must ask these questions when we find ourselves in these gray areas: “Am I taking any shortcuts? Jumping to any conclusions? Have I done the research to familiarize myself with this specific group of people?” Not one of us can completely solve this problem, but all of us can be part of the solution with conscious and

active mental effort.

Dr. Dao, a graduate of the Pacific University College of Optometry, completed an ocular disease residency at the Herbert Wertheim School of Optometry & Vision Science (previously UC Berkeley School of Optometry), where she is currently an Assistant Clinical Professor. Dr. Dao also practices with East Bay Vision Center Optometry in Oakland, CA.

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Guest Editorial

On Diversity in Optometry, Progress, but More Work to Be Done

Keshia S. Elder, OD, MS, MS, FAAO | *Optometric Education: Volume 47 Number 3 (Summer 2022)*

This themed edition of *Optometric Education* focuses on diversity, cultural competence and cultural humility. A diverse and inclusive optometric environment produces many organizational and healthcare benefits. Diversity is associated with improved performance, innovation, creativity, access to care, patient satisfaction, patient health outcomes, student persistence and positive student outcomes.¹⁻³



Keshia S. Elder, OD, MS, MS, FAAO

Ongoing ASCO Initiatives

Since the previous similarly themed edition was published in fall 2017, the field of optometry has continued to work to increase diversity. As optometric educators, we are in a unique position to influence the trajectory of diversity in the optometric profession. We have the ability to recruit students and faculty members who are more representative of the U.S. population.

One of the top priorities in ASCO's strategic plan is to increase the quantity, quality and diversity of the optometry school applicant pool through initiatives such as the *Optometry Gives Me Life* public awareness campaign. Additionally, the ASCO Diversity and Cultural Competency Committee has hosted multiple town halls and has partnered with organizations such as the American Academy of Optometry (AAO) and the National Optometric Association to further educate the optometry community about diversity, equity, inclusion and belonging, discuss challenges facing optometry, and provide tools for navigating the changing profession. A pilot program was also launched in the 2020-2021 academic year to promote careers in academia to Black optometry residents. This program will be expanded to include other minority racial and ethnic groups in the 2022-2023 academic year.

Where We Stand

With ongoing effort, change has begun. Since the 2017-2018 academic year, the percentage of full-time Black or African American optometry students in ASCO member schools and colleges has increased from 2.7% to 4.0%.⁴ The percentage of Hispanic or Latino optometry students has increased from 6.4% to 7.8%. The percentage of Native American and Alaska Native optometry students has increased from 0.5% to 0.6%. The percentage of Hawaiian or other Pacific Islander optometry students has remained constant at 0.2%. During the same period, the percentage of White and Asian optometry students has decreased from 52.2% to 50.0% and from 30.7% to 29.9%, respectively. The percentage of racial and ethnic minority optometric educators at ASCO member schools and colleges is also slowly increasing.⁵ In the past year, the percentage of full-time Black or African American faculty has increased from 3.6% to 3.8%. The percentage of Hispanic or Latino faculty has increased from 5.7% to 5.8%, and the percentage of Asian faculty has increased from 19.7% to 20.6%.

Unlike the incremental changes in the racial and ethnic composition of optometry schools, a large gender shift has occurred in the optometric profession. According to the American Optometric Association (AOA) Survey of Optometric Practice, from 2009 to 2016 the percentage of female optometrists increased from 29% to 43%.⁶ Data collected by Women in Optometry in January 2021 showed that 45.1% of practicing optometrists in the United States, Guam and Puerto Rico are women.⁷ Optometric leadership is finally

mirroring the change in the proportion of male and female optometrists: 39% of the deans of the schools and colleges of optometry in the United States are female; 45% of the AOA Board of Trustees members are female; and 50% of the Board of Directors for the AAO are female.

Where We Need to Go

As the racial and ethnic demographics in the field of optometry continue to shift, the leadership roles will eventually catch up. I was recently named dean of the University of Missouri-St. Louis College of Optometry, effective Sept. 1, 2022. I am excited to lead the college in this capacity. However, I am astounded that it is 2022, and I will be the first Black female to serve as dean at a U.S. school or college of optometry. Why did it take this long for our profession to meet this milestone? For optometric leadership to reflect the totality of our profession, we must be intentional about recruiting racial and ethnic minority optometry students and grooming them to become optometric educators. Only then will all of our students see representation in optometric education.

Although this editorial focuses on racial, ethnic and gender diversity, the optometric profession should be prepared to embrace many other facets of diversity including gender identity, sexual orientation and religious beliefs. The intersection of an individual's dimensions of diversity is what makes each unique. When we as a profession are willing to embrace and accept our students and colleagues as their authentic selves, we will be able to cultivate a true environment of inclusion and belonging.

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Dr. Elder, an Associate Editor with *Optometric Education*, will assume the role of Dean of the University of Missouri-St. Louis College of Optometry On Sept. 1, 2022. Dr. Elder was previously an Associate Professor, Director of Diversity, Equity and Inclusion, and Director of the Externship Program at the

University of Alabama at Birmingham School of Optometry.

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