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December 2015

PERCEPTIONS OF SENIOR DENTAL STUDENTS REGARDING CULTURAL DIVERSITY BEFORE AND AFTER COMMUNITY SERVICE-LEARNING ROTATIONS

A Thesis Presented to the
Faculty of the College of Education
University of Houston

In Partial Fulfillment
of the Requirements for the Degree

Doctor of Education

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An Abstract
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Abstract

Cultural perspectives vary from one individual to another. The world is diverse; therefore, it is the intent to live as an inclusive community despite varied human characteristics, ideas, or philosophies of life. This study explored how a dental curriculum included training in multiculturalism in order to provide students with opportunities to treat patients from a variety of cultural and ethnic backgrounds. A pre-survey and post-survey consisting of eight behavioral attitude questions was given to senior dental students prior to community service-learning rotations and after graduation. Results from this study explored changes in cultural perspective through community service-learning rotations before and after the dental students' senior year. Through community service-learning, dental students witnessed social and cultural differences and might have gained insight into their approach to treating patients of economic, racial, or cultural backgrounds. The results of this research study also demonstrated whether a student experienced growth in his or her cultural perspective during the senior year through community service-learning that would foster competent and ethical behavior as a practicing oral healthcare provider. The evidence in this study suggested slight significant change in behavioral attitude towards perception in discrimination.

Key words: cultural awareness, service learning, diversity, inclusive, multicultural education

Table of Contents

Acknowledgments ... iv

Abstract ... vi

I. Introduction ... 1

Statement of the Problem ... 4

Research Question ... 5

Purpose of the Study ... 5

Definitions ... 6

Background Information ... 8

Summary ... 9

II. Literature Review ... 11

Educational Research ... 12

Educator Awareness ... 14

About Health Literacy ... 16

Cultural Competence ... 18

Positive Aspects of Diversity ... 20

Diversity Dilemmas ... 21

Measuring Cultural Awareness ... 23

Summary ... 25

III. Methodology ... 27

Research Questions ... 27

Variables 28
Conceptual Definitions 28
Measures 30
Research Design.. 31
Limitations of this Study... 31
Data Collection Procedures.. 32
Data Analysis Procedures 32
Summary 33
IV.Results.. 34
Results.. 35
Demographics of participants and characteristics of community service-learning off-site rotations. 35
Summary of Research Results 39
V. Discussion and Conclusion 40
Overview of the Problem and the Methodological Approach 40
Discussion of the Problem and Summary of the Methodological Approach ... 41
Discussion of the Results of the Research 42
Limitations (in sampling, treatment, and data analysis) 43
Conclusion 45
Recommendations.. 45
References.. 47
Appendix A Pre-survey.. 52

Appendix B Post-Survey.. 54

List of Tables

Table 1……………………………………………………………page 37

Table 2……………………………………………………………page 37

Chapter I

Introduction

Ms. Jones, a first-grade teacher at Santa Elena Elementary School, noticed that the left side of a student's face was swollen. He was also not engaged in the classroom activity. She asked him to stay behind after class so that she could assess his condition. Jose, in his best broken English, tried to explain that his mouth hurt and his mom was treating the area with some type of topical ointment; however, he was still in pain. Ms. Jones took Jose to the school nurse who examined his mouth. She noted his lower left molar was badly decayed and broken. When asked whether his mother had taken him to a dentist, Jose asked, "What is a dentist?"

Unfortunately, this scenario was not uncommon to the school nurse. The school is located in an underserved area comprised of individuals with low socioeconomic or undocumented residential status. In these types of areas, dental care is typically not obtained on a regular basis, if at all. Often, children such as Jose have never been to a dentist because they live with a single parent, usually the mother, who is an immigrant herself, has no insurance, and is working long hours at a low-paying job. There is no time for scheduling any type of appointments during business hours and little money to pay for services. Additional barriers include language and transportation.

One of the leading causes of children either missing school or being inattentive in class is dental infection and pain. As a result, hospital emergency rooms have experienced an increase in the number of pediatric patients seeking emergency care for

dental-related visits, with the majority of those urgencies related to untreated dental decay, infection, and inflammation.

According to the City of Houston Health Disparities Data Report (2008), despite being one of the largest and most diverse cities in the United States, Houston has an exponential number of underserved and uninsured individuals, predominately Hispanic, who do not have access to dental or medical care. Health disparities are known as differences in health conditions that exist between specific population groups, resulting in one group having a disproportionate burden of disease, disability, or premature death. The Centers for Disease Control and Prevention (2015) suggests poor oral health is related to the economic factor of no access to health services which include an individual's ability to get and keep dental insurance. Oral health disparity is a profound dental issue that often gets overlooked because of economic factors, transportation, and communication barriers—the inability to interact with a health-care provider or understand instructions. These are common obstacles encountered in an underserved community.

What makes up an underserved or uninsured population? The most simplistic definition is an area where residing individuals possess a low level of education, live at the poverty level, are afflicted with untreated medical condition(s), and may be undocumented immigrants. Disabled individuals and older adults who reside at capacity-assisted or long-term facilities may also be included in this population. Therefore, such individuals would more likely be seen in a community clinic or an

academic dental institution, where they could obtain dental care at no cost or reduced costs. According to Grobe-Hood (2009), this component of community service-learning illustrates the application of educational strategy in predoctoral education. As with most dental schools, the patients who visit these educational institutions or federally qualified health centers (FQHC) represent a wide spectrum of diversity. These individuals can be characterized as representatives of the American "Melting Pot," who have various religious, cultural, and ethnic backgrounds.

Dental students gain exposure to cultural diversity in the community clinical setting, which enables them to possibly feel more comfortable when treating patients from these populations. Consequently, this may also promote the desire to practice in an underserved area or public health facility after graduation. "In particular, community-based dental education has been associated with students' improved confidence and willingness to care for vulnerable and underserved populations" (Institute of Medicine [IOM], & National Research Council [NRC], 2011, p. 124). It appears that students appreciate the outside clinical rotations for the opportunity to provide dental treatment to those in need despite the fact that some of them may never set foot in a community clinical setting again. In fostering the guidelines and recommendations set forth by educational bodies and organizations, all students in an institution of higher learning will be exposed and acquainted with understanding and incorporating the necessary values to treat patients of different ethnicities.

Racial and ethnic minorities seem to experience the most significant disparities in oral health and access to care. "There are calls across the health professions for academic

health centers to do more to educate all future practitioners to better meet the needs of society by fostering idealism, cultural competence, and social responsibility" (Grobe-Hood, 2009, p. 6). Therefore, exposing students to the cultural diversity of patients during clinical rotations teaches them compassion and empathy and that every culture and race contributes to America.

Statement of the Problem

There are students in advanced education that may not be familiar with the concerns of poverty or diversity because they were not raised in an impoverished economic setting. Therefore, they are not accustomed to dealing with underserved, diverse groups in their daily lives. As a result, these students could be at a disadvantage when treating patients of different cultural or socioeconomic backgrounds. In an educational environment, it is important to be able to communicate with the patient. The University of Texas Health Science Center at Houston School of Dentistry's Strategic Plan 2011–2016, Strategic Direction 5: Culture and Environment states, "We will continually strive for a humanistic environment focused on a culture of improving health, valuing individuals and optimizing opportunities for development and personal growth of dental professionals" (p.7).

According to Adams (2013), cultural learning is second nature and so deeply ingrained that often people do it is not recognize how profoundly it influences thoughts or actions. The IOM also encourages hiring faculty who have experience in treating patients

of diversity and recommends that educational programs be developed that would be relevant to the needs of underserved populations (IOM, 2011). Faculty with experience in treating underserved individuals may have a significant impact in student learning; therefore, that connection may ignite more insight into cultural awareness.

Research Question

Is there a change in perceptions regarding cultural diversity of senior dental students before and after participating in community service-learning rotations? Data to answer this research question was provided through an eight-item behavioral attitude questionnaire. This questionnaire was given to 84 fourth-year dental students during the fall orientation session and again at the end of the academic year to determine whether there is a change in cultural perception during the senior year.

Purpose of the Study

The purpose of this study was to measure whether there were changes in behavioral attitudes before and after community service-learning rotations with treating culturally, diverse patients. These rotations consisted of providing dental care at FQHCs, (i.e., community-based facilities), and in academic clinical settings. The goal for this project was to enable students treat patients of diversity with a universal level of integrity and competency as mandated in the curriculum. This study would also guide academic administrators to determine whether there is a need for a cultural awareness course(s) in the dental education curriculum prior to the senior year, a need for a certain amount of

community outreach activity hours as a prerequisite to dental school, or a need for more cultural competency lectures integrated into the curriculum. Grobe-Hood (2009) found the following:

> Service-learning differs from other types of programs, in that it is mutually beneficial to the service provider and the recipient, and there are intentional learning goals for the service provider. It is not just an occasional volunteer program, an add-on to the curriculum, or an opportunity to log a set number of community service hours in order to fulfill a requirement. Service-learning is designed to be an integral part of the curriculum (p. 13).

In addition, it is suggested the community service-learning rotations will “have the potential to nurture and increase idealistic attitudes” (Grobe-Hood, 2009, p. 6). Therefore, the philosophy of service-learning has the potential to have a significant impact on this generation as they go forward in their career path of dentistry.

Definitions

For the purpose of this study, definitions of the following key terms will be used:

Service-learning. According to Grobe-Hood (2009), service-learning is a method in which students or participants learn and develop through active participation in thoughtfully organized service that is conducted in and meets the needs of a community. It is coordinated with an elementary school, secondary school, institution of higher education, community service program, and with the community. Service-learning helps foster civic responsibility that is integrated into and enhances the academic curriculum of

the students or the educational components of the community service program in which the participants are enrolled and provides structured time for the students or participants to reflect on the service experience.

Federally Qualified Health Centers. Any health center that receives a grant established by section 330 of the Public Health Service Act. FQHCs must be located in or serve a medically underserved area or medically underserved population, provide both primary health-care services as well as supportive services (e.g., education, transportation, translation services), and see patients regardless of their ability to pay for those services (IOM, & NRC, 2011).

Cultural Competence. The ability to communicate with diverse people with respect and empathy and attempt to understand others in spite of differences (Adams, 2013).

Diversity. The state or quality of being different or varied.

Melting pot. A place (such as a city or country) where different types of people live together and gradually create one community.

Inclusive. Open to everyone; not limited to certain people.

Millennial generation. A term used to refer to the generation born from 1980 onward, brought up using digital technology and mass media; the children of Baby Boomers; also called Generation Y.

Multicultural education. Any form of education or teaching that incorporates the histories, texts, values, beliefs, and perspectives of people from different cultural backgrounds.

Poverty. The state or condition of having little or no money, goods, or means of support; the condition of being poor.

Ethnicity. The fact or state of belonging to a social group that has a common national or cultural tradition.

Coexist. Multiple groups purposefully live together peacefully and nonviolently, despite differences in ethnicity, religion, gender, sexual orientation, and politics (Long, 2013, p. 13).

Background Information

The Commission of Dental Accreditation (CODA) is an educational body in charge of evaluating and assessing dental programs and dental hygiene programs in the United States every seven years. This mandated study allows for the accrediting body to make sure that educational and clinical standards are being enforced and are in line with teaching future oral health professionals in a competent manner. Clinical rotations are a mandated portion of the dental and dental hygiene curriculum. As stated in the University of Texas School of Dentistry at Houston 2011–2016 Strategic Direction 5: Culture and Environment mandates that graduates must be competent in managing a diverse patient population and have the interpersonal and communication skills to function successfully in a multicultural work environment. In doing so, students will learn about the issues and practices associated with disparities in health status among populations, including but not limited to, racial, ethnic, geographic, or socioeconomic groups. Dental students will be

best prepared for dental practice in a diverse society when they learn in an environment characterized by and supportive of diversity and inclusion. Such an environment should facilitate dental education in:

- basic principles of culturally competent health-care;
- recognition of health-care disparities and the development of solutions;
- the importance of meeting the health-care needs of dentally underserved populations; and,
- the development of core professional attributes, such as altruism, empathy, and social accountability, needed to provide effective care in a multidimensional, diverse society.

By complying with CODA standards, educational institutions seek off-site clinics or facilities where students will have the ability to gain experience in every component listed above to meet their educational/clinical expectations and to fulfill graduation requirements. Doing so enables graduates to be successful in service learning, promote civic engagement, and become a part of their community.

Summary

In conclusion, dental students' exposure to community service-learning is an integral component of their dental education. The off-site clinical rotations during the senior year prepare students to better communicate with and treat individuals of diversity. Dental education must portray the promotion of understanding and encouraging

sensitivity to diversity. In order to provide an overall personal and educational perspective for this study, a literature review was conducted in the areas of cultural awareness, community service-learning, and multicultural education and those topics are explored in the next chapter.

Chapter II

Literature Review

This review of literature was conducted in the following areas: educational research, educator awareness, health literacy, cultural competence, positive aspects of diversity, diversity dilemmas and measuring cultural awareness. These areas support the impact of cultural awareness on treating patients outside one's own culture.

We take our cultural background with us to our workplace and school. It is the lens through which we view the world and a complex matrix of interacting elements. Our cultural background becomes a powerful ally in the technical care of the patient when the behaviors that reflect our cultural values are evident to patients (Daniel, Harfst, & Wilder, 2008, p. 69). In today's society, most health-care providers engage at some level of cultural awareness in their daily interactions with patients or fellow students. Being sensitive to different ethnic backgrounds enables one to take into consideration key elements that are vital to a successful relationship between patient and health-care provider. Being empathetic, compassionate, observant, and respectful are qualities of a culturally competent health-care professional. This chapter includes a discussion of several characteristics that are the foundation for cultural awareness in a community service-learning environment for a future health-care provider. Fernando (1993) wrote the following:

> Culture is no longer seen as a closed system that can be defined very clearly, nor something that is composed of traditional beliefs and practices that are passed on from generation to generation, but as something living, dynamic and changing—a flexible system of values and world views that people live by and create and recreate continuously (p. 11).

According to the U.S. Department of Health and Human Services' Quick Guide to Health Literacy (2015), it is imperative that all medical and dental professionals have the knowledge and communication skills that will make them attentive to the cultural diversity of their patients. The guide also indicates that health-care professionals should speak in a manner that is understandable to the patient. Therefore, sensitivity to diversity will enable the health-care professional to bridge the communication gap or any other barriers to provide comprehensive strategies and treatment.

Educational Research

Past research about diversity in the educational setting may be helpful to understanding the background needed to be an effective educator. If an educator is prepared for cultural diversity, it will reduce the challenges, and teaching in a more positive environment will be accomplished. Many researchers seem to indicate that a diverse student population would enable one to learn better. Dr. James Albert Banks, a professor of diversity studies at the University of Washington in Seattle and the director of the Center of Multicultural Education, has written that the role of the educator is to construct knowledge processes to different levels of education, which may decrease racial

biases and empower students to be open to diversity (2006). Through his publications and leadership roles in multicultural education and social sciences, he strived to acknowledge the importance of redefining education into a universal, diverse model. A survey by Gurin, et al., (2002) found that students in integrated school districts learned better in such settings. Parallel to that report, Gebru, Kahlaf, and Willman (2008) wrote that a diverse population would allow students to be involved in more rigorous curricula, better school resources, and higher academic expectancies compared to schools that were composed of only one ethnic or racial group. Some surveys distributed throughout the United States have shown that both Caucasian and minority students in integrated school districts have learned to study and work together, developing confidence and skills to work in such settings (Gurin, 2002). According to the American Psychological Association (APA), in addition to socioeconomic realities that may deprive students of valuable resources, high-achieving African American students may be exposed to less rigorous curricula, attend schools with fewer resources, and have teachers who expect less of them academically than they expect of similarly situated Caucasian students. Thus, research indicates that an environment with a diverse student population creates a better learning environment. Therefore, past research alludes to the opinion that diversity in the educational setting may be helpful to future health-care professionals who seek future roles in academia. It is also important to understand that educational background can play a vital role in becoming an effective educator or in faculty development.

In the article “Benefits and Challenges of Diversity in Academic Settings,” Fine and Handelsman (2010) reference multiple studies that suggest promoting diversity on

campus has positive effects on students' cognitive development, community engagement, and acceptance of diversity and intellectual challenges. If students are comfortable in their academic setting, they will be less likely to question their ability to communicate and collaborate with one another, which would result in a better learning environment and justifies faculty engaging with students using educational methods such as group discussions, interaction, and guided reflection to foster growth in communication and assist in their educational progress.

Educator Awareness

Jennings, Snowberg, Coccia, and Greenberg (2013) illustrated an interventional program, Cultivating Awareness and Resilience in Education (CARE). CARE is designed to assist teachers with daily teaching challenges through stress-reduction techniques, especially for time pressures and increasing mindfulness and self-efficacy as well as reducing physical symptoms. In addition, CARE strives to support teachers in becoming more sensitive to students' needs, cognizant of emotional classroom climate, and able to regulate their emotions while managing disruptive behavior (Jennings et al., 2013). CARE began as a faculty development project at the Garrison Institute and then was extended to other school sites. In the study, teachers stated they were able to accomplish more, rather than spending a lot of time thinking of what to do. The CARE program also provided the opportunity for educators to enrich their teaching practices by promoting awareness, presence, compassion, reflection, and inspiration—the inner resources teachers need to help students flourish socially, emotionally, and academically.

According to Wolfe and Spencer (1996), by addressing and accepting cultural differences in our pedagogy and course content, educators can create multicultural sensitive classrooms that make education relevant and accessible to all students.

According to Alexander (2009), information on the background, language, history, and culture of students is a valuable resource for teachers. This information assists with making pedagogical decisions and offers the teacher a lens through which to view and support the student, parents, and the home. The approach to learning should consider personal challenges, teamwork, and technology.

> Our new generation of learners, the Millennials and, to an extent, the Gen Xers, have no brand loyalty and accept as their rights the ability to make choices and customize the things they choose. They are more educated than their parents and expect to make more money (Lynn-Nelson, 2007, p. 10).

As generations have evolved, it has been suggested that this generation anticipates change and is not frightened or intimidated; therefore, failure will not be something to fear. In the new population of this country, teaching students who come from non-English-speaking backgrounds will involve much more than reveling in cultural or ethnic differences (Valdes, 1992).

According to Ponnudurai and De Rycker (2012), educators generally believe that writing, reading, listening, and speaking skills are equally crucial to be truly proficient in a language. In the United States, English composition is a required prerequisite for any level of higher education. Despite the various ethnicities, English is the primary language

in the United States that is relevant and needed in the ability to communicate. For a health-care provider, it is critical to record clear and concise documentation in a patient's health record. In addition to placing precise information in the patient record, the ability to communicate is essential when one has to inform and provide instructions and recommendations for the wellbeing of the patient.

About Health Literacy

The Centers for Disease Control and Prevention (2015), defines health literacy by using The Patient Protection and Affordable Care Act of 2010, Title V, "the degree to which individuals have the capacity to obtain, process, and understand basic health information needed to make appropriate health decisions and services needed to prevent or treat illness." Nearly nine out of 10 adults have difficulty using the everyday health information that is routinely available in our health-care facilities, retail outlets, media, and communities (Centers for Disease Control and Prevention, 2014). According to the Center for Health Care Strategies, a disproportionate number of minorities (estimated at 50% of Hispanics, 40% of Blacks, and 33% of Asians) have literacy problems (Health Literacy: Statistics At-A-Glance, p. 1). To substantiate this, the illustrations of lack of health literacy are nearly half of all Americans have difficulty understanding and using health information disparity in health and many individuals hide this problem.

"Of the more than 37 million adults in the U.S. who speak a language other than English, some 18 million people—48 percent—report that they speak English less than 'very well.' Language and communication barriers can affect the amount and quality of

health care received" (Center on Aging Society, 2004, p. 2). The issue of health literacy is of great importance for patient safety because patients may not understand medication, instructions, consent forms, or appointment times.

In addition, the U.S. health-care system is shifting toward more self-care, enhanced technology, and additional complex health-care delivery systems and products. In dental health literacy, health-care providers should be cognizant of the possibility of low literacy, recognizing informal cues and assessments, and eliciting patient-family support. Understanding can be improved by speaking to the patient slowly and simply and repeating all instructions. According to Center for Health Care Strategies, Inc., Health Literacy and Understanding Medical Information Fact Sheet (1997), patient compliance and medical errors may be based on a poor understanding of health-care information, and only about 50% of all patients take medications as directed. Unfortunately, it is all too common for patients not to ask questions or follow through with appointments or tests because of this disconnect. Also, asking the patient to reiterate the information is key to a successful outcome. By taking recommendations from the Problems Center for Health Strategies, Inc. into consideration, it is possible that this could reduce confusion and increase health literacy. "The combination of medical errors, excess hospitalizations, longer hospital stays, more use of emergency departments, and a generally higher level of illness—all attributed to limited health literacy—is estimated to result in excess costs for the U.S. health-care system of between $50 billion and $73 billion per year" (Centers for Health Care Strategies, Inc., 1997).

Cultural Competence

The U.S. Census Bureau (2014) estimates that by 2050, 48% of the U.S. population will be comprised of minorities, e.g., 52.5 White, 22.5% Hispanic, 14.4% Black, 9.7% Asian, and 0.9% Native American. Because of this, sensitivity to racial and ethnic minorities is a growing need in the United States. As suggested by Professor Banks in *Multicultural Education: Issues and Perspectives* (2009), being culturally competent is recognized as an essential component of academic excellence. Staff members and students at the University of Kentucky in 2011 created a diversity project called the "I am . . ." Diversity Movement. Their mission states, "We are building a movement that expands the conversation of diversity in a way that promotes common humanity by exploring identity, nurturing inclusivity, and connecting communities" (2010). Because there is such a large diverse population and there is no way to tap into everyone's unique cultural background or practices, this project was created so that anyone could contribute via a link, video, or some other form of communication to help people become familiar and comfortable with those they come in contact with in a professional or academic setting. The project demonstrated a positive application in dealing with academic diversity. In multicultural teaching, initiatives and applications towards a respect for culture would propose value in the learning environment.

> The level of comfort for all cultures on campus needs to improve, in order to ensure safety and wellbeing if we are to live and study together. A safe environment is necessary for scientific inquiry, exchange and dialogue to take

> place. Therefore, efforts are being brought forth by universities around the world to build awareness of cultural diversity for the professionals of tomorrow, considering multiple initiatives to accept and celebrate cultural diversity (Hunt, 2013, p. 768).

In any multicultural and/or cross-cultural aspect of evaluation for an organization or community, the participant hopes to understand the importance of recognizing the cultural environments of assessment, define cultural competence within an assessment perspective, and understand how an individual's ethnicity can affect evaluation practice. However, the most crucial aspect of teaching any type of cultural competency to any group of individuals is for the presenter or teacher to be culturally familiar and sensitive. This would then increase the ability of the instructor to influence and educate the student's own identity while interacting with patients. Qualitative feedback of these activities would allow for appreciation of other's cultures and engagement in diverse opportunities. The opportunity to examine one's viewpoint of an issue may encourage more open-mindedness in the way something was initially perceived. Therefore, multicultural training is a strong representation of being responsive to cultural sensitivity. Acknowledging diversity stems from recognizing different viewpoints of cultural awareness. Lickona, (2002) states the following,

> "Intellectual honesty requires us to acknowledge at least three kinds of diversity: (1) 'positive diversity'(such as the different races, ethnic groups, and cultural strengths that make up our classrooms and communities); (2) 'negative diversity'

> that we morally reject (such as belief systems that sanction hatred or abuse of human rights); and (3) 'controversial diversity,' concerning matters about which people often do not agree (such as abortion and the proper relationship for sexual intimacy). 'Appreciating diversity,' then, is an appropriate educational goal only with regard to category #1—diversity that we generally agree is positive or at least morally neutral" (Likona, 2002, p.1).

According to the Center on an Aging Society at Georgetown University (2014), cultural competency is an ongoing learning process rather than an ultimate goal and is often developed in stages by building upon previous knowledge and experience. Currently, this goal is one that will probably take much effort to be reached but will be gratifying in its pursuit of its end result. In our ever changing world, education, personal experience, and willingness to accept diversity contribute to cultural competence.

Positive Aspects of Diversity

Diversity in an educational setting has the potential to promote a learning environment that will be safe and where everyone feels they are being treated fairly and respectfully. "A vast and growing body of research provides evidence that a diverse student body, faculty, and staff benefits our joint missions of teaching and research by increasing creativity, innovation, and problem-solving" (Fine & Handelsman, 2010, p. 2). Findings from other experimental studies have concluded that creative, feasible, and more effective ideas were produced by groups of different ethnicities. In addition, the studies also allowed viewpoints from different minorities, which encouraged more

inspired discussion during brainstorming. It has also been noted that most innovative corporate companies seek to employ individuals of diverse backgrounds to obtain the goal of a successful, productive team (Fine & Handelsman, 2010). In regards to benefits for teaching and research, a 1995 study from the University of California, Los Angeles (UCLA) Higher Education Institute (HERI) found that African-American women faculty and staff were more apt to engage in active learning, encourage student participation, and portray positive perceptions of women and minorities in their curriculum (2010). Classrooms that include students of diverse backgrounds allow for "meaningful engagement" when interacting in an academic setting, enabling growth in motivation and intellectual and academic abilities. Critical thinking was also found to be a positive attribute from data at the National Study of Student Learning. "Teaching our students to be critical thinkers has always been important, but today this should be regarded as an especially urgent goal. Although we talk—often in self-regarding ways—about the complexity of modern life, we, in fact, live in a culture of simplification" (American Council of Learned Societies, 2007, p.7).

Diversity Dilemmas

In academia, studies indicate there are still challenges despite the fact that institutional environments are comprised of faculty from different ethnic backgrounds. In the United States, are faculties predominately Caucasian? Do African Americans still express a concern of exclusion, prejudice, division, and segregation? Would an individual of a diverse background feel unwelcome in an institution that is predominately white,

along with the concern of incidences of discrimination? Does anxiety become a result of negative experiences associated with minorities that could lead to avoiding interactions with diverse classmates or faculty? According to Banks (2009), although most faculty members believe they are objective scholars who judge people on merit, the quality of their work, and the nature of their achievements, research reveals that a lifetime of experience and cultural history shape every one of us and our judgments of others. However, even today, social assumptions can still play an integral part in our society and inhibit the ability to be open minded and accepting of diversity (Fine & Handelsman, 2010).

One way to determine if one is culturally aware would be to take an attitudinal test, such as the Implicit Association Test provided by Project Implicit (2011). Project Implicit (2011) is a multi-university research collaboration that was founded in 1998 by three scientists, Tony Greenwald (University of Washington), Mahzarin Banaji (Harvard University), and Brian Nosek (University of Virginia) (Greenwald et al, 2003). It was designed in 2001 to foster dissemination and application of implicit social cognition. This tool allows the person being tested to decipher if the answers they provide are based upon implications of diversity or assumption. At the conclusion of the test, the person being tested may want to explore issues such as interacting with minority colleagues, promoting inclusivity in personal and community opportunities, and treating all individuals equally.

Are there misconceptions about different ethnicities that may have an influence on an opinion of someone of a different cultural background? According to the Identities. Mic website, the following misconceptions of the Hispanic community are: they have

dark hair and eyes, they are unintelligent because they have a Spanish accent, they are poorly educated, and they are poor. In regards to these statements, would it be possible that biases or assumptions may affect an interview process or hiring of a candidate of a different cultural background? Thereby, understanding and appreciating cultural differences is essential when hiring employees, including faculty, or accepting students in an academic setting. If cultural awareness and sensitivity are not practiced, there could be the possibility of discriminatory action(s).

Measuring Cultural Awareness

Should classrooms of today call for educators who are well-prepared to instruct culturally diverse students? Unfortunately, classroom teachers often have life experiences that are dissimilar to those of many of the students they are teaching (Fehr & Agnello, 2012). Fehr and Agnello (2012) wanted to evaluate this common situation and thought that an instrument was needed to test a teacher's knowledge, skills, and outlook on teaching in a diverse setting. In designing their instrument, they sought a tool that would alert the administration that faculty needed assistance in understanding how to effectively teach diverse students. One example they explored was the Cultural Diversity Awareness Inventory (Henry, 1986) to assess attitudes, beliefs, and behaviors toward children of diverse backgrounds. However, over time, this survey was modified slightly to represent the evolution of time but not to a great extent. It seemed the world changed more than the questions in regards to diversity. In 2012, Fehr and Agnello (2012) noted about their survey, "Given that this previous survey was now 20 years old, we believed it was time

for a more contemporary survey. The demographics of today's classroom are very different from those of two decades ago. Teachers being prepared now must be ready for these new changes, and possess the awareness, skills, and dispositions appropriate to teach diverse students of this new century successfully" (p. 34). Their updated survey consisted of demographic questions based on immigration, sexual orientation, race, religion, and other diverse topics and used a Likert scale and open-ended questions that would be given to every new educational teacher twice during pre-and post-program entrance. Outcomes of this study demonstrated both successes and challenges. This method of preparing a new academic faculty member to teach to a diverse student body is a successful result of the survey. "The college continues its commitment to preparing teacher candidates for a diverse student population, and this survey offers rich opportunities for self-assessment, reflection, and program improvements" (Fehr & Agnello, 2012, p. 38). Challenges included course content consistency, faculty political views, and controversial or sensitive topics. Diversity courses are a requirement at many institutions (such as foreign languages), and Texas Tech University is a good example of a program that could have an impact on multicultural education.

Developed in 1996 for college students, the Openness to Diversity and Challenge Scale is an eight-item instrument used to evaluate views and perspectives of cultural diversity. This questionnaire uses a Likert scale, ranging from "strongly disagree" to "strongly agree." There are no right or wrong answers, and respondents are encouraged to leave questions blank if there is not a clear answer. This protocol was created to eliminate the threat of participant-biased opinions and to allow a positive sense of comfort when

answering the questions. It appears that various universities and corporations utilize diversity scales to assist with selecting and recruiting staff and students to join their student/faculty body and businesses to reflect the “melting pot” representation of the United States.

Does feeling comfortable in a diverse population and valuing the impact of diversity allow for understanding and personal growth? Yao and Martin asserted, “For the long run, enhancing diversity is vital to promote human societies and global prosperity” and “it helps to train students to appreciate multiculturalism, an indispensable component of being ‘world ready’” (2012, p. 3).

Summary

The literature review that was undertaken was carefully researched to complement the intent of this research study. University settings are conscientious in implementing and expanding the curriculum to promote and support community service-learning. In these times, institutional administrations seem to be aware of the need to provide faculty development for junior faculty or those faculty members who feel the need to enhance their cultural awareness. It is reassuring to be aware that there are tools to measure the level of cultural competency, whether from the student or educator perspective. In most instances, topics of diversity can go without review or study, which would not allow for expanding educational resources in academia. The literature review selected for this study varies from diversity, cultural awareness, and multicultural education. Therefore, the

hope is that the cultural perspective of dental students will expand during their senior year when treating diverse patients at community service-learning rotations.

Chapter III

Methodology

This chapter presents the reader with the research question that asks whether there is a change in perceptions of senior dental students regarding cultural diversity before and after community service-learning rotations. The study began at the start of the academic year, in August, with a pre-survey of behavioral attitudes (Welch, 2003), and ended at the end of the spring semester with a post-survey using the same behavioral attitude questionnaire. The sample came from a student population of diverse backgrounds, including African, African American, Asian, Caucasian, and Hispanic. Determining the student comfort level in cultural perception is integral to the treatment that is provided to the underserved or uninsured population. The off-site clinical rotations promote the opportunity to ensure a well-rounded, culturally competent oral health professional.

Research Questions

The research question guiding this thesis is whether there was a change in perception of senior dental students regarding cultural diversity before and after community service-learning clinical rotations. The study began by providing a behavioral attitude questionnaire to 84 senior dental students (completed by 80 students) to measure the attitudes held by the students before engaging in community service-learning. Orientation to the community service off-site rotations was provided on the first day of school when faculty met with the senior students to review the logistics of the upcoming

semester. The student introduction to community service-learning off-site rotations allowed for logistics, expectations, and questions to be addressed. In addition, students were informed of competencies and requirements for graduation. Since community service-learning is an important component of students' clinical education, the off-site rotations allowed for the experience and growth of personal interaction at the community clinics.

Variables

The dependent variable for this thesis was the senior dental student's cultural perception before and after community service-learning rotations. It is hoped that the community service-learning component of the dental curriculum will provide an effective attribute to their service-learning experiences. The components of diversity that may impact the service-learning rotation are: ethnicity, religious beliefs, socioeconomic and educational background.

Conceptual Definitions

Cultural Competence. The ability to interact effectively with people of different cultures and socioeconomic backgrounds, particularly in the context of human resources, nonprofit organizations, and government agencies whose employees work with persons from different cultural/ethnic backgrounds. Cultural competence comprises four components: (a) awareness of one's own cultural worldview, (b) attitude toward cultural differences, (c) knowledge of different cultural practices and world views, and

(d) cross-cultural skills. Developing cultural competence results in an ability to understand, communicate with, and effectively interact with people across cultures. "Culture is a complex matrix of interacting elements that is ubiquitous, multidimensional, and complex. It represents knowledge, experiences, beliefs, values, meanings, and attitudes, as well as concepts of religion and notions of time, roles, and the universe" (Gluck & Morganstein, 2003, p. 111–112).

Cultural Awareness. Understanding the differences of people from other countries or other backgrounds, especially differences in attitudes and values. "Cultural sensitivity, as part of communication, implies an awareness of and accounting for cultural differences during human interaction" (Daniel, Harfst & Wilder, 2008, p. 69).

Community Service-Learning. A method of teaching that combines classroom instruction with meaningful community service. This form of learning emphasizes critical thinking and personal reflection while encouraging an inviting sense of community, civic engagement, and personal responsibility. "Service learning objectives are taught in class by faculty and in the community by organizers of community programs. It is important that the students understand that these objectives are part and parcel of their didactic classes and their service-learning requirements for graduation" (Gaeth, 2011, p. 8).

Off-site Rotations. Clinical rotations away from the dental school at an FQHC or community-based clinic or facility where the dental and dental hygiene student or resident will provide preventative or limited dental treatment. "The rotations are not necessarily clinical, but provide opportunities for students to be involved in the community as early as possible" (Grobe-Hood, 2009, p. 460).

Measures

The measure used to assess the level of cultural sensitivity of senior dental students during community service-learning clinical rotations was a pre-and post-survey design. The survey consisted of eight behavioral attitude questions, using a Likert scale of 1–6 (“Extremely unlikely” to “Extremely likely”). The scale for this project consisted of a survey that was administered as a pre-and post-survey behavioral attitude questionnaire. The pre-survey (found in Appendix A) was distributed to the senior dental students at orientation of the 2014 fall semester and the dental director collected the questionnaires upon completion. The post-survey (found in Appendix B) was distributed to the students after graduation via SurveyMonkey and collected by the institution’s IT manager. The study took place during the course of the entire senior year. The intent of the pre-and post-surveys was to demonstrate whether any changes were present in senior dental students’ cultural perspectives after completing community serving-learning off-site rotations. Selected, edited questions used came from *Teaching Diversity and Cross-Cultural Competence in Health Care: A Trainer’s Guide* (Third Edition) by Dr. Melissa Welch. As students completed the surveys, it was expected that the responses were based on personal, honest opinions and not answered based on what students thought sounded most politically correct.

Research Design

Participants/Characteristics. This quantitative research design used a fourth-year dental class comprised of 84 students at a large dental school in the Southwestern United States. The composition of students was a) Caucasian: 10 males, 30 females, b) Hispanic: 6 males, 10 females, c) African-American: 1 male, 2 females, and d) Asian: 9 males, 9 females.

Intervention(Treatment). The intervention of this study was to provide an off-site community service-learning rotation which allowed students to work with people who were likely different from themselves. Thus, the goal of community service-learning was to expose students to diverse populations. In addition, it was hoped that following these rotations, dental students would feel competent in providing the standard of care to any individual, regardless of physical or cultural differences.

Limitations of this Study

One limitation of the study was that, direct, one-on-one interviews with students could not occur before the community service-learning clinical rotation. These interviews would have included questions about each student's previous exposure to other languages, ethnicities, time spent in rural areas, or access to care. Unfortunately, due to time constraints, it was not realistic to speak to all 84 students before they began the off-site clinical rotations. The same constraint prevented interviews upon return from the off-site rotations as well. Interviewees might have included the following: What other

languages were spoken? What underserved area of Houston or surrounding area was targeted? How was treatment paid for (CHIPs, Medicaid, Medicare) at the site? Were there any religious or cultural practices observed? Were patients responsive to treatment? This opportunity would have enabled an overall comparison of the community service-learning experiences but most importantly, a self-reflection of cultural awareness.

Data Collection Procedures

Two separate survey administrations were given to the senior dental students. The first was at orientation at the beginning of the fall semester, when the pre-survey was distributed. The anticipated time to complete the eight-question survey was 5–10 minutes. The second administration involved repeating the same survey at the end of the academic year, which took 5–10 minutes online. Therefore, the total amount of time for a participant to take part in this study was no more than 20 minutes. The Director of Clinical Education & Quality Improvement collected the pre-surveys and placed them in a secured envelope for the principal investigator. The post-surveys were collected by the UTSD IT department manager and forwarded to the principal investigator.

Data Analysis Procedures

The principal investigator followed the protocol for gathering, documenting, and analyzing the data. The data collection began and ended with recording the results of the pre-and post-surveys on an Excel spreadsheet. SPSS predictive analytics software was then used to gather and analyze the results from the collected surveys. After the analyses

were completed, the results were recorded and documented in the thesis paper by use of graph(s) to assist with the explanation of the overall outcome.

Summary

In conclusion, the quantitative study "Perceptions of Senior Dental Students Regarding Cultural Diversity Before and After Community Service-Learning Rotations" was designed to provide insight into the existing cultural viewpoint of senior dental students. In addition, it was hoped that after completion of dental school, the graduates would recognize the growth of cultural sensitivity when treating patients of different ethnic backgrounds and diversity. Lastly, the outcome of this study was to ensure an enriching community service-learning experience and a better perspective of cultural awareness.

Chapter IV

Results

Access to care is a continuous global problem affecting all uninsured and underserved populations, ranging from children to the elderly and from all ethnic backgrounds. In order for these populations to receive unmet dental needs, they most likely will seek treatment at community health clinics which provide an educational opportunity for dental students. The intent of this study was to determine whether there was a change in cultural perspective after a senior dental student's clinical rotations at off-site community dental clinics. According to the literature in community-service learning, off-site rotation experiences may lead to future career interests in community health dentistry and/or community involvement (Grobe-Hood, 2009).

The duration of the fourth-year off-site rotations allowed a student to spend approximately 9 weeks in community dental clinics providing preventative, emergency, or limited dental treatment to all underserved and uninsured individuals. At these sites, students might have had previous experiences to provide them with a sense of familiarity with the diverse populations they encounter. Therefore, the data analysis of this study provided some insight into the comprehension and comfort level of the senior dental students who responded to eight behavioral attitude questions. Please note that -the study did not collect any participant demographic information in order to maintain the anonymity of respondents.

Results

Demographics of participants and characteristics of community service-learning off-site rotations. Senior dental students were asked to participate in this study, which was not mandatory, to begin the process of assessing the impact of community dentistry on the attitudes and beliefs of the dental students. The demographic background of the participants was not included in this study in order to maintain anonymity. The cultural or religious backgrounds of participants were also not identified. The identification process of the pre-survey and post-survey consisted solely of participants providing the first three letters of the city in which they were born, the first two letters of their mothers' first name, as well as the month and the date of their birth (e.g., Hou, Lu, 01/15). This process allowed the researcher to match pre-and post-data without jeopardizing the anonymity of the students who participated in the study.

The off-site rotations mostly took place in locations that include underserved patients, such as those in rural areas, and were coordinated through nonprofit organizations. The dental clinics are usually a component of an interdisciplinary healthcare system that is designed to provide access to care to uninsured or underserved individuals. The setting is typically a small but efficiently run practice. Students work in these basic dental environments using paper charts, limited materials, and standard dental supplies. This community setting would allow students to appreciate state-of-the-art equipment, an assortment of products and clinical/staff support that they have worked

with at their institution and in future work settings at urban or metropolitan private practices.

Student behavioral attitude questionnaire. Participants were asked to determine how likely they would be able to engage in certain activities or mental processes by responding to eight behavioral attitude questions using a Likert scale of six options ranging from "Extremely unlikely" to "Extremely likely." The response rate for the initial participation in the questionnaire was 80 students. Two surveys were not used because participants did not correctly follow the identification process and two students chose not to participate. The response rate for the online post-survey was 39 students. The lower number of participants for the post-survey may have been due to the graduates no longer wanting to be burdened with school-related requests, or they may have felt that their personal opinions were not relevant to this study, that the survey did not directly affect their wellbeing or unfamiliarity using an online survey tool to participate in the post-survey.

Table 1 displays the results of the eight behavioral attitude questionnaire for both the pre-and post-survey. Survey scores in Table 1 indicated that senior students only demonstrated significant changes in two of the eight questions (4 and 7). For instance, one question had a negative response, indicating post-survey scores were higher than on the pre-survey scores. Results in the table below indicated that the senior students demonstrated a very slight change in two of the eight questions (6 and 8) of the pre-survey and post-survey.

Table 1. Survey scores

	Pre-survey	Post-survey
1. Feel at ease with people of diverse backgrounds	4.9	5.1
2. Notice the influence of stereotypes on your thoughts, feelings, and behaviors	4.3	4.9
3. See little importance in understanding how people are different	2.4	2.5
4. Notice institutional discrimination.	3.8	4.3
5. Understand the prejudice you hold about different groups.	3.6	4.0
6. Incorporate or initiate discussions of diversity-related issues into your teaching, work, or practice	3.7	4.2
7. Repeat a prejudicial comment or joke	2.2	3.4
8. Interact with people of diverse groups and feel comfortable doing so	5.0	4.5

Table 2 shows the results of a (paired samples) t-test. The complete pre-survey and post-survey questionnaires are located in Appendix A and B. Results of the data revealed several findings: behavioral attitudinal responses for each question were more positive after a year of community service-learning rotations. However, these data may lack significance due to differences in some responses.

Table 2. Paired Samples T-Test

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Pre1 - Post1	-.25806	.85509	.15358	-.57171	.05559	-1.680	30	.103
Pair 2	Pre2 - Post2	-.16129	1.18594	.21300	-.59630	.27372	-.757	30	.455
Pair 3	Pre3 - Post3	-.16129	2.54423	.45696	-1.09452	.77194	-.353	30	.727
Pair 4	Pre4 - Post4	-.43333	.89763	.16388	-.76852	-.09815	-2.644	29	.013
Pair 5	Pre5 - Post5	-.40000	1.40443	.25641	-.92442	.12442	-1.560	29	.130
Pair 6	Pre6 - Post6	-.48276	1.35279	.25121	-.99733	.03182	-1.922	28	.065
Pair 7	Pre7 - Post7	-1.20000	2.04096	.37263	-1.96211	-.43789	-3.220	29	.003
Pair 8	Pre8 - Post8	-.33333	.99424	.18152	-.70459	.03792	-1.836	29	.077

The responses to question 4, "Notice institutional discrimination" illustrate the intensity of attitude change during the senior year. Noticing institutional discrimination might be the result of a number of factors, including a) individual situation(s), b) biased

opinion, c) observing the standard of care at various off-site community service rotation sites, d) becoming more cognizant of external factors in community service-learning, or e) personal growth. Question 4 indicates a t-test value difference of –2.644. Question 7 indicates a t-test value difference of –3.220. In reference to question 7, “Repeat an act of prejudicial comment or joke,” the concentration of attitudinal change of repeating a prejudicial comment or joke was also significant.

Regarding Question 6, “Incorporate or initiate discussions of diversity-related issues when teaching, work or practice.” it is hoped that all students, faculty and staff are open-minded to embracing all aspects of diversity when dealing with one another or patients. The ability to have a conversation or maintain dialogue about diversity embodies the respect for all. Question 8, “Interact with people of diverse groups and feel comfortable doing so” exemplifies the growth of our cultural environment. Working as a well-rounded, ethical healthcare provider requires students to have the ability to learn from other people, utilize their complementary skills, and take value in their cultural knowledge. Most universities have various student organizations which allow for the opportunity to engage and participate in activities which enable them to learn from individuals of diverse backgrounds.

Questions 1, 2, 3 & 5 did not indicate any statistically significant results. Therefore, no analysis was able to be predicted with the difference in scores.

Summary of Research Results

To summarize, the intent of this study was to determine the perceptions of senior dental students regarding cultural diversity before and after community service-learning rotations. It was important to the researcher to conduct a study of cultural perception in community service-learning since there is a wide-spread belief that academic healthcare institutions demonstrate universal standards to all individuals and that no individual feels isolated or targeted. All patients should be treated in a dignified and respectful manner. As noted from the results, there was some slight change in behavioral attitude or recognition in cultural diversity. However, due to the size of the population at the conclusion of the study, it was hard to obtain an accurate cultural perception in diversity from the senior class. Therefore, the researcher will introduce some recommendations for further concentration on this study and try to obtain a more thorough individual perspective in cultural diversity during community service-learning rotations.

Chapter V

Discussion and Conclusion

The goal of this study was to determine what are the perceptions regarding cultural diversity of senior dental students before and after participating in community service-learning rotations. Data were obtained from a pre-survey and post-survey distributed, respectively, at the beginning and end of the senior academic year. The analyzed data assisted in providing insight into students' culture awareness.

Overview of the Problem and the Methodological Approach

The cultural perception of dental students is not known prior to entrance into dental school. Therefore, cultural insight may vary because of individual viewpoints when it comes to community service-learning at off-site clinical rotations. Negative cultural perception may be the result of limited exposure to diversity, limited participation of community outreach activities throughout their educational career, and limited experience with adversity in personal upbringing. The methodological approach of this study was to present each dental student with a behavioral attitude questionnaire (pre-survey and post-survey) at the beginning and the end of the academic year in which they fulfilled their community service-learning off-site rotation requirements. Participation in the survey process allowed students to reflect upon how likely it was that they would be able to engage in certain activities or mental processes before and after their final year of community service-learning. In addition, this question explored in the

study and data was collected to try to answer the question of whether the community service-learning portions of the required curriculum led to a positive impact in the delivery of care when treating patients of cultural diversity.

Discussion of the Problem and Summary of the Methodological Approach

The problem associated with this study was to determine whether graduate dental students were culturally sensitive and open to diversity while treating patients of different cultural/ethnic backgrounds. In addition, would they be cognizant of the impact of the socioeconomic problems of uninsured or underserved patients when treating them? From an institutional standpoint, the intent of this study was to help academic administrators determine whether there is a need for a cultural awareness course(s) in the dental education curriculum prior to the senior year, a need for a certain amount of community outreach activity hours as a prerequisite to dental school, or a need for more cultural competency lectures integrated into the curriculum. The methodological approach taken to evaluate this problem was to present fourth-year dental students with a pre-survey and post-survey (behavioral questionnaire). The students' senior clinical requirements consist of clinical rotations at off-site community service clinics. It was essential to determine whether those students recognized the value of providing dental services to the patients at these off-site rotations. These rotations allow students to go beyond treating medically compromised patients, and allowed them to provide urgent care, palliative treatment, preventative treatment, and lastly, increase their comfort zone in unconventional dental environments. However, some students might have felt that this portion of their clinical

education was a waste of their time or viewed it simply as a requirement that had to be undertaken to graduate, rather than an opportunity to help those in need. Therefore, it was hoped that the opportunity to present the pre-survey and post-survey would allow students to reflect upon their behavioral attitudes.

The ideal option for pre-survey distribution was at the start of the academic year in a classroom setting; however, the post-survey did not allow for this option after graduation. In addition, the idea of conducting individual exit interviews to go along with the post-survey was not logically possible due to end of the year time constraints.

Discussion of the Results of the Research

The results of this research study provided insight on the significance of certain questions on the behavioral attitude pre-and post-surveys. Because of the anonymity of the students, the ability to understand or know the character of each senior dental student was not possible. This eliminated the possibility of comparing survey answers before and after each student's off-site community service-learning rotations as well as to conclude whether there were any changes in cultural perception. In addition, it was impossible to determine whether there were any significant life circumstances that impacted their survey responses, such as racial prejudice.

The results of this study suggested that there may not be much variation in the outcome of the behavioral attitude questionnaire responses. Research results indicated that only two questions, 4 & 7, demonstrated statistical significance. The insignificant

differences in the other six questions may indicate little thought was given to each question. It could also be the case that the remaining questions (1, 2, 3 & 5) illustrated that the students have a cultural perspective relative to today's environment and are more open-minded in their personal, academic, and clinical perspectives. Also, this could have demonstrated that students do not seem to take any offense at this type of action. On the other hand, it is likely that there may have been some students who are not able to see how people are different and at times do not take feelings into consideration when conversing with individuals or groups of other cultures or socioeconomic levels. Most universities have student organizations which would allow the students to engage and participate in activities that would enable them the opportunity to learn from individuals of diverse backgrounds. However, in the world of academic healthcare, it is hoped that students do not sense or witness institutional discrimination. It would be the goal for all students, faculty and staff to embrace all aspects of diversity when dealing with one another or patients.

Limitations (in sampling, treatment, and data analysis)

There were limitations in the sampling population used to answer the behavioral attitude questions: students may have had little or no experience with underserved populations; and students may have had little dealing with diverse populations. Additionally, the students were not required to complete either the pre-or post-surveys. Thus it is possible that the data collected did not accurately reflect the attitudes of all students.

An additional limitation was a result of unequal sample sizes between participants in the pre-and post-survey. Therefore, the data analysis (i.e., outcomes) may not have provided a true representation of the senior dental students' cultural perceptions. It is also possible that the questions of the pre-survey may have had some impact on the students when going forth in their community service-learning rotations during their senior year. Those students may have taken a more cognizant approach when they began treating patients of diversity at the community service-learning rotations. Because of the difference in the response rate of the pre-and post-survey, it is hard to determine the cultural perspective of all senior dental students. Likely, the analysis only provided a limited insight into the various issues addressed in this survey.

In addition, the weakest portion of the study was the low response rate on the post- survey. At the time the post-survey was administered, the senior dental students were out of the academic setting; therefore, they were not required to take part in the post-survey. In addition, there was never any time to meet with the graduates in a classroom setting to distribute the post-survey. Instead, the post-survey was provided on the Class of 2015 Facebook page that included a SurveyMonkey link since the use of social media was the manner they had chosen to stay connected after graduation. However, not all graduates may be comfortable using social media which would prevent them from participating in the post-survey.

The outcome of the study might have been improved if arrangements had been made to meet with the class before graduation; it is likely that the response rate could

have been the same or almost the same as the pre-survey. An equal level of participation on both surveys would have provided greater validity and insight about this topic.

Conclusion

In conclusion, it is hoped that students who participated in this study have enhanced their understanding of some of the basic requirements of being a future health-care provider—to be more compassionate and understanding of the perceptions of individuals of diverse cultural backgrounds. It is further hoped that their cultural awareness will enable them to display a greater degree of sensitivity and understanding in their delivery of dental care.

Recommendations

As for the post-survey, as stated earlier, it would be ideal to meet with students near the end of the semester where they could complete the survey in a classroom setting in order to obtain greater participation. Recommendations for future work in this area are to distribute the pre-survey during student orientation for first-year dental students the post-survey at the end of the senior year. Another option would be to introduce community service-learning off-site rotations during second-year clinical orientation for second-year dental students and distribute the pre-survey. This would allow time to answer any questions they may have pertaining to their future community service-learning off-site rotations and ponder the behavioral attitude questions throughout their dental education. Hopefully, this would allow students to reflect upon the behavioral

attitudinal questions with more compassion and integrity. In addition, the students would understand the value of answering the survey questions rather than considering it to be a chore.

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Appendix A

Pre-survey

DIRECTIONS:

Please provide:

- *The first three letters of the city in which you were born: ___/___/___*
- *The first two letters of your Mother's first name: ___/___*
- *Your day of birth (ex. 01, 15, 31): ___/___*

Please respond to each question by using the following 6-point scale:

1 = Extremely unlikely
2 = Very unlikely
3 = Somewhat unlikely
4 = Somewhat likely
5 = Very likely
6 = Extremely likely

PRIOR to the community service learning rotations, how likely were you to engage in the following activities or mental processes:

1. Feel at ease with people of diverse backgrounds.	**1**	**2**	**3**	**4**	**5**	**6**
2. Notice the influence of stereotypes on your thoughts, feelings, and behaviors.	**1**	**2**	**3**	**4**	**5**	**6**
3. See little importance in understanding how people are different.	**1**	**2**	**3**	**4**	**5**	**6**
4. Notice institutional discrimination.	**1**	**2**	**3**	**4**	**5**	**6**
5. Understand the prejudice you hold about different groups.	**1**	**2**	**3**	**4**	**5**	**6**
6. Incorporate or initiate discussions of diversity-related issues into your teaching, work, or practice.	**1**	**2**	**3**	**4**	**5**	**6**
7. Repeat a prejudicial comment or joke.	**1**	**2**	**3**	**4**	**5**	**6**
8. Interact with people of diverse groups and feel comfortable doing so.	**1**	**2**	**3**	**4**	**5**	**6**

Appendix B

Post-Survey

DIRECTIONS:

Please provide:

- *The first three letters of the city in which you were born: ___/___/___*
- *The first two letters of your Mother's first name: ___/___*
- *Your day of birth (ex. 01, 15, 31): ___/___*

Please respond to each question by using the following 6-point scale:

1 = Extremely unlikely
2 = Very unlikely
3 = Somewhat unlikely
4 = Somewhat likely
5 = Very likely
6 = Extremely likely

IN THE FUTURE, how likely do you think you will be able to engage in the following activities or mental processes:

1. Feel at ease with people of diverse backgrounds.	**1**	**2**	**3**	**4**	**5**	**6**
2. Notice the influence of stereotypes on your thoughts, feelings, and behaviors.	**1**	**2**	**3**	**4**	**5**	**6**
3. See little importance in understanding how people are different.	**1**	**2**	**3**	**4**	**5**	**6**
4. Notice institutional discrimination.	**1**	**2**	**3**	**4**	**5**	**6**
5. Understand the prejudice you hold about different groups.	**1**	**2**	**3**	**4**	**5**	**6**
6. Incorporate or initiate discussions of diversity-related issues into your teaching, work, or practice.	**1**	**2**	**3**	**4**	**5**	**6**
7. Repeat a prejudicial comment or joke.	**1**	**2**	**3**	**4**	**5**	**6**
8. Interact with people of diverse groups and feel comfortable doing so.	**1**	**2**	**3**	**4**	**5**	**6**