6-9-2016

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**CULTURAL COMPETENCY IN THE DENTAL HYGIENE
CURRICULM: A SURVEY**

by

CHRISTINA CALLEROS

BACHELORS OF SCIENCE IN DENTAL HYGIENE

THESIS

Submitted in Partial Fulfillment of the
Requirements for the Degree of

Masters of Science in Dental Hygiene

The University of New Mexico
Albuquerque, New Mexico

May, 2016

CULTURAL COMPETENCY IN THE DENTAL HYGIENE CURRICULM: A SURVEY

By

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ABSTRACT

As the population of the nation becomes more diverse, dental hygiene programs must ensure graduates are receiving cultural competency training in entry level educational programs. The purpose of this study was to establish a baseline for what topics of cultural competency training are or are not being incorporated into dental hygiene schools, and to determine if differences exist between topics covered amongst the types of degree granting institutions. Topics were investigated via survey instrument and data was collected from 76 U.S dental hygiene program directors. Results of this study emphasized the similarities between entry level dental hygiene programs and illustrated a lack of difference between topics of cultural competency training taught between

associate and baccalaureate granting dental hygiene institutions. More effort

must be made by all entry level degree granting dental hygiene program to

ensure cultural competency training is implemented.

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CHAPTER 1: INTRODUCTION

        The 2000 U.S. Census provides a projection of the future United States

populous, one that shows an ever-increasing culturally diverse society (1).

Cultural diversity is brought to light by the growing gap of disparity in oral and

systemic care among ethnic and minority populations (2). Due to the national

increase in racial and ethnic diversity, it is imperative that the awareness of

cultural, ethnic and social diversity be strengthened. This is portent to the fact

that cultural competency in our oral healthcare system and healthcare

relationships with patients will play an integral role in the care of future

populations. As part of the oral health care team, dental hygienists spend the

majority of the time with the patient during a typical recall visit.   During this time,

hygienist clinicians are ascribed to educating, and promoting value in oral health

for their patients. Much of this education requires delicate communication and

negotiation in a fragile dynamic between clinician and patient.   This frailty can be

caused by differences in culture, prejudices, prior beliefs, communication style

experiences and the list goes on.   Because dental hygienists will always have a

large impact on patient care in the dental office, a culture of pluralism and cultural

competency must be observed to ensure best practices.

Where does/will a dental hygienist acquire this skill? As with most disciplines this

starts with formal education and could subsequently be acquired throughout a

persons experiences arising from interactions with people from different

backgrounds, race, culture, religion and regions. As the demographics of this

country change, dental hygiene programs should be incorporating these concepts into the curriculum.   And so the question exists: Do dental hygienists receive training or education in the concepts of cultural competency?   This study investigates cultural competency implementation in dental hygiene curriculum.

Purpose

The extent in which cultural competency is being taught in dental hygiene programs in the United States is ambiguous. After graduating from a Commissions On Dental Accreditations (CODA) enfranchised educational institution, it is presumed the graduate will be competent in working with a diverse population, as this is a standard for programs that receive accreditation by CODA. Although it is assumed that graduates are in fact capable of working with people from different backgrounds, how is this benchmark being met? The rhetoric being taught surrounding cultural competency in dental hygiene is not clear, unsettled because of the lack of clear pathways in achieving cultural competency in degree programs. As the nation becomes teem with a diverse populous, a better explicate of how students are being prepared to work with society is needed.   This study is important as it is intended to uncover which concepts of cultural competency are being taught to ensure that dental hygienists are capable of working with a diverse patient population. The results of this study would be two fold: it would first establish a baseline for what cultural competency training is currently being incorporated across dental hygiene

schools. Secondly, the voids in cultural competency training in dental hygiene schools across the nation would be appraised. Results are relevant to dental hygiene programs, directors, and faculty, as it will assist in identifying areas of improvement, optimizing program outcomes, and meeting accreditation standards.

Statement of the Problem

Do gaps exist in cultural competency training throughout dental hygiene programs?

To what extent is cultural competency being incorporated in the dental hygiene curricula?

Significance of the Problem

Americans regardless of race or ethnicity should have access to high quality medical and oral health care, but minorities experience a multitude of disparities unequal to their majority counter parts. Insurance status, income, and age are all factors taken into considerations when trying to determine the cause of health care disparities (3). Interestingly, racial and ethnic disparities exist even when all of the social factors are equal (3). Charging any one factor has proven to be complex because so many sources of bias, stereotyping, prejudice, historical, social issues come into play (3).

A 2003 Association report, Improving the Oral Health Status of All Americans: Roles and Responsibilities of Academic Dental Institutions, cites the oral health workforce as being unprepared to render culturally competent care to racially, and ethnically diverse populations (4) Cultural competence training could aid in closing the disparities gap in health care. The question whether dental hygiene schools are educating students properly regarding cultural competence still exists. Racially, and ethnically diverse populations, including the foreign born are on the rise. According to the United States Census Bureau eleven percent of United States counties are now majority -minority and that number is projected to increase by the year 2025. Research published to date focuses on the need for cultural competence training. This paper's objective focuses on the actual implementation of the cultural competence education into dental hygiene programs.

Operational Definitions

Majority-Minority: More than half is other than non-Hispanic white

Cultural Competence: a skill set, developed through education, to create a health care system and workforce that are capable of delivering the highest quality care to every patient regardless of race, ethnicity, culture, or language proficiency.

CHAPTER 2: LITERATURE REVIEW

Introduction

Chapter Cultural competency may reduce racial disparities. The Institute of Medicine (IOM) published, Un-equal Treatment: Confronting Racial and Ethnic Disparities in Health, which studied the differences in type and quality of health care between U.S. racial and ethnic minorities and non-minorities. The aim of IOM's study was twofold: to evaluate potential sources of racial and ethnic disparities in healthcare and provide recommendations on how to eliminate them. One key finding presented in the report was that racial and ethnic disparities exist in health care even when insurance status, income, age and severity of conditions are taken into account. (3) Among the several recommendations made by the IOM's study was the recommendation of cross-cultural education directed toward current and future health care professionals (3).

Cultural competence is not a new concept. Yet due to the IOM's report it has, however, evolved significantly as a strategy to address racial and ethnic disparities in health care. (5) Among the healthcare disciplines, many different definitions for cultural competence exist without consensus as to which definition is accepted across the professions. Some feel the term cultural competency is not broad enough to cover the many aspects of culturally sensitive care. A number of different terms have been proposed to better articulate and

encompass the meaning of care provided which is sensitive to cultural needs. (6)

Tervalon, a long time cultural humility advocate, prefers the term cultural humility

to cultural competence. She states that the term cultural competence could

potentially be too narrowly defined and could possibly be confused as an

endpoint, or mastery rather than a career long process. Tervalon argues that

humility is a necessary component to bring equilibrium to the imbalance of power

that exists between the physician-patient dynamic by using patient centered

techniques (7). Dr. Somnath Saha's, researcher on the physician–patient

relationship and the influence of race and ethnicity on racial disparities in the

quality of heath care, states that proponents of patient centeredness speak of

cultural competence as merely one aspect of patient-centered care, while

proponents of cultural competence often assert the contrary (8). Cultural

sensitivity, responsiveness, effectiveness, and transnational competence all seek

to encompass the broadness needed to communicate across cultures effectively.

This debate, as to how to better define and operationalize this critical yet broad

construct, is still ongoing. Because each cultural competence definition

emphasizes certain aspects, it also reveals a lack of consensus in health care as

a whole. (6) Perhaps one definition cannot encompass the amalgamation of

factors that make one culturally competent, yet it remains an acme that

healthcare workers should constantly strive to achieve and never ignore.

     In Defining Cultural Competence: A Practical Framework for Addressing

Racial/Ethnic Disparities in Health and Health Care, Betancourt sought to define

cultural competence in the health care as the ability to acknowledge and

incorporate—at all levels—the importance of culture, assessment of cross-cultural relations, vigilance toward the dynamics that result from cultural differences, expansion of cultural knowledge, and adaptation of services to meet culturally unique needs. (6) This definition of cultural competency carries a broad understanding and definition to include religion, social structure, nationality, familial hierarchy and race. As has been argued, one's culture shapes beliefs, attitudes and perceptions in our everyday life. It is these beliefs and attitudes that demand a change be made in the way healthcare providers make decisions. The ability to understand each other's differences will not only establish stronger rapport with the patient but will also improve their oral healthcare experience. This review will refer to cultural competence as a skill set, developed through education, to create a health care system and workforce that are capable of delivering the highest quality care to every patient regardless of race, ethnicity, culture, or language proficiency.

Cultural competence has gained attention on a national and state level due to its ability to be utilized as a strategy to eliminate healthcare disparities. Armed with the ability to mandate with licensure requirements and extensive health directives, legislative policy can greatly help to decrease health disparities. Mandates requiring cultural competence in education curriculum or cultural competence in continuing education are among the recently implemented.

The Center for Disease Control and Prevention's Office of Minority Health (OMH) created legislation directed at reducing disparities in minority healthcare. In October of 2000, U.S. Congress passed the Minority Health and Research Act. The act was created as a means of not only identifying and reporting health disparities, but also as a means of eliminating them (1). In September 2000, California's Chapter 802 established a Task Force on Culturally and Linguistically Competent Physicians and Dentists. The task force was mandated to develop recommendations for a continuing education program that includes language proficiency standards of a foreign language; the goal being to maximize linguistic and cultural competency standards among health care providers. In October 2001, Chapter 509 was signed into law, authorizing a physician to report to the Medical Board of California on his or her cultural background and foreign language proficiency (9).

According to the U.S. Department of Human Services, Office of Minority Health a number of states have all passed laws that address competency training for one or more sections of their healthcare workforce (10) Five states California, New Jersey, New Mexico, Connecticut, and Washington enacted laws that address or mandate cultural competence training (10) In 2007, Governor Bill Richardson passed the New Mexico Senate Bill 600 into law (11). This law established a task force to design cultural competence education requirements in certain health education training programs in NM. The NM task force was dealt the undertaking of constructing and recommending specific cultural competence

curriculum exclusive to each health related discipline's curriculum in New Mexico's two to four year post-secondary educational institutions. (11) It is unknown to this author what recommendations the task force has put in place.

Cultural Competency and Dental Hygiene

Many authoritative bodies in dental hygiene have recognized the need for the inclusion of cultural competency in their curriculum. The Commission on Dental Accreditation states:

> "Graduates must be competent in interpersonal and communication skills to effectively interact with diverse population groups and other members of the health care team. Dental hygienists should be able to effectively communicate with individuals, groups and other health care providers. The ability to communicate verbally and in written form is basic to the safe and effective provision of oral health services for diverse populations. Dental Hygienists should recognize the cultural influences impacting the delivery of health services" (12).

The American Dental Education Association (ADEA) has also published competencies for entry into the profession of dental hygiene that include the ability to communicate in written and verbal form. ADEA also published competency PC.3, which states dental professionals must collaborate with the patient/client, and/or other health professionals, to formulate a comprehensive

dental hygiene care plan that is patient/client-centered and based on current scientific evidence (12). In short, a client-centered model is a manner of approaching services from the perspective that the patient is the main focus of attention, interest, and activity; the client's values, beliefs, and needs are of utmost importance in providing care (13). The American Dental Education Association also set forth policy statements for dental and allied dental health educations. One policy set forth was a cultural and linguistic concept as an integral component of their curricula to facilitate the pro-vision of oral health care services (14).

The ability for dental hygienists to provide culturally competent care is vital to patients' future oral healthcare success. Key to improving the health of patients is addressing the dental hygienists' attitude, knowledge and skill in understanding the patient's perception of illness. The curriculum used to teach these cultural diversity skills varies between each institution and between each profession. While there have been many different studies and recommendations for education, no current national standard of curriculum exists today for dental hygiene cultural competency education. In December 2000, the Office of Minority Health (OMH) presented the National Standards for Culturally and Linguistically Appropriate Services in Health Care (CLAS Standards). These consist of a set of 14 standards that include: Culturally Competent Care (Standards 1-3), Language Access Services (Standards 4-7) and Organizational Supports for Cultural Competence (Standards 8-14) (15). The 2008 American Dental Education

Association's (ADEA) competencies for a general dentist state in section 3.3, "graduates must be competent to communicate effectively with individuals from diverse populations" (16). While this is an important move towards cultural competency, the ADEA gives no guideline as to how curriculum must be structured for cultural competency education. The ADEA is not the first to face this predicament; in other healthcare fields there are no structured guidelines for curriculum or whether curriculum must be taught as a stand-alone course or as an adjunct to another course. Rather the medical profession is advanced in its cultural competence endeavor and seems to be embracing tools such as the Tool for Accessing Cultural Competence Training (TACCT) for evaluating their cultural competency curriculum. The TACCT can be used to determine disparities or gaps in cultural competency curriculum and the need for curriculum revision (17). The TAACT is composed of six domains and evaluates the knowledge, skills and attitudes of an individual's cultural competence training. It is often suggested that because the TACCT is the most appropriate tool for evaluating curriculum, it could also be used as a guide to develop a cultural competency curriculum.

Once a curriculum has been implemented the next step would be to actually measure cultural competence training outcomes. In Measures of Cultural Competence: Examining Hidden Assumptions, Kumas-Tan systematically reviewed the literature for the most commonly used evaluation methods. Kumas –Tan discovered that the measures currently in place are vastly embedded with assumptions about what constitutes cultural competence. Due to these barriers,

the authors state that health professions remain far from establishing valid methods for measuring competence in practice with diverse populations. (18) The amount of existing research for dental hygiene and cultural competence is scarce.   While there is little research, if any, on implementing cultural competence education in dental hygiene programs, dental hygiene researchers have sought to measure cultural competence in dental hygiene curriculums by measuring students cross cultural adaptability. The methods and curriculum vary, yet the evaluation of cultural competency seems to be determined by self-evaluation of personal awareness and curriculum. The Cross-Cultural Adaptability Inventory (CCAI) is a tool that measures one's personal awareness and skills of cultural diversity. It is not meant to be a stand-alone instrument but rather an instrument to evaluate ones awareness of cultural diversity when used with other testing or interviewing (19).

De Wald and Soloman administered the CCAI three times during the students' 2-year program at the Caruth School of Dental Hygiene. The premise of this study was to measure changes in cross-cultural adaptability throughout the two-year program. Thirty dental hygiene students were administered the CCAI during orientation, during the second semester, and at the end of the second year. Within the two-year program, Walsh and Soloman reported the students attended a 4-hour diversity workshop, a two-hour lecture on cultural competence in health education and behavioral science, and various clinical rotations aimed at exposing them to diverse populations. Resultantly no significant differences were detected in the student's cross-cultural adaptability over the progression of

the two-year program (20).

Similar to the previous study, Magee's study was to establish a base line to determine the cross-cultural adaptability of dental hygiene students. Magee sampled 188 students from four diverse vs. four non-diverse dental hygiene programs. The score from the diverse hygiene programs were significantly higher than the scores of the non-diverse group in the three out of four domains of the CCAI; no difference was detected in the dimension of personal autonomy. Although a difference was detected between groups, the overall score for both groups was less than the CCAI norm group. Since the overall score was less for the CCAI norm group Magee concludes that cross-cultural education and training is necessary (21).

Holder-Ballard sought to discover whether students from a 2-year dental hygiene program at the University of Tennessee Health Science center gained in the area of cultural competency. Holder and Ballard also sought to uncover how certain socioeconomic factors (current family status/parent educational level) influence cultural competence. The study concluded with no significant difference between socioeconomic factors of three of the 4 dimensions of the CCAI, although the author did suggest a statistically significant difference in flexibility and openness (22).

Tavoc, Newsome and DeWald sought to determine statistical differences between licensed dental hygienists and 1st and 2nd year dental hygiene students

using a cross-cultural adaptability inventory (CCAI). A sample of 289 individuals from 5 randomly selected dental hygiene programs in Texas completed the 50-item CCAI and a brief demographic survey. The results revealed no statistical significance between the two groups' cultural adaptability scores. The results of this study indicate that number of years for degree, level of practice, ethnicity, and years employed, as a licensed dental hygienist may not play a significant role in enhancing cross-cultural adaptability (19).

In Cultural Competence and Dental Hygiene Care Delivery: Integrating Cultural Care into the Dental Hygiene Process of Care, Fitch suggests many ways to incorporate cultural care into the dental hygiene process of care. In addition, Fitch explores practical approaches in which cultural competence can be incorporated into dental hygiene education and research. An example of an approach was a first semester ethics course in which course requirements would include an assessment of the student's own cultural heritage, values and beliefs. A second example was the use of a special seminar on the topic of cultural competence, which could be added to the educational requirements of the program. Fitch warned that the current level of cultural competence in the dental hygiene curricula would prove a damper (23).

Conclusion

In review, there are a limited number of studies in dental hygiene that have attempted to measure cultural competence in curriculum. Researchers

have attempted to evaluate the student's ability to adapt to any culture by using the Cross-cultural adaptability inventory. The CCAI does have its flaws as a stand-alone test. The test was designed to be part of a comprehensive battery of tests. Due to the limitations of the limited sample sizes and possible flaws in the method of measuring, it is difficult to infer that dental hygiene curriculum is lacking in cultural competence. The research brings one to consider that a gap may exist in the cultural competency curriculum of dental hygiene programs. There is a need for review and implementation of cultural competency guidelines for dental hygiene program curriculums. The curriculum recommendations and modes for teaching cultural competency need to be established. Cultural competency in dental hygiene programs requires further investigation.

CHAPTER 3: METHODS AND MATERIALS

Purpose

The purpose of this current study is to assess whether cultural competence is part of dental hygiene curriculum and if differences exist between bachelor degree programs and associate degree programs in cultural competence training. In addition, which concepts are more likely to be covered. Descriptive information gathered will also identify gaps that exist in cultural competency training throughout dental hygiene programs and curricular utilization of cultural competency.

Hypothesis

This study is looking into the differences between a two and a four-year program based on cultural competency training in dental hygiene programs in order to ascertain whether or not more training is needed in this area.

Sample Defined

This sample includes a census of the 332 U.S. entry level dental hygiene program directors surveyed via email. The list of directors and programs email addresses were accessed from the list of dental hygiene institutions via the

ADHA website. The institutions selected from the website are all CODA accredited programs and possess regional or national accreditation recognized by the United States Department of Education. These institutions include at least two academic years of post secondary college level education. The 332 United States entry level dental hygiene programs are comprised of 90 Baccalaureate granting institutions that award either an associate degree, certificate or bachelor degree and 242 associate degree granting institutions. All private, for and non-profit, and public schools are included. Institutions not listed on the ADHA website were not included in the survey.

Research Design

A descriptive study using an online survey instrument sent via email was chosen as the quantitative study design. A survey was sent through email to all 332 entry level dental hygiene program directors whose addresses were available via access through the ADHA website. The survey was adapted from the Tool for Assessing Cultural Competence (TACCT) training, created by the American Association of Medical Colleges intended for medical schools to examine its curricula for cultural competence training to help identify lack or duplication of cultural competence training within the curriculum. Some wording in the TACCT was slightly modified to pertain to the field of dental hygiene for example the word "physician" was replaced with the word "clinician" and so forth, and was also significantly shortened to avoid duplicating topics a survey was

used to gather descriptive data about cultural competence training in dental hygiene programs asking in simple "yes" (taught) or "no" (not taught) fashion what material had been covered in their respective programs. Psych Data, a web based survey system, was used to create and perform the online survey. The directors were contacted by email, which included a letter that introduced and described the study in addition to the link to the survey. Respondents clicked the survey link to gain access to complete the survey. The respondents were given three weeks to complete the survey, upon the expiration of the first week a second email was then sent as a reminder to complete the survey. After the lapse of the three weeks the survey was no longer accessible. Psych Data captures the data from the survey which is then capable of being transferred into Microsoft Excel and imported into a statistical analysis program.

Descriptive statistics were utilized to analyze the findings. Both numerical and graphical summaries were employed to characterize the nature of cultural competency being taught in dental hygiene programs. For each question, bar charts were developed indicating the proportion of responses in each category (yes or no), overall, as well as broken down by whether the institution offers two or four year programs.

Also the data helped to determine what concepts of cultural competence were most likely taught in schools. Data were analyzed using Microsoft Excel add- in Data Analysis Tool Pak.

Assumptions:

    Assumes that the dental hygiene director were aware of all cultural

    competence training incorporated into the curriculum.

    Assumes that dental hygiene directors answered all questions truthfully

Limitations:

    This study cannot account for unintentional learning or benefits of diversity

    in patient clinician experience during direct patient care and life

    experiences.

CHAPTER 4: RESULTS, DISCUSSION, AND CONCLUSION

Results

A total of 76 surveys were returned of the 335 sent. The mixtures of responses by degree type awarded to their entry-level dental hygienists are represented as follows: 15 Bachelor, 45 Associate, 1 Certificate, and 10 chose not to designate. (Figure 1)

Figure 1. Number of Respondents by Degree Type
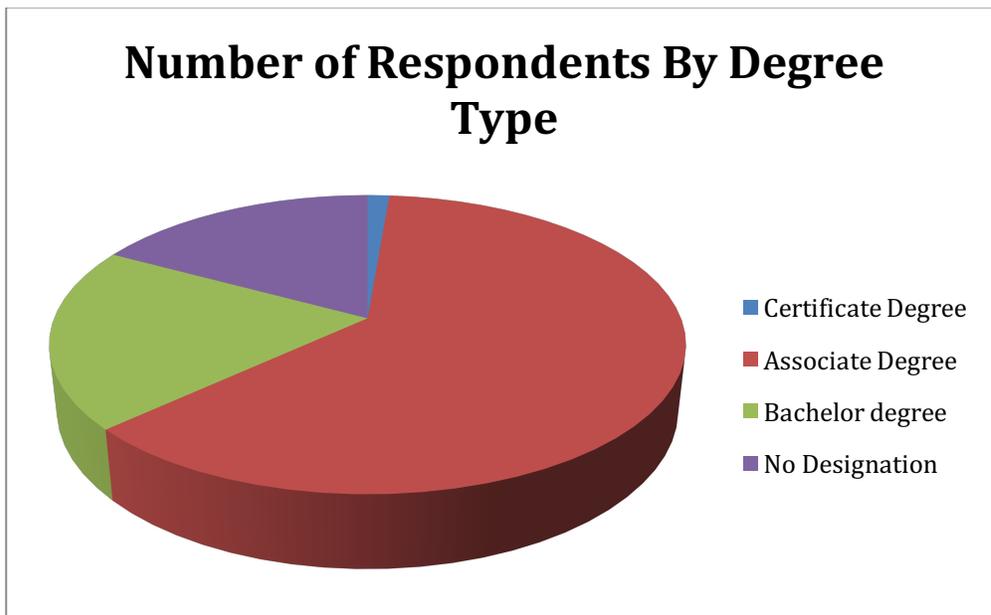
Of the potential 50 Bachelor degree programs 33% responded to this survey.

(Figure 2) Of the potential 280 associate and certificate program 17% response

rate. 3% of the total population surveyed declined to designate what type of

degree was offered to their entry level matriculates.

Figure 2. Total Responses of U.S. Bachelor Degree Programs
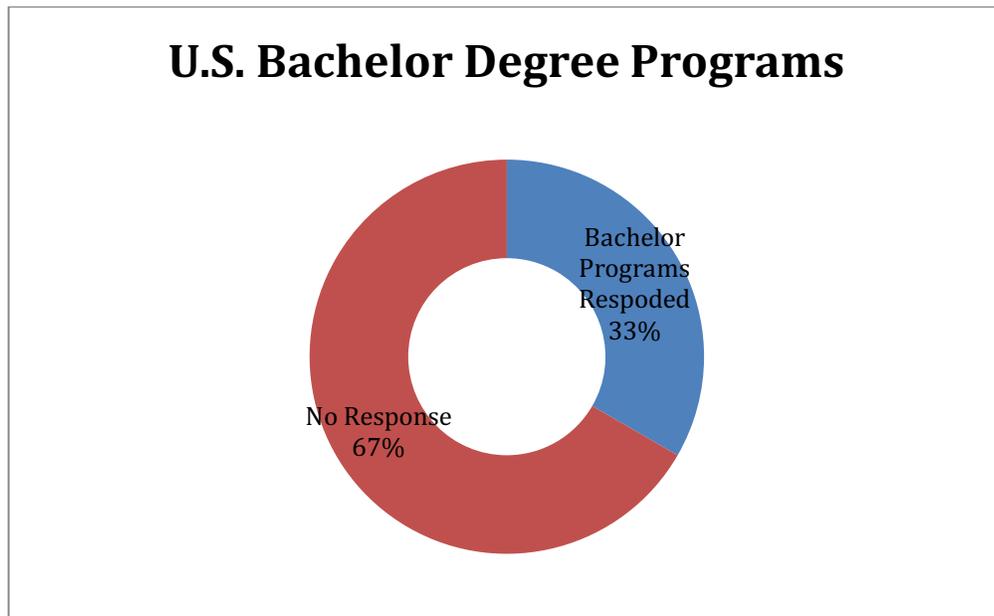
U.S. Associate Degree Programs
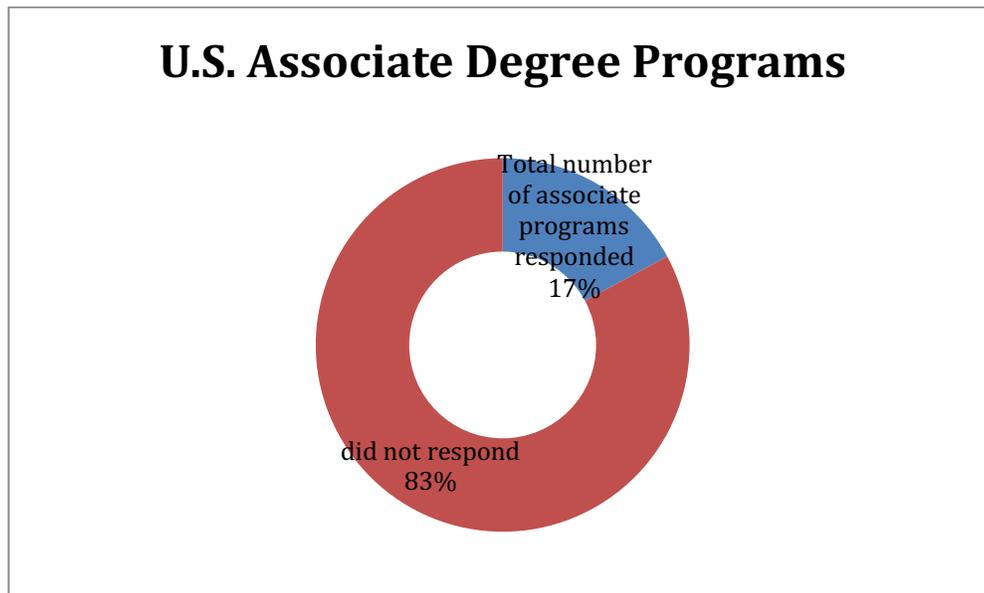
The purpose of the study was twofold to evaluate what concepts of cultural competency were being taught in dental hygiene programs and to see if there was a difference between what was being covered between associate and baccalaureate degree programs. About 89% of all respondents reported they taught their students to define race ethnicity and culture. Associate programs reported not teaching this concept about 11% of the time vs Bachelor degrees reporting not covering this concept 13% of the time. When asked if students were taught to identify how race and culture relate to health, 94.4% of respondents confirmed that this was being taught in their programs. All of baccalaureate and certificate programs reported teaching this 100% of the time

with only about 8% of associate programs not covering how race and culture related to health.

When asked if students were taught to identify patterns of national data on disparities a total of 79.5% of programs confirmed that they were in fact covering this topic in their respective programs.(Figure 4) With both bachelor and associate degree reporting not teaching this topic around 21 % of the time.

Figure 4. Identify Patterns of National Data on Disparities
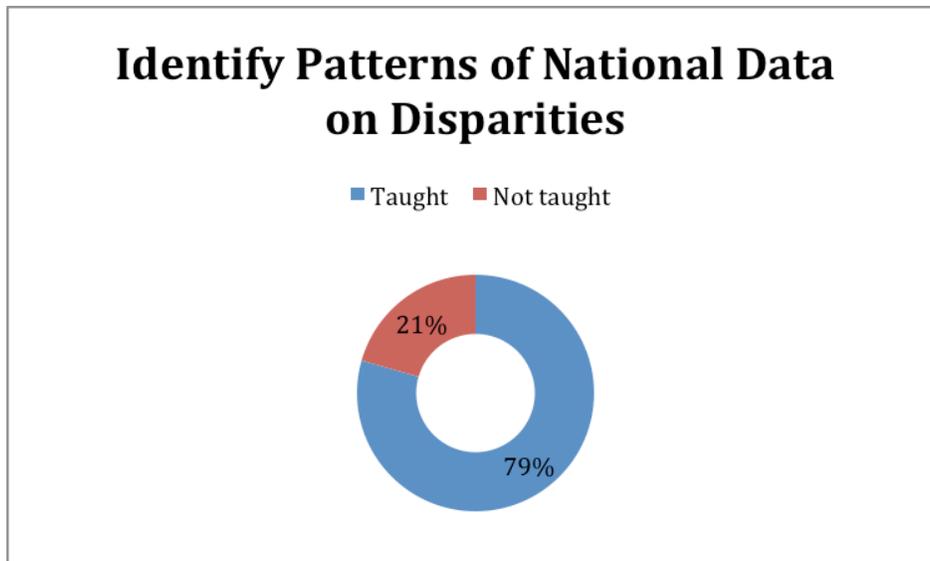
When asked if students were taught to describe their own cultural background and biases 68.5% of all programs reported teaching this in their programs. With associate degrees reporting not teaching 34.7 % of the time and bachelor programs only 6% reported not teaching. (Figure 5)

Figure 5. Describe Own Cultural Background and Biases

Describe Own Cultural Background and Biases
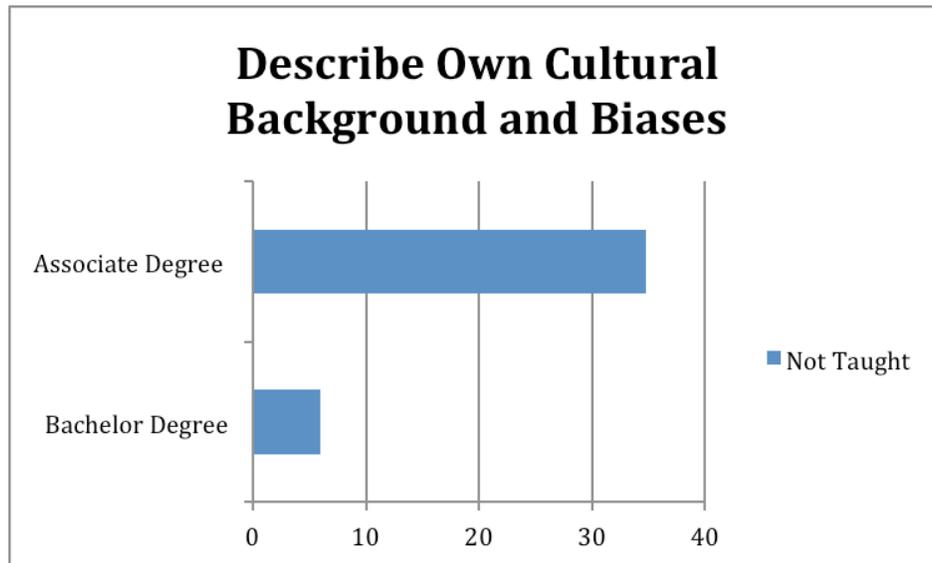
73 % of respondents reported teaching students to identify practitioner bias and stereotyping. With about 23.9% of associate and 20% of bachelor programs reporting they did not teach students to Identify Practitioner Bias and Stereotyping. (Figure 6)

Figure 6. Identify Practitioner Bias and Stereotyping
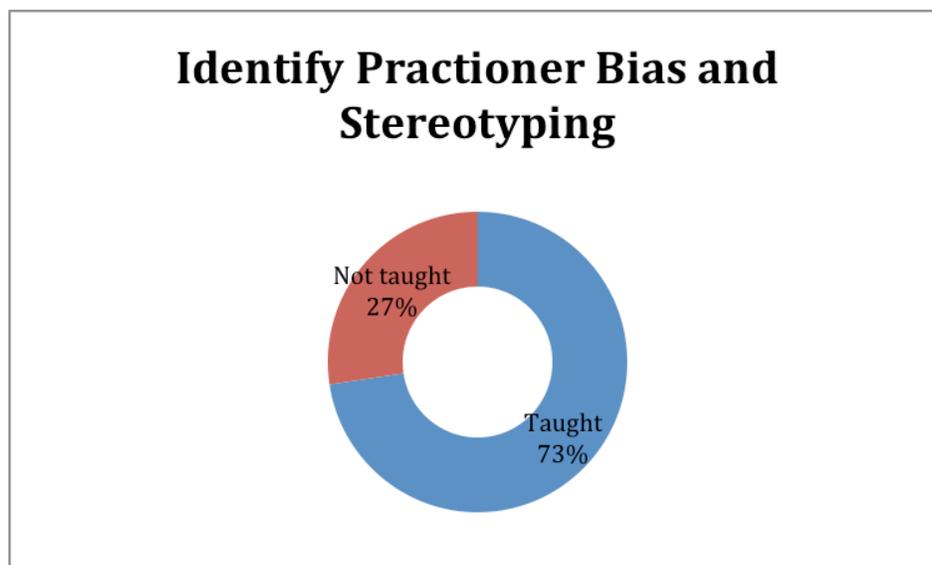
Identify Practioner Bias and Stereotyping

When programs reported on Practitioners' own potential for bias 78.1% of Programs confirmed taught. With 24% of Associate programs reporting they did not teach students to recognize a practitioner's own potential for biases in comparison to bachelor degree programs who reported not teaching at less than 1%. (Figure 7)

Figure 7. Recognize Practitioners Own Potential for Biases
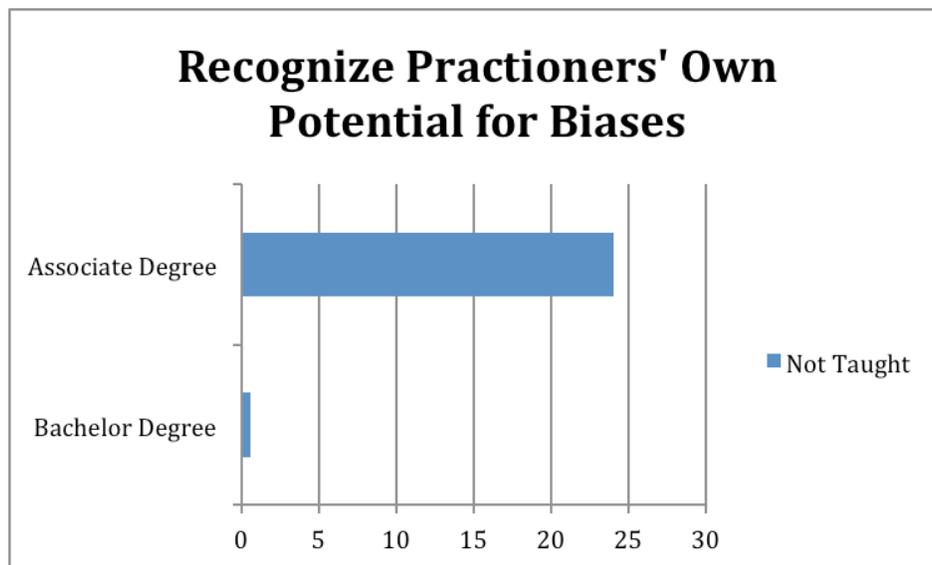
About 96% of all programs reported that they taught students to describe cross cultural communication challenges. And about 95.8 of all programs who responded teach students to discuss social determinants on health and 91% are taught to identify and discuss key areas of disparities. 91% of the respondents reported teaching students to identify community beliefs and health practices. When asked if students are taught to elicit a culture, social, and medical history 80 percent of all respondents reported that students were taught to do this in their program. (Figure 8)

Figure 8. Elicit a culture, social, and medical history.
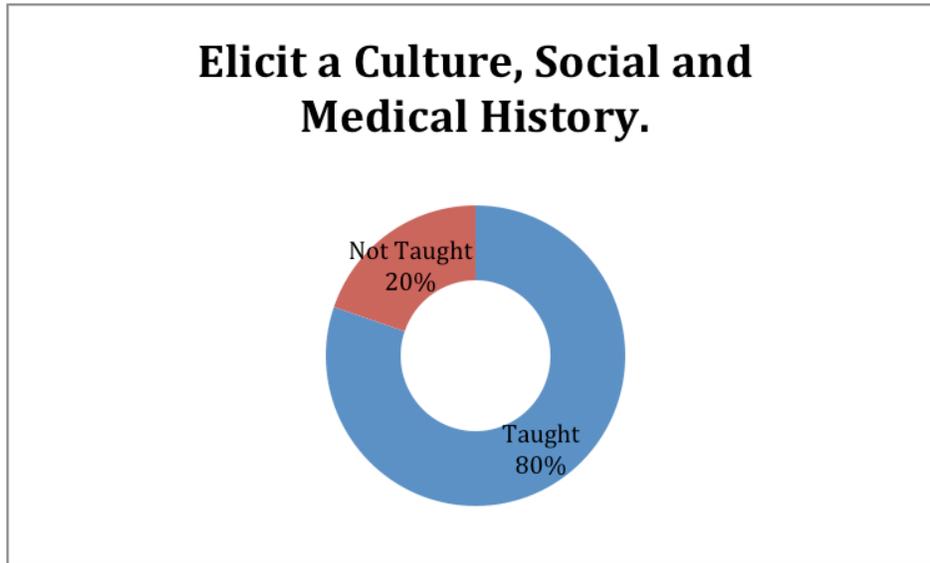
77.8 of all respondents taught students to recognize and identify how practitioner biases impact care. With 22% of associate programs reporting that they did not teach taught versus 6% of bachelor degree programs. (Figure 9)

Figure 9. Recognize and Identify How Practitioner Biases Impact Care
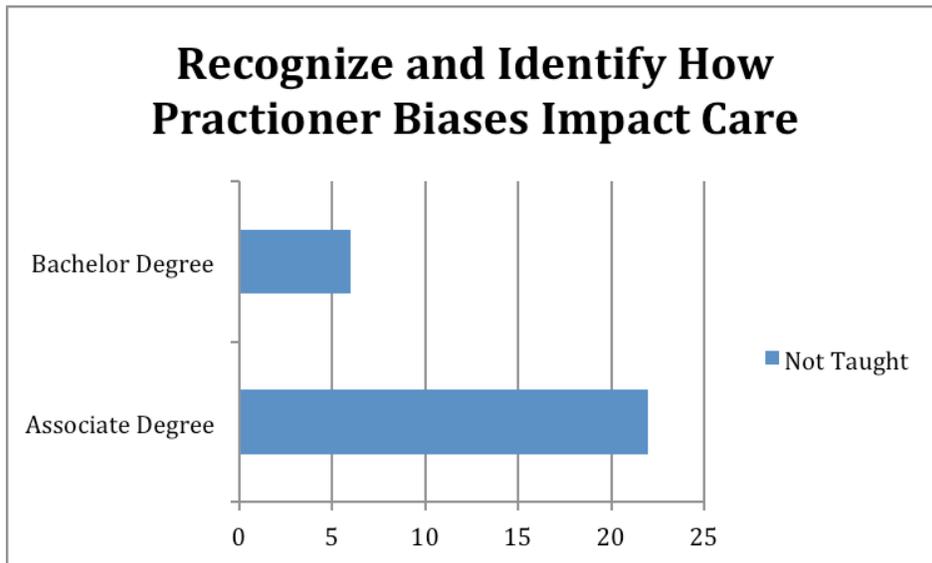
Recognize and Identify How Practioner Biases Impact Care

Of all survey respondents an average of 45.1% of programs reported their students were taught to Critically appraise literature on disparities. With a total of 60% of associate degrees declining and 33% of bachelor degrees.(Figure 10)

Figure 10. Critically Appraise Literature on Disparities.
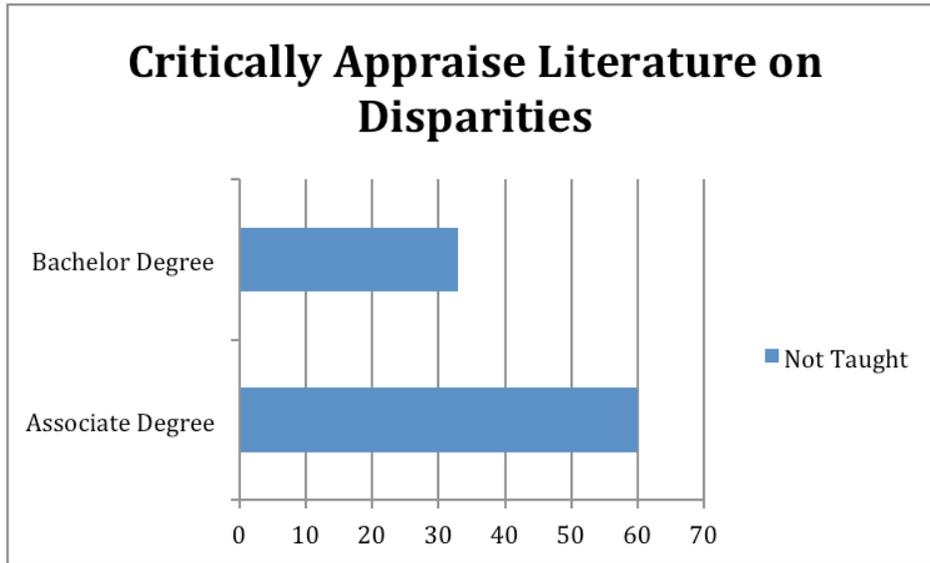
Critically Appraise Literature on Disparities

Similarly, 66.7 % of programs purported that they taught students to strategize ways to counteract bias. With Associate degrees reporting 39.1% did not teach vs the 6% of Bachelor degree programs that did not teach. (Figure 11)

Figure 11. Strategize Ways to Counteract Bias
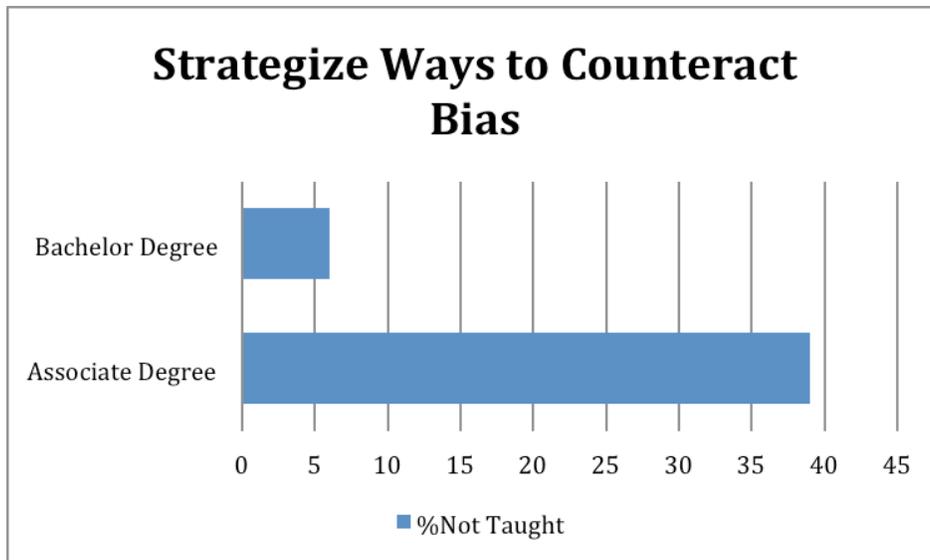
Strategize Ways to Counteract Bias

Of the total responses 52% reported they did not teach students to realize the historical impact of racism. (Figure 12) With Associate degrees reporting not teaching at 58% and Associate degrees reporting at 46% of the time

Figure 12. Realize the Historical Impact of Racism
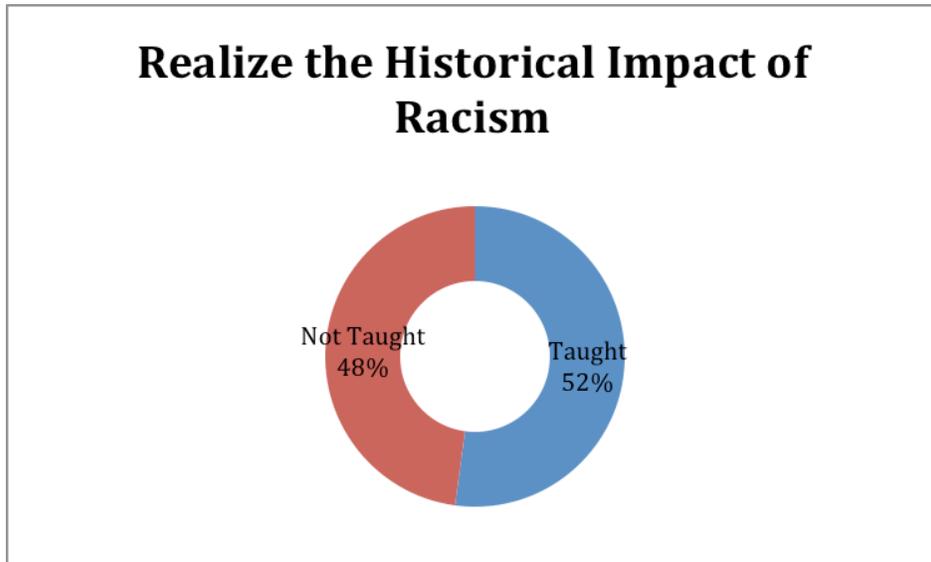
About 79.2% of the survey respondents reported teaching students how to identify need for and collaborate with and interpreter. With 23% associate and 13% for bachelor degrees.   In addition 57% of all respondents are not taught to list effective ways of working with an interpreter (Figure 13.)

Figure 13 List Effective Ways of Working with an Interpreter
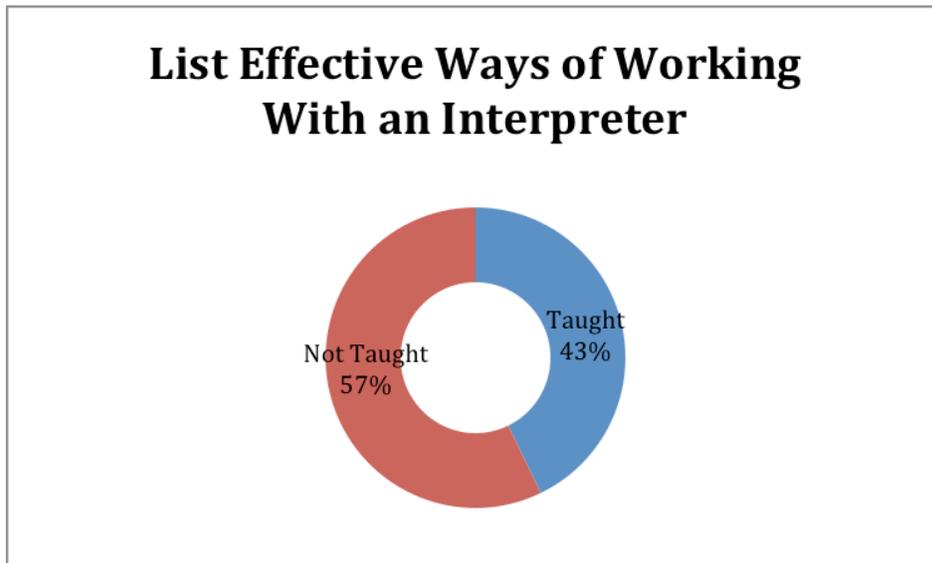
Although just by viewing the descriptive statistics it might appear that a slight difference exists between training provided between both program types. This however proved false.   Exact Fisher tests were used to test whether or not there was an association between the highest degree offered and whether or not any of the concepts in cultural competency were included. In all instances, and for all questions evaluated individually there was not a significant difference between the concepts taught in both the entry-level bachelor and associate granting institutions when p values were adjusted for false discovery, (alpha=.05). Therefore, we failed to reject the null hypothesis of no difference and conclude that no differences exist between concepts of cultural competency taught in bachelor and associate degree programs.(Table 1)

Table 1. p Values

Concept	pval	adj.pval
Define Race Ethnicity and Culture.	1	1
Identify how race and culture relate to health.	0.56	0.79
Identify patterns of national data on disparities.	1	1
Describe own cultural background and biases.	0.05	0.47
Describe cross cultural communication challenges.	0.57	0.79
Identify practitioner bias and stereotyping.	1	1
Recognize practitioners own potential to bias.	0.26	0.75
Recognize how practitioner biases impact care.	0.26	0.75
Describe potential ways to address bias	0.49	0.79
Discuss social determinants of health.	0.44	0.79
Identify and discuss key areas of disparities.	0.59	0.79
Critically appraise literature on disparities	0.13	0.67
Strategize ways to counteract bias.	0.02	0.47
Realize the historical impact of racism.	0.55	0.79
Identify the need for and collaborate with an interpreter.	0.49	0.79
Identify community beliefs and. health practices.	0.56	0.79
List effective ways of working with an interpreter.	0.23	0.75
Elicit a culture, social, and medical history.	1	1
Identify need for and collaborate with an	0.74	0.92

interpreter.		
Recognize and manage the impact of bias.	0.11	0.67

Discussion

There was limited response to the survey and a broad valuation of cultural competency training in dental hygiene programs was unable to be reached. Only a slight amount of responses were received and a small sample size may mask a clinical meaningful result as non-significant. While there may be no difference between degree granting institutions by cultural competency topics as indicated by this study it is still unknown how comprehensively the topics are imparted or if program directors consider different topics relative to cultural competency training other than the ones listed in the survey. Although results of this study were limited, several concepts on cultural competency training that are being taught have now been denuded

It appears that a large percentage of programs are implementing a sizeable portion of topics in cultural competency training, but more work can be done. Ideally all programs should be incorporating these concepts into the curriculum 100% of the time. Ramifications of failing to implement cultural competency training are considerable. Not teaching a clinician to recognize bias could promote ethnocentrism and affect clinical judgment and patient outcomes

even if the clinician is unaware of their own bias. It is devastating to uncover that

only about half the respondents reported to teaching the historical impact of

racism. Clinicians may not even be aware that inequities experienced by

patients may shape their patients view of their health care providers because of

past experiences. Events and social injustices outside of healthcare may also

influence a patient's distrust in their oral health care provider and can lead to a

general ill feeling toward healthcare workers of different races nationalities and

beliefs.

Cultural bias exists in many facets and the dental community is not

immune, especially in regards to to anti-fluoridation sentiments.   Within the

culture of dental hygiene, a dental hygienist may not understand why a parent

would refuse a fluoride treatment for their children because this point of view

deviates so far from the professions preventive base.

Another reason it is so important to incorporate cultural competency

training in dental hygiene is because the profession lacks diversity. Ethnic

minorities and men, in dental hygiene, and in dental hygiene educational

institutions are underrepresented and not characteristic of the general population.

The benefits of diversity have been well studied. Interactions with people that

are different than ourselves we can lead to acknowledgement of different

perspectives, and the anticipation that in order to reach understanding between

people with different viewpoints requires, open-mindedness, compromise,

resolve, and patience. The lack of diversity in our student bodies, professional

organization, and the significant impact it may have on health outcomes puts

cultural competency training at the forefront of fighting oral disparities and should have rampant implementation in our dental hygiene programs regardless of the type of degree offered, as it is probable we all will end up in direct patient care.

Conclusion:

This study demonstrated that there is no significant difference between bachelor granting institutions and associate level institutions regarding topics of cultural competency. In addition, the purpose of this study was to assess inadequacies in cultural competency training in dental hygiene education. Although the outcomes were positive, ideally all programs should implement all concepts of cultural concept training into their curriculum. More studies are needed as this study failed to address how comprehensively cultural competency topics are being inculcated in dental hygiene programs. Additional research is needed in areas including: clock hours, modalities, perceived barriers, and rational for topic inclusion.

Cultural competency training must be a widespread momentum to invoke change and decrease oral health disparities.

CHAPTER 5: ARTICLE FOR SUBMISSION

Title Page:

Cultural Competency in the Dental Hygiene Curricula: A Survey

Christina Calleros RDH, MS

University of New Mexico

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505-417-1617

505-266-6449

Key words: cultural competency, curriculum, education

Abstract

Objectives: The purpose of this study was two-fold. The first was to create a baseline for topics of cultural competency taught in U.S entry-level hygiene programs, as well as to identify areas in which programs could improve. The second was to identify the differences between cultural competency training between degree granting institutions

Methods: A survey instrument was sent out via email to all 325 U.S dental hygiene program directors. 20 topics of cultural competence training were presented and respondents were asked to indicate whether they were taught or not taught. Descriptive statistics were used for all inquiries and statistical significance was determined using the fisher exact test.

Results: A total of 76 responses were collected. Significant testing between cultural competency training among types of degree granting institutions revealed p-value results greater than alpha at 0.05.

Conclusion: No significant differences in cultural competency training were identified between bachelor and associate degree programs. Cultural diversity training needs to be improved in all program types.

Clinical Relevance

Scientific Rational for the Study

With oral health disparities at alarming rates, along with an increasingly diverse populous, an era of dental hygienists that are capable of providing care to a multitude of groups must be fostered. To ensure this transpires, programs must incorporate cultural competency training into their curriculum, but a review of the literature demonstrated that this training was indistinct.

Principle Findings

Cultural competency training in programs of all levels is decisively under educated.

Practice Implications

No significant differences were found between degree programs, but more effort must be made to ensure cultural competency training is fully implemented.

Introduction

The 2010 U.S. Census provides a projection of the future United States

populous, one that depicts a culturally diverse society (1). Cultural diversity is

brought to light by the growing gap of disparity in overall health, including oral

health among ethnic and minority populations (2). Due to the national increase in

racial and ethnic diversity, it is imperative that the awareness of cultural, ethnic

and social diversity be strengthened within our health care professions. This is

important since the relationships with patients will play an integral role in the care

of future populations. As part of the oral health care team, dental hygienists

spend the majority of the time with the patient during a typical recall visit.   During

this time, hygienist clinicians are ascribed to educating, and promoting value in

oral health for their patients. Much of this education requires delicate

communication and negotiation in a fragile dynamic between clinician and

patient.   This frailty can be caused by differences in culture, prejudices, prior

beliefs and communication style experiences.   Because dental hygienists will

always have a large impact on patient care in the dental office, a culture of

pluralism and cultural competency must be observed to ensure best practices.

Healthy People 2020 lean on interventions such as community water

fluoridation and school based dental sealant programs to eliminate or reduce oral

heath disparities. (24) Although this will undoubtedly help to alleviate disparities

for all persons and persons with reduced access to oral health care, this ignores

a large aspect of sources of disparities. Socio economic, gender, age and

geographic location are all also purported to influence oral health disparities but a better explicate is needed for why racial and ethnic disparities exist even when all of the social factors are equal (3). A 2003 Association report, Improving the Oral Health Status of All Americans: Roles and Responsibilities of Academic Dental Institutions, cites the oral health workforce as being unprepared to render culturally competent care to racially and ethnically diverse populations (4). The question whether dental hygiene schools are educating students properly regarding cultural competence still exists. Racially and ethnically diverse populations, including the foreign born are on the rise. According to the United States Census Bureau 11% percent of United States counties are now majority - minority and that number is projected to increase by the year 2025. Research published to date focuses on the need for cultural competence training. As with most disciplines, the initiation of cultural competency training begins with formal education and could subsequently be acquired throughout a person's experiences arising from interactions with people from different backgrounds, race, culture, religion and regions. As the demographics of this country change, dental hygiene programs should be incorporating these concepts into the curriculum.   And so the question exists: What training or education in the concepts of cultural competency do dental hygiene programs incorporate and do differences exist in entry-level dental hygiene programs between degree granting institutions.

Study Population and Methodology

This sample included a census of the 332 U.S. entry level dental hygiene program directors surveyed via email. The list of directors and programs email addresses were accessed from the list of dental hygiene institutions via the ADHA website. The institutions selected from the website are all CODA accredited programs and possess regional or national accreditation recognized by the United States Department of Education. These institutions include at least two academic years of post secondary college level education. All private, for and non-profit, and public schools are included. Institutions not listed on the ADHA website were not included in the survey. The survey was adapted from the Tool for Assessing Cultural Competence (TACCT) training, created by the American Association of Medical Colleges intended for medical schools to examine its curricula for cultural competence training to help identify lack or duplication of cultural competence training within the curriculum. Some wording in the TACCT was slightly modified to pertain to the field of dental hygiene for example the word "physician" was replaced with the word "clinician" and so forth, and was also significantly shortened to avoid duplicating topics a survey was used to gather descriptive data about cultural competence training in dental hygiene programs asking in simple "yes" (taught) or "no" (not taught) fashion what material had been covered in their respective programs. The respondents were given three weeks to complete the survey, upon the expiration of the first week a second email was then sent as a reminder to complete the survey. After the lapse of the three weeks the survey was no longer accessible. This study

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was approved "exempt" by Human Subjects Review Committee and informed consent was garnered from all participants.

Results

Descriptive statistics and exact fisher tests were used to analyze the data. A total of 76 surveys were returned from the 335 sent. The mixtures of responses by degree type awarded to their entry-level dental hygienists are represented as follows: 15 bachelor, 45 Associate, 1 Certificate, and 10 chose not to designate.

Of the potential 50 Bachelor degree programs 33% responded to this survey. Of the potential 280 associate and certificate program 17% response rate. 3% of the total population surveyed declined to designate what type of degree was offered to their entry level matriculates. About 89% of all respondents reported they taught their students to define race, ethnicity and culture. When asked if students were taught to identify how race and culture relate to health, 94.4% of respondents confirmed that this was being taught in their programs. When asked if students were taught to identify patterns of national data on disparities a total of 79.5% of programs confirmed that they were in fact covering this topic in their respective programs. When asked if students were taught to describe their own cultural background and biases 68.5% of all programs reported teaching this in their programs. With associate degrees reporting not teaching 34.7 % of the time and bachelor programs only 6%

reported not teaching. Seventy-three percent of respondents reported teaching

students to identify practitioner bias and stereotyping. When programs reported

on practitioners' own potential for bias 78.1% of Programs confirmed taught. With

24% of Associate programs reporting they did not teach students to recognize a

practitioner's own potential for biases in comparison to bachelor degree

programs who reported not teaching at less than 1%. About 96% of all programs

reported that they taught students to describe cross cultural communication

challenges. And about 95.8% of all programs who responded teach students to

discuss social determinants on health and 91% are taught to identify and discuss

key areas of disparities. Ninety-one percent of the respondents reported

teaching students to identify community beliefs and health practices. When

asked if students are taught to elicit a culture, social, and medical history 80% of

all respondents reported that students were taught to do this in their program.

Seventy-seven percent of all respondents taught students to recognize

and identify how practitioner biases impact care. With 22% of associate

programs reporting that they did not teach taught versus 6% of Bachelor degree

programs. Of all survey respondents an average of 45.1% of programs reported

their students were taught to critically appraise literature on disparities, with a

total of 60% of associate degrees declining and 33% of Bachelor degrees.

Similarly, 66.7 % of programs purported that they taught students to strategize

ways to counteract bias. With associate degrees reporting 39.1% did not teach

vs the 6% of Bachelor degree programs that did not teach. Of the total

responses 52% reported they did not teach students to realize the historical

impact of racism. With Associate degrees reporting not teaching at 58% and

Associate degrees reporting at 46% of the time. About 79.2% of the survey

respondents reported teaching students how to identify need for and collaborate

with and interpreter. With 23% associate and 13% for bachelor degrees.   In

addition, 57% of all respondents are not taught to list effective ways of working

with an interpreter.

Figure 14 Concepts Taught- Not Taught by Program Types
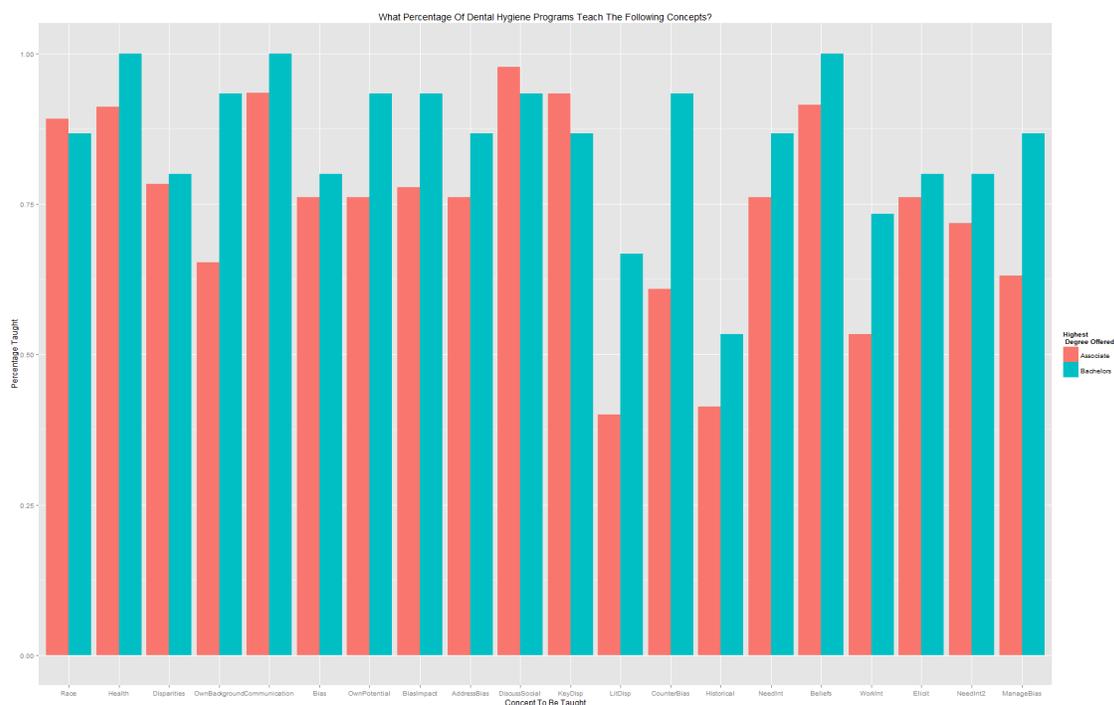
Although just by viewing the descriptive statistics it might appear that a

difference exists between training provided between both program types. This

however proved false.   Exact Fisher tests were used to test whether or not there

was an association between the highest degree offered and whether or not any

of the concepts in cultural competency were included. In all instances, and for all

questions evaluated individually there was not a significant difference between

the concepts taught in both the entry-level bachelor and associate granting

institutions when p values were adjusted for false discovery, (alpha=.05).

Therefore, we failed to reject the null hypothesis of no difference and conclude

that no differences exist between concepts of cultural competency taught in

bachelor and associate degree programs.

Table 2. p Values

Concept	pval	adj.pval
Define Race Ethnicity and Culture.	1	1
Identify how race and culture relate to health.	0.56	0.79
Identify patterns of national data on disparities.	1	1
Describe own cultural background and biases.	0.05	0.47
Describe cross cultural communication challenges.	0.57	0.79
Identify practitioner bias and stereotyping.	1	1
Recognize practitioners own potential to bias.	0.26	0.75
Recognize how practitioner biases impact care.	0.26	0.75
Describe potential ways to address bias	0.49	0.79
Discuss social determinants of health.	0.44	0.79
Identify and discuss key areas of disparities.	0.59	0.79
Critically appraise literature on disparities	0.13	0.67
Strategize ways to counteract bias.	0.02	0.47

Realize the historical impact of racism.	0.55	0.79
Identify the need for and collaborate with an interpreter.	0.49	0.79
Identify community beliefs and. health practices.	0.56	0.79
List effective ways of working with an interpreter.	0.23	0.75
Elicit a culture, social, and medical history.	1	1
Identify need for and collaborate with an interpreter.	0.74	0.92
Recognize and manage the impact of bias.	0.11	0.67

Discussion

There was limited response to the survey and a broad valuation of cultural competency training in dental hygiene programs was unable to be reached. Only a slight amount of responses were received and a small sample size may mask a clinical meaningful result as non-significant. While there may be no difference between degree granting institutions by cultural competency topics, as indicated by this study, it is still unknown how comprehensively the topics are imparted or if program directors consider different topics relative to cultural competency training other than the ones listed in the survey. Although results of this study were limited, several concepts on cultural competency training that are being taught have now been denuded.

It appears that a large percentage of programs are implementing a sizeable portion of topics in cultural competency training, but more work can be done. Ideally all programs should be incorporating these concepts into the curriculum 100% of the time. Ramifications of failing to implement cultural competency training are considerable. Not teaching a clinician to recognize bias could promote ethnocentrism and affect clinical judgment and patient outcomes even if the clinician is unaware of their own bias. It is devastating to uncover that only about half the respondents reported teaching the historical impact of racism. Clinicians may not even be aware that inequities experienced by patients may shape their patients view of their health care providers because of past experiences. Events and social injustices outside of healthcare may also influence a patient's distrust in their oral health care provider and can lead to a general ill feeling toward healthcare workers of different races nationalities and beliefs.

Cultural bias exists in many facets and the dental community is not immune, especially in regards to anti-fluoridation sentiments.   Within the culture of dental hygiene, a dental hygienist may not understand why a parent would refuse a fluoride treatment for their children because this point of view deviates so far from the professions preventive base.

Another reason it is so important to incorporate cultural competency training in dental hygiene is because the profession lacks diversity. As depicted in Figure 15, white non-Hispanic Dental hygienists make up eighty five percent of the

dental hygiene workforce. Ethnic minorities and men, in dental hygiene, and in dental hygiene educational institutions are underrepresented and not characteristic of the general population. (25) Men comprise close to three percent of the overal dental hygiene workforce incomparison to fifty three percent in the overall US workforce. (26)

Figure 15 Distribution of Dental Hygienists, by Race/Ethnicity, Relative to the Working-Age Population (25)

Distribution of Dental Hygienists, by Race/Ethnicity, Relative to the Working-Age Population
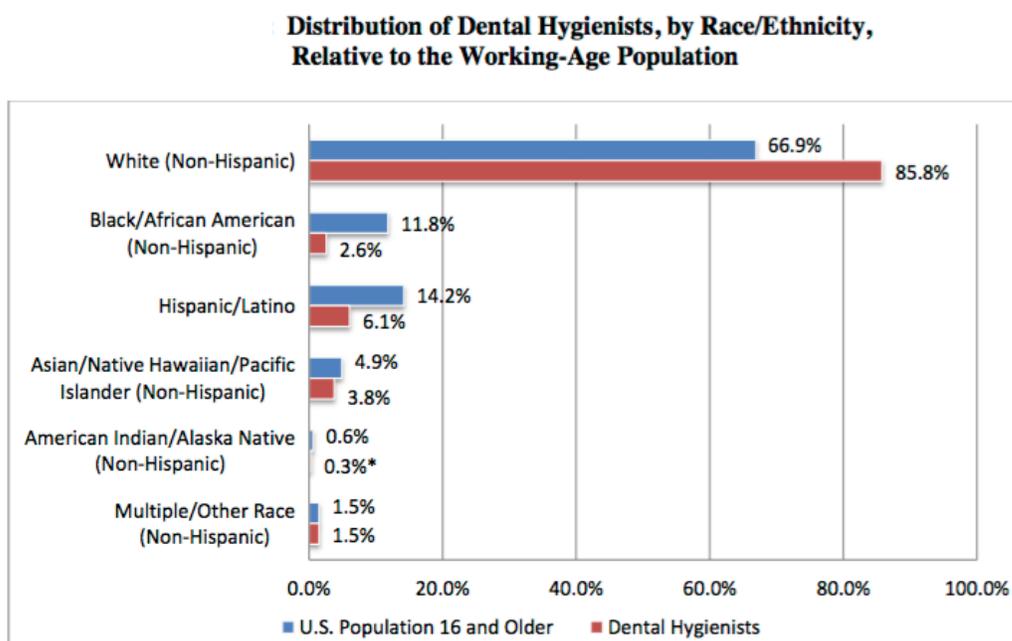
Data Source: HRSA analysis of the ACS PUMS, 2008-2010.
Note: Percentages may not total 100, because of rounding.
*Note: 20% ≤ RSE < 30%; estimate should be used with caution because of large sampling error.

The benefits of diversity have been well studied. Interactions with people that are diverse can lead to acknowledgement of different perspectives, and the anticipation that in order to reach understanding between people with different viewpoints requires, open-mindedness, compromise, resolve, and patience. The lack of diversity in student bodies, professional organization, and the significant impact it may have on health outcomes puts cultural competency training at the

forefront of fighting oral disparities and should have rampant implementation in

our dental hygiene programs regardless of the type of degree offered, as it is

probable we all will end up in direct patient care.

This study demonstrated that there is no significant difference between

bachelor granting institutions and associate level institutions regarding topics of

cultural competency. In addition, the purpose of this study was to assess

inadequacies in cultural competency training in dental hygiene education.

Although the outcomes were positive, ideally all programs should implement all

concepts of cultural concept training into their curriculum. More studies are

needed as this study failed to address how comprehensively cultural competency

topics are being inculcated in dental hygiene programs. Additional research is

needed in areas including: clock hours, modalities, perceived barriers, and

rational for topic inclusion. Cultural competency training must be a widespread

momentum to invoke change and decrease oral health disparities.

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APPENDICES

Appendix A-HRRC Approval Letter

Human Research Review Committee
Human Research Protections Office

November 10, 2015

Christine Nathe, RDH, MS
CNathe@salud.unm.edu

Dear Dr. Nathe:

On 11/2/2015, the HRRC reviewed the following submission:

Type of Review:	Initial Study
Title of Study:	Cultural Competency Education in the Dental Hygiene Curricula: A Survey
Investigator:	Christine Nathe, RDH, MS
Study ID:	15-519
Submission ID:	15-519
IND, IDE, or HDE:	None

Submission Summary:	Intitial Study
Documents Approved:	• Cultural Competency Education in the Dental Hygiene Curricula: A survey (Protocol) v2.0 11/03/2015 • C_Calleros-Consent-Survey Cover Letter v1_10-6-15 • Cultural Competency Survey 092215
Review Category:	EXEMPTION: Categories (2) Tests, surveys, interviews, or observation.
Determinations/Waivers:	HIPAA Authorization Addendum Not Applicable. Waived the requirement to obtain a signed Consent form. Provisions for Consent are adequate (exempt project with participant interaction).

Submission Approval Date:	11/2/2015
Approval End Date:	None
Effective Date:	11/10/2015

The HRRC approved the study from 11/2/2015 to inclusive. If modifications were required to secure approval, the effective date will be later than the approval date. The "Effective Date" 11/10/2015 is the date the HRRC approved your modifications and, in all cases, represents the date study activities may begin.

Because it has been granted exemption, this research is not subject to continuing review.

Please use the consent documents that were approved and stamped by the HRRC. The stamped and approved consents are available for your retrieval in the "Documents" tab of the parent study.

The University of New Mexico • MSC08 4560 • 1 University of New Mexico • Albuquerque, NM 87131-0001 • Phone 505.272.1129 • Fax 505.272.0803 • **hsc.unm.edu/som/research/hrrc** • BMSB B71

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This determination applies only to the activities described in this submission and does not apply should you make any changes to these documents. If changes are being considered and there are questions about whether HRRC review is needed, please submit a study modification to the HRRC for a determination. A change in the research may disqualify this research from the current review category. You can create a modification by clicking Create Modification / CR within the study.

In conducting this study, you are required to follow the Investigator Manual dated April 1, 2015 (HRP-103), which can be found by navigating to the IRB Library.

Sincerely,

Stephen Lu, MD
HRRC Chair

The University of New Mexico • MSC08 4560 • 1 University of New Mexico • Albuquerque, NM 87131-0001 • Phone 505.272.1129 • Fax 505.272.0803 • **hsc.unm.edu/som/research/hrrc** • BMSB B71

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Appendix B-Informed Consent and Recruitment Email

University of New Mexico Health Sciences Center
Informed Consent Cover Letter for Anonymous Surveys

STUDY TITLE
Cultural Competency Education in the Dental Hygiene Curricula: A Survey

Christine Nathe RDH, MS from the Department of Dental Medicine is conducting a research study. The purpose of the study is to investigate cultural competency education in dental hygiene programs.
You are being asked to participate in this study because you are a dental hygiene program director.

Your participation will involve taking a brief survey. The survey should take about 10 minutes to complete. Your involvement in the study is voluntary, and you may choose not to participate. There are no names or identifying information associated with this survey. The survey includes questions such as the amount of time spent educating students in topics of cultural awareness. You can refuse to answer any of the questions at any time. There are no known risks in this study, but some individuals may experience discomfort when answering questions. All data will be kept for 1 year in a locked file in Mrs. Christine Nathe's office and then destroyed.

The findings from this project will provide information on cultural competency education in dental hygiene programs. If published, results will be presented in summary form only.

If you have any questions about this research project, please feel free to call Christine Nathe RDH, MS (505) 272-8147 or Christina Calleros RDH,BS at (505) 272-4513. If you have questions regarding your legal rights as a research subject, you may call the UNMHSC Office of Human Research Protections at (505) 272-1129.

By following the link to the survey this survey, you will be agreeing to participate in the above described research study.

Thank you for your consideration.

https://www.psychdata.com/s.asp?SID=167559

Sincerely,

Christine Nathe RDH, MS
Vice Chair, Department of Dental Medicine

<div align="right">HRRC#15-519
Version Date 10-6-2015</div>

| HRPO #: | Page 1 of 1 | Version: V1 10-6-15 |

Appendix C-Survey

Cultural Competency Education in the Dental Hygiene Curricula: A Survey

Please choose one answer, either yes=taught or no= not taught that best corresponds to the instruction of cultural competency in your entry-level dental hygiene program.

1 Your entry-level Dental Hygiene Program graduates are awarded which degree type:	Certificate	Associates	Baccalaureate
2 Define race, ethnicity and culture	Taught	Not Taught	
3 Identify how race and culture relate to health	Taught	Not Taught	
4 Identify patterns of national data on disparities	Taught	Not Taught	
5 Describe own cultural background and biases	Taught	Not Taught	
6 Describe cross-cultural communication challenges	Taught	Not Taught	
7 Identify practitioner bias and stereotyping	Taught	Not Taught	
8 Recognize practitioners' own potential for biases	Taught	Not Taught	
9 Recognize and identify how practitioner biases impact care	Taught	Not Taught	
10 Describe potential ways to address bias	Taught	Not Taught	
11 Discuss social determinants on health	Taught	Not Taught	
12 Identify and discuss key areas of disparities	Taught	Not Taught	
13 Critically appraise literature on disparities	Taught	Not Taught	
14 Strategize ways to counteract bias	Taught	Not Taught	
15 Realize the historical impact of racism	Taught	Not Taught	
16 Identify need for and collaborate with interpreter	Taught	Not Taught	
17 Identify community beliefs and health practices	Taught	Not Taught	
18 List effective ways of working with an interpreter	Taught	Not Taught	
19 Elicit a culture, social and medical history.	Taught	Not Taught	
20 Identify need for and collaborate with interpreter	Taught	Not Taught	
21 Recognize and manage the impact of bias	Taught	Not Taught	