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OPPORTUNITIES FOR INTER-CULTURAL AWARENESS IN THE EDUCATION OF DENTAL HYGIENISTS

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ABSTRACT

Professional standards require that dental hygienists deliver culturally appropriate services and demonstrate respect for patients whose cultural beliefs and values may conflict with normative clinical recommendations. The present study provided a snapshot of undergraduate students in one dental hygiene education program about the students' Intercultural competence (ICC): "the capability to understand and adapt behavior to cultural differences and commonality accurately." Rather than a longitudinal study of a student cohort, investigators sought to understand if program outcomes were congruent with the stated visions and missions of the university, co llege, and department. The participants completed an Informed Consent before taking the Intercultural Development Inventory (IDI) (version 3) online during regularly assigned class periods. The Internal Review Board for Research with human subjects approved using previously collected data for this report (IRB log #1137599). As a course and program assessment, the 50-question inventory generated individual and group profile reports about Orientation to cultural differences. Data were de-identified and analyzed using IBM SPSS statistics (version 1.0.0.1406). The scores of interest for this investigation included Perceived Orientation (PO), how the individual or group rates their Orientation toward other cultures, and the Developmental Orientation (DO), an individual's or group's primary orientation toward cultural differences and commonalities. In addition, the researchers examined group mean scores to evaluate any observed significant differences in ICC. The IDI assessment results indicated that students saw culture from their viewpoints at all steps in the dental hygiene education program and tended to minimize cultural differences and focus on similarities. However, group members were not adapting their behavior to accommodate cultural differences. The authors make several recommendations for dental hygiene education programs and future research.

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Introduction

Cultural competency is an important aspect of providing health care in any multicultural society. Utilizing a culturally competent curriculum builds on a theoretical knowledge framework and leads to students mastering culturally competent clinical strategies in community-based experiences. The learners fully develop cultural humility and a worldview of knowing, valuing, and applying culturally appropriate care. Purnell defines cultural humility as an individual's ability to process an intercultural exchange while paying specific attention your own value and beliefs through self-reflection. Cultural humility incorporates the cultural characteristics of the profession in partnership with the patient to develop a "mutually beneficial and balanced relationship" (Purnell, 2013, p.9).

The American Dental Association's Commission on Dental Accreditation (2019) directs all accredited dental programs to develop teaching strategies to provide culturally appropriate oral health care. The learning objectives guide course content to provide the knowledge, value, and practice of applying culturally appropriate care. Ethnocentrism is when a clinician believes their way of knowing, thinking, and behaving is correct. An example of this would be students returning from an oral health mission trip and reporting extensive childhood caries related to eating and drinking sugary foods. A culturally competent clinician would reflect that sugar cane production is a primary source of regional income, and the drinking water is not fluoridated, which increases childhood caries.

Background

Dental hygienists are primary oral health professionals who must be prepared to support patient care for anyone who presents at their practice. Therefore, the Commission on Dental Accreditation Standard 2-15 states: "Graduates must be competent in communicating and collaborating with other members of the healthcare team to support comprehensive patient care (interpersonal and communication skills to interact with diverse population groups effectively" (CODA, 2019, p. 26). The intent of this standard focuses on written and verbal communication supporting safe and effective oral care for diverse populations (i.e., health status, health services, and health beliefs).

Clinical Relevance

As the world population becomes more diverse, dental providers no longer see a homogeneous group of patients. Clinical providers may be competent about care related to the specific diagnosis. However, Purnell (2013) emphasized that providers who understand and respect the patients' beliefs and values about health care reach multually acceptable health outcomes.

Cultural competence requires dental hygienists to possess knowledge of various cultures and be comfortable with people from other cultures. Dental hygienists need to deliver dental services that are culturally appropriate and demonstrate respect for patients whose cultural beliefs and values may conflict with normative clinical recommendations. At the same time, they need to assist the patient in obtaining positive dental outcomes. Dental hygienists use specific beliefs to guide their practice as a community of professionals devoted to preventing disease and promoting and improving public health. These beliefs include statements such as:

- *Individuals have intrinsic worth, are responsible for their health, and are entitled to make choices regarding their health.*
- *All people should have access to health care, including oral health care.*
- *We are individually responsible for our actions and the quality of care we provide.4*

The National Dental Hygiene Research Agenda (2016) has three core areas of recommended areas of research: (a) Professional Development, (b) Client Level, and (c) Population Level. Population-Level Research is divided into health services and access to care. The ADHA (2016) has suggested that research about access to care should examine the challenges to positive health outcomes, such as recognized and unrecognized barriers to care.

Scientific Rationale for Study

According to statistics provided about Dental Hygienists by Data USA (2023), 79.6% of dental hygienists are White (Non-Hispanic), making that the most common race or ethnicity in the occupation. White (Hispanic) is the second most common race or ethnicity in this occupation representing 5.81% of dental hygienists. Data USA (2023) also reported that 94.7% of dental hygienists are female, with a median age of 42.5 while male employees are generally 42.3 years of age, 0.2 years younger

than their female counterparts.

Dental hygienists contribute to the health and well-being of society while helping individuals achieve optimal health. Their profession must function interdependently with other health care providers while each individual adapts to cultural backgrounds beyond their own. Dental hygienists must be able to adapt their care to cultural differences and commonalities among patients.

While current accreditation standards state that dental hygienists need to understand and to provide culturally appropriate oral health care plans, Engeswick observed that dental hygiene educators (i.e., faculty members) lack experience with cultures different than their own (Engeswick, 2013). According to the results of her study, dental hygiene educators in the Upper Midwest were more likely to minimize cultural differences and emphasize cultural commonalities. Fitch reports that dental clients' values and general oral health care beliefs are rooted in culture (Fitch, 2004).

Questions of Interest

The research reported herein reflected an interest in how a dental hygiene preparation program currently impacts the ICC of its dental hygiene students. Specifically, the study examined these questions:

1. What is the level of ICC at the beginning of the introductory course in Dental Hygiene?
2. What is the difference between pre-instruction and post-instruction ICC in the introductory course in Dental Hygiene?
3. What is students' concluding level of ICC after their studies in Dental Hygiene?
4. What is the difference in ICC between students at the beginning of their Dental Hygiene studies compared with students after their Dental Hygiene studies?

Need for Cultural Competence

Increasingly, researchers and instructors report the need for culturally competent practitioners, i.e., adapting their behavior to reach goals with cultural groups different from their own. Chen and colleagues (2018) found that undergraduate nursing students who had more opportunities to interact with people of different ethnic backgrounds had higher subscales of cultural awareness, cultural knowledge, cultural skills, cultural encounters, and cultural desire.

Seeleman and others (2009) report that when medical professions recognize cultural and ethinic diversity issues within the educational process the result is improved care. The authors recognize the implementation of a culturally competent curriculum presents a variety of challenges. Their research sought to develop a framework to assist educators to translate existing educational objectives to measureable cultural competent outcomes. The recommended curriculum framework would include "cultural competencies in 1) knowledge of epidemiology and manifestations of diseases in various ethinic groups, 2) knowledge of differential effects of treatment in various ethnic groups, 3) awareness of how culture shapes individual behavior and thinking, 4) awareness of the social content in which specific ethinic groups live, 5) awareness of one's own prejudices and tendency to stereo type, 6) ability to transfer information in a way the patient can understand and know when external help and 7) ability to adapt to new situations flexibly and creatively" (Seeleman et al., 2009, p.231).

The literature provides evidence for the efficacy of cultural training, cultural programs, and cross-cultural experiences in influencing students' learning and development of cultural knowledge, skills, and awareness, such as those experienced while participating in international service programs (Long, 2014) and study abroad opportunities (Carpenter and Garcia, 2012). However, such opportunities may be beyond the financial capacity of many students.

Theoretical Basis

To understand the developmental processes of growth in ICC, the investigators reviewed several theoretical frameworks. Eventually, the investigators chose the Intercultural Development Continuum (IDC) as the theoretical foundation for course planning and assessment. The IDC describes predictable (although not automatic) stages that individuals progress as their cultural competence increases.

There are five stages of the IDC (Bennett and Hammer, 2001). The stages (originally defined by Bennett in 1993) included stage one, Denial, the individual sees their culture as the only authentic culture and may reduce exposure to different cultures. Stage two is Defense; individuals in this stage are defensive of their culture, believing their culture is the best one, and use statements like "us and them." Stage three is Minimization; the individual views their culture as shared globally and sees cultures as having no differences. Minimization is divided into two stages because it is a transitional stage, wherein the person grows from an ethnocentric worldview to an ethnorelative worldview. Stage four is acceptance; here, the individual views their culture as one of many complex cultures.

They have learned respect for differences. Stage five is Adaptation; in this stage, the individual can put themselves in the other culture's "shoes" and adapt their behaviors and communication style to better fit into that culture at hand to communicate more effectively.

Faculty Preparation

The first essential step for teaching and learning cultural competence is understanding the current levels and gaps in competency among faculty members. This understanding provides faculty members insight into their current capacity to teach cultural competence within the program scope and sequence. It is recommended to provide culturally sensitive and competent undergraduate education "faculty must first recognize their limitations and bias in teaching this content" (Cuellar et al., 2008, p.143).

There are many over-arching challenges to adding new curriculum into an already extensive curriculum with required accreditation standards. Faculty may be relucent to add more content to their existing courses, require additional professional development programs to teach the changing curriculum concerning racial and ethnic minorities, and work in academic settings lacking educational opportunities for to update the curriculum.

Currently, the educational standards for culturally competent care has been included in the new standards of many health care professions providing evidence of the needed change.

Professional development for faculty members and instructors would lead them to examine their attitudes and understand how covert and overt curriculum influences learning. Such understanding also provides insight for where to start in guiding undergraduate students in their journey. Diaz et al. (2015) maintained this was critical to nursing education programs. However, it is also a general first step for any health care professional, including those in dental hygiene.

Integration into Curriculum Design

Past research has described several effective practices for teaching and learning that lead to enhanced cultural competence among undergraduate students in health professions. These practices include (a) self-understanding in attitudes and competence among faculty members and student learners; (b) experience with partners or groups of persons from cultures different than those of the student; (c)

coaching or mentorship from professionals farther along on the diversity and equity journey; and (d) reflection and growth opportunities.

Cuellar and colleagues reported about a program in which university students can choose to take a cultural competency course as part of their general education requirements. However, the university "does not dictate to students which courses they must take to meet these requirements, although some advisors strongly suggest courses with cultural impacts as appropriate to the nursing curriculum" (Cuellar et al., 2008, p.146).

To address integrating cultural competence in undergraduate education, Cuellar and colleagues (2008) developed Blueprint for Integration of Cultural Competence in the Curriculum (BICCC). Curriculum objectives are (a) define culture and cultural competence as they relate to teaching, (b) present educational standards of cultural competence in accreditation agencies, (c) present learning objectives for competent cultural information, (d) describe a curriculum incorporating cultural competence in the undergraduate nursing curriculum, and (e) provide examples of teaching strategies and implementation (Cuellar et al., 2008, p.143).

The conceptual frameworks recommended by Seeleman and colleagues (2009) utilized two basic assumptions: (a) the use of broad conceptualization of cultural competence related to patient cultural issues and ethnic backgrounds, epidemiological differences, patients' social content and prejudice/stereotypes and (b) not to assume that doctors (or dentists) are culturally and ethnically neutral. It is recommended the framework of instruction use a lens of cultural competence broadly considering knowledge, attitudes, and skills necessary to provide ethnically and culturally sensitive care to diverse patient populations (Seeleman et al., 2009).

Banks and colleagues (2001) identified components of best practices for primary and secondary education be grouped into categories including (a) teacher learning, (b) student learning, and (c) intergroup relations. These components may be applied to higher education. For example, education programs, even individual courses, should create what Banks and co-authors called "superordinate groups," groups with which members of other groups in a given situation identify. Such groups encourage cohesion, friendliness, and joint learning while reducing fear and anxiety.

Barker and Mak (2013) suggested using curriculum and classroom diversity to create opportunities to enhance students' cultural competence. They used an established intercultural resource called EXCELL Intercultural Skills Program in courses in several disciplines related to Business and Health. The EXCELL generic competencies framework was practical to support students in learning and

practicing culturally sensitive ways to (a) seek help, (b) make social contact, (c) participate in a group, (d) refuse a request, (e) express disagreement, and (f) give feedback (Barker and Mak, 2013). The researchers examined four-course case studies to explore possibilities for embedding skills in different disciplines. They recommended using discipline-specific scenarios provided by stakeholder experts. Students may use these scenarios to explore the options in low-risk education environments.

Method

Research Setting

The investigation reported herein was conducted at a mid-size, Midwestern, public university. The university student population included more than 2,200 underrepresented students (based on socioeconomic status, ethnicity, or non-traditional status). Nearly 10% of this university's 15,000 students were international students from more than 90 countries. The university has been ranked 31 in international student enrollment among master's degree institutions in the U.S. (Institute of International Education, 2014).

Population and Sample

This university's Dental Hygiene program enrolls 24 new students each academic year. This investigation included 68 undergraduate students in the Dental Hygiene program: 25 enrolled in DHYG100 CID 2300 during Spring 2019; 24 enrolled in DHYG100 CID 3233 during Fall 2019, and 19 enrolled in DHYG439 CID 2327 during Fall 2019 (Delgado, 2021; Engeswick, 2021).

Table 1 presents the demographic information collected from the students when they completed the IDI survey. All subjects included in the data in Table 1 were individual students; this is an unduplicated count. However, several participants did not respond to all demographic questions, so there is missing data.

Demographic Characteristic	# of respondents	# with this characteristic
Enrolled in DHYG100 CID2300 Spring 2019	68	25
Enrolled in DHYG100 CID3233 Fall 2019	68	24
Enrolled in DHYG439 CID2327 Fall 2019	68	19
Female	68	65
US Citizen	68	64
Between 18 and 24 years old	68	67
Completed secondary school	68	65
Second year of university	44	16
Fourth year of university	44	19
Member of ethnic majority	25	20
Childhood in North America	25	24
Lived only in North America	25	20

Table 1. *Demographic Characteristics of Subjects*

Variables

This study examined the undergraduate students' Intercultural competence (ICC): "the capability to understand and adapt behavior to cultural differences and commonality accurately" (Hammer, 2013, p. 26). The scores of interest for this investigation included Perceived Orientation (PO), how the individual or group rates their Orientation toward other cultures, and the Developmental Orientation (DO), an individual's or group's primary orientation toward cultural differences and commonalities.

Measurements

The investigators used the Intercultural Development Inventory (IDI; Bennett and Hammer, 1998; Bennett and Hammer, 2001) to measure cultural competency. Respondants may complete the survey on paper or online within approximately 30 minutes. The 50-question inventory generates individual, and group profile reports about Orientation to cultural differences.

For more than 20 years, the IDI has been psychometrically tested in multiple languages. Its validity includes predictive validity within the educational and corporate sectors. Rigorous tests have shown the IDI's cross-cultural generalizability, including international and domestic populations. Designers followed psychometric scale construction protocols to ensure the IDI would not be culturally biased or susceptible to individuals "figuring out" how to get a higher score. Several studies indicated the IDI's strong predictive validity. For example, higher levels of intercultural competence (measured by the IDI) were predictive of successful recruitment and retention of diverse staff members (Bennett and Hammer, 2001).

Data Collection Procedures

The IDI as a program assessment was completed online during regularly assigned class periods. Students completed the inventory online during the third week of the semester. The online survey took approximately thirty to forty minutes for each participant to complete. To avoid having the students feel coerced to participate, the instructor (a) provided class time for completing the IDI so that students did not have to use their own "free" time for the survey and (b) offered points to enhance grades in the class. The participants completed an Informed Consent before taking the Intercultural Development Inventory (IDI) (version 3) online during regularly assigned class periods. The Internal Review Board for Research with human subjects approved using previously-collected data for this report (IRB log #1137599).

Data Analysis Procedures

The data collected was analyzed by the investigators using established IDI protocols. To find the scores for each respondent, the IDI software, version 3, was used (Hammer, 2012). This Microsoft Access uses raw survey data to generate

reports detailing individual and/or group results. Data were de-identified and analyzed using IBM SPSS Statistics for Windows version 1.0.0.1406 (IBM Corp, 2020). The researchers examined mean scores in various IDI areas to evaluate any observed significant growth indicators in ICC.

Results

Intercultural Competence Before the Introductory Course

IDI scores were collected from a total of 48 students at the beginning of two semesters of DHYG100 Perspectives in Dental Hygiene (Delgado, 2019). As Table 2 indicates, the students' Perceived Orientation scores ranged from 104.36 to 126.59, with the mean of 118.109, suggesting that students in general thought more highly of their ability to perceive and accept cultural differences. In contrast, the students' Developmental Orientation scores ranged from 48.32 to 117.06, with the mean of 87.269, indicating that students were actually in the ethnocentric half of the minimization stage. In this stage, group members see culture from their viewpoints and tend to minimize cultural differences – focusing on similarities instead of differences.

Time	Variable	*n*	Range	*M*	*SD*
Beginning DHYG100	Perceived Orientation	48	104.36-129.59	118.11	5.13
	Developmental Orientation	48	48.32-117.06	87.27	14.58
Concluding DHYG program	Perceived Orientation	19	114.24-129.96	118.11	5.13
	Developmental Orientation	19	69.42-113.70	87.27	14.58

Table 2. *Range and Mean ICC for Students Beginning DHYG100 Perspectives on Dental Hygiene and Concluding DHYG Education Program*

ICC data for DHYG100 was collected from two-course sections, one in each of two semesters; the investigators wondered if there was any statistical difference between the beginning scores of the two sections. ANOVA analysis found no statistical difference between the two groups of university students ($p < .05$). The investigation reported herein suggests that students early in their university studies (a) see culture from their viewpoints, (b) overestimate their capacity to adapt to cultural differences, and (c) tend to minimize cultural differences – focusing on similarities instead of differences.

Influence of Introductory Course on ICC

In one semester, investigators collected pre-instruction scores for 24 students and post-instruction scores for 19 students in DHYG100 Perspectives in Dental Hygiene (Delgado, 2019). Data analysis shown in Table 3 presents the resulting group statistics.

Orientation toward Cultural Differences	*n*	*M*	*SD*	*SE*
Perceived Orientation - pre-instruction	24	118.66	5.89	1.20
Perceived Orientation - post-instruction	19	121.47	5.31	1.22
Developmental Orientation - pre-instruction	24	88.10	16.04	3.27
Developmental Orientation - post-instruction	19	93.60	13.90	3.19

Table 3.*Group Statistics for Students Enrolled in DHYG100 Perspectives on Dental Hygiene*

A paired-samples t-test was calculated to show the differences for each student for which pre-instruction and post-instruction scores were available. Table 4 shows the results of this analysis.

There was no statistically significant difference between starting and concluding scores ($p < .05$). After this one-credit, one-semester course, students continued to (a) see culture from their viewpoints, (b) overestimate their capacity to adapt to cultural differences, and (c) minimize cultural differences – focusing on similarities instead of differences.

Table 4.*Paired Samples Test*

Orientation toward Cultural Differences	*M*	*SD*	*SE*	95%CI		*t*	*p*
				LL	*UL*		
Perceived Orientation	-.16	5.00	1.15	-2.56	2.26	-.13	.90
Developmental Orientation	.49	16.27	3.73	-7.35	8.34	.13	.90

Note. Significance at $p < .05$ level.

ICC Among Students After Dental Hygiene Studies

Table 2 presented information about the concluding level of intercultural competence among students after their studies in Dental Hygiene. As Table 2 indicates, the students' Perceived Orientation scores ranged from 114.24 to 129.96, with the mean of 118.109, suggesting that students in general thought highly of their ability to perceive and accept cultural differences. In contrast, the students' Developmental Orientation scores ranged from 69.42 to 113.70, with a mean of 87.269, indicating that students were in the ethnocentric stage of minimization stage. In this stage, group members saw culture from their viewpoints and tended to minimize cultural differences – focusing on similarities instead of differences.

Influence of Dental Hygiene Program on ICC

It is important to note that the data examined in response to research question 4 were collected from different students, so there are no paired differences to analyze. For purposes of this study, however, this may still be useful since the investigators established there were no significant differences among two different groups of students and were interested in the impact of the Dental Hygiene program in general. Table 5 presents the results of Levene's Test for Equality of Variances (equal variances assumed) between students at the beginning (point 1) and the conclusion (point 3) of the program.

Table 5. *Group Statistics for Levene's Test for Equality of Variances (equal variances assumed)*

Orientation to Cultural Differences	*n*	*M*	*SD*	*SE*	*F*	*t*	*p*
Perceived Orientation - pre-program	48	118.11	5.18	.75			.02
Perceived Orientation - post-program	19	121.47	5.31	1.22	.56	-2.38	
Developmental Orientation - pre-program	48	87.27	14.58	2.10			
Developmental Orientation - post-program	19	93.60	13.90	3.19	.06	-1.62	.11

Note. Significance at $p < .05$ level (two-tailed).

There was a statistically significant difference between starting and concluding Perceived Orientation scores ($p < .05$). However, there was no statistically significant difference between starting and concluding Developmental Orientation scores.

Principal Findings

The students' Perceived Orientation mean scores changed from 118.109 to 121.473, indicating that students generally continued to think more highly of their ability to perceive and accept cultural differences. In contrast, the students' Developmental Orientation scores changed from 87.269 to 93.600, indicating that students were continued in the ethnocentric stage of minimization stage. In this stage, group members saw culture from their viewpoints and tended to minimize cultural differences – focusing on similarities instead of differences.

Discussion

The present study provided a snapshot of undergraduate students in one Dental Hygiene education program. This was not a longitudinal study of a cohort of students as they move through the four-year program. However, this study provides

a baseline of information about a Dental Hygiene education program's impact.

This study indicates the starting level of cultural competency among undergraduate students is ethnocentric Minimization. In this stage, group members see culture from their viewpoints and tend to minimize cultural differences – focusing on similarities instead of differences. In the introductory course, the ending level of cultural competency among undergraduate students was in ethnocentric Minimization. There was no statistically significant difference in cultural competency's starting and ending values among undergraduate students in the introductory course. After their four-year program, cultural competency among undergraduate students was ethnocentric Minimization. Again, there was no statistically significant difference in the starting and ending values of cultural competency among undergraduate students in the Dental Hygiene program.

Practical Implications

Developers of the IDC maintain that progress is not automatic. In other words, one does not develop cultural competence by getting older. However, much of growing up involves getting along, learning a profession, reaching standards, and, in

fact, minimizing differences. These are all milestones that would keep someone in ethnocentric Minimization. And celebrating cultural differences is not automatic. For example, dental hygienists learn to expect and teach patients to conform to hygiene standards. Historically, hygienists have not been concerned about adapting hygiene standards and practices to the patients' cultural norms. Interestingly, this study's results illustrate how one's perceived Orientation to cultural differences might maintain the status quo. In other words, one perceives one's competence as actually more open to Acceptance and Adaptation than one's behavior indicates.

Commission on Dental Accreditation Standard 2-15 states: "Graduates must be competent in communicating and collaborating with other members of the healthcare team to support comprehensive patient care (interpersonal and communication skills to interact with diverse population groups effectively" (CODA, 2019, p. 26). This study provides evidence-based on the education of baccalaureate degreed dental hygienists, graduates tend to minimize cultural differences and focus on similarities. As a result, oral health professionals provide care to people of diverse cultures in educational and dental settings, community clinics, school-based programs, and nursing home settings.

Recommendations

At this time, dental hygiene education is focused on a disease model to develop specific treatment recommendations. As a result, little time and value are given within dental hygiene curricula to discover and establish cross-culturally appropriate care plans. Since experiences and reflections prompt growth, the preparation of Dental Hygienists will impact the ICC of the profession. However, this is likely to happen when teaching and learning strategies that promote ICC are intentionally infused throughout the preparation program. Therefore, the authors make the following recommendations for dental hygiene education programs:

- Mission and Vision: Re-define the college and department diversity vision, mission, and goals to bring cultural competence to the fore.
- Theoretical Basis: Consistently use a theoretical framework to scaffold the program.
- Faculty Recruitment: Search and hire diverse faculty, instructors, and staff members.
- Scope and sequence of the curriculum design: Develop a curriculum map that illustrates the integration of cultural competency across the four-year program.
- Faculty Preparation: Research on dental hygiene faculty knowledge, beliefs, and attitudes would provide insight for possible educational barriers that may exist in advancing access to oral health care and a cultural-competency framework.
- Teaching and Learning: Further research should identify cost-effective teaching and learning strategies to provide cultural knowledge and encounters to increase students' exposure and understanding of individuals from other cultures.
- Longitudinal Research: Repeat the study with the same students over time, when accepted into the Dental Hygiene program and during their last semester, just before graduation.

Research investigating faculty knowledge, beliefs, and attitudes can expose possible educational barriers in advancing access to oral health care and a cultural-competency framework. The authors recommend identifying practical cross-cultural diversity education courses to be used to develop guidelines for a competency-based curriculum for healthcare professionals. Developing culturally competent care models while uniting healthcare professionals during undergraduate and graduate education is critical to educating cross-cultural and globally-aware professionals.

Conclusion

This study provides a baseline understanding about the current impact of a Dental Hygiene education program. Entry-level first-year pre-dental hygiene students and senior dental hygiene students completed the Intercultural Development Inventory (Bennett and Hammer, 2001). The beginning dental hygiene students' starting orientation toward cultural differences was ethnocentric Minimization. The nearly completed dental hygiene students' concluding orientation toward cultural differences was still ethnocentric Minimization. Evidently, students who complete this Dental Hygiene preparation program continue to see other cultures from their viewpoints and generally minimize cultural differences – focusing on similarities instead of differences. Dental hygiene preparation programs must provide purposeful teaching and experiences within a curriculum framework if graduates are going to effectively interact with diverse population groups.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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