Building Cultural Competency among Emerging Public Health Professionals: Student Experiences in Panama

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Cover Page Footnote
The authors would like to thank the following individuals for their important contributions to this immersive study abroad experience: Ms. Aracely Quintero (USF Health), Dr. Arlene Calvo (USF Health), Dr. Ana Belén Araúz (Hospital Santo Tomás), UAB Office of Education Abroad, and the many other public health partners we met with in both Alabama and Panama.

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Building Cultural Competency among Emerging Public Health Professionals: Student Experiences in Panama

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In 2020, the COVID-19 pandemic forever changed the world as we know it, and proved, once again, that public health is global health (Fried et al., 2010). Therefore, schools of public health, medicine, and other health professions need to prepare students with the knowledge and skills necessary to address both current and future global health needs. One of the prerequisite skills of effective public health and health practitioners is cultural competency (Fleckman et al., 2015), and previous authors have described study abroad and service-learning as established strategies for enhancing this skill (DeLoach et al., 2018; Kohlbry, 2016).

In summer 2019, the University of Alabama at Birmingham School of Public Health sponsored a six-credit hour study abroad course for undergraduate and graduate students to explore population health in Panama. By design, this travel course afforded students a unique opportunity to view health and health care through a cultural lens. This article describes how students made meaning of their experience through an analysis of student-produced work, including reflective journal entries, blog posts, and photo journaling.

Literature and Conceptual Framework

Across health disciplines, cultural competency has been identified as a critical skill for addressing the health challenges of the 21st century (de Beaumont Foundation, 2015; DeSalvo et al., 2017; Expert Panel, 2012). Cultural competency connotes one’s ability to effectively interact with people of diverse backgrounds and different identity groups. In the context of medicine and public health, culturally competent care respects diversity in the patient population and cultural factors that can affect health and healthcare, such as language, communication styles, beliefs, attitudes, and behaviors (AHRQ, 2014). The Association of American Medical Colleges and Association of Schools of Public Health (Expert Panel, 2012) noted that culturally compe-
tent care and services improves both their delivery and relevance to diverse populations, thus improving health outcomes and reducing health disparities.

**Experiential Education**

One evidence-based strategy for enhancing cultural competency in the health professions is experiential education (Cahn & Smaller, 2020). Experiential education is an educational philosophy that describes out-of-classroom learning opportunities that incorporate (a) reflection, critical analysis, and synthesis of the learning experience; (b) student accountability for learning; (c) active engagement; (d) deeper understanding of self and self in relationship to others; and (e) opportunities for growth through natural consequences, mistakes, and successes (AEE, n.d., para. 3). The Panama trip combined two specific forms of experiential learning: study abroad and service-learning.

**Study Abroad**

Study abroad is generally defined as an academically-grounded, university-related program of study that takes place in a foreign location. For the purpose of this investigation, study abroad signified a location outside the boundaries of the United States. Study abroad is considered a high-impact educational practice that promotes international awareness; intercultural competence; and student gains in cognitive, intrapersonal, and interpersonal domains (DeLoach et al., 2018; Engberg, 2013; Pipitone, 2018).

Some have argued that ‘more is better’ in terms of duration and depth of the study abroad experience (DeLoach et al., 2018; Dwyer, 2004). Others, however, have suggested that academic rigor and the use of intentional, experiential pedagogies (e.g., service-learning, reflecting writing, pre-trip learning), rather than program length, are largely responsible for student outcomes (Antonakoupoulou, 2013; Nguyen, 2017; Tarrant et al., 2014). Pipitone (2018) stated, “effective short-term programs create culturally immersive and focused learning environments through intentional program structure and pedagogy” (p. 57).

**Service-learning**

Seifer and Connor (2017) defined service-learning as a “teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities” (p. 4). Best practices for service-learning suggest that the experience (a) responds to community-identified concerns, (b) balances service with learning, (c) is mutually beneficial, (d) enhances the curriculum by extending learning beyond the classroom, (e) applies lessons learned in real-world situations, and (f) provides opportunities for critical reflection (Comeau et al., 2018).

Parker and Altman Dautoff (2007) argued that study abroad and service-learning strategies can complement one another and produce learning and teaching synergies. Kohlbry (2016) observed that international service-learning experiences fostered cultural competence among nursing students, and Lichtveld (2016) stated, “Public health professionals, especially those who benefited from study abroad programs during their education, seek to practice in lower- and middle-income countries where they hope to address dire health needs and make a greater difference” (p. 511).
Pre-departure Learning

Prior to departure, students met with faculty and staff to review course expectations and student responsibilities and to discuss relevant public health topics. Instructors assigned several readings from the book *Healthier: Fifty Thoughts on the Foundations of Population Health*, which focused on the aspirations and strategies of public health, social justice, the culture of health, intergenerational health, and the relationship between income and health. After completing these readings, students worked together to co-construct shared definitions of core themes that would play a central role in their learning. Consensus definitions are available in Figure 1.

Finally, instructors delivered a presentation on the role of culture, listing aspects of culture and drawing specific attention to the differences between individualist and collectivist cultures. This presentation provided a framework for understanding that (a) all societies are shaped by culture, including the United States, (b) cultures are equally valid, and (c) we can critically assess the positive and negative functions of any culture.

Methodology

For this investigation, our team conducted secondary data analysis of student-produced work, including reflective journal entries, blog posts, and photo journaling. Based on the highly structured nature of this course, we used deductive coding to guide thematic analysis. Data were organized in a text-to-table application in Microsoft Word and coded using the procedures outlined by Ivankova (2015). Authors verified all themes and sub-themes and discussed disagreements until consensus was reached. Consistent with best practices in qualitative methodology, we used multiple methods of verification to ensure trustworthiness of the data, including peer debriefing, internal memoing, and triangulation of data sources (Birks et al., 2008; Nowell et al., 2017). Finally, we used reflexivity to clarify our own values, beliefs, and assumptions (Dodgson, 2019). This project was reviewed by the

<table>
<thead>
<tr>
<th>Terms</th>
<th>Definitions</th>
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<tr>
<td>Population health</td>
<td>The collective well-being of a community</td>
</tr>
<tr>
<td>Health equity</td>
<td>Improve access and minimize inequities through innovative strategies</td>
</tr>
<tr>
<td>Social Determinants of Health</td>
<td>Internal and external factors that influence health outcomes</td>
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</table>

*Figure 1. Terms and Definitions Definitions were based on student consensus of terms.*
University of Alabama at Birmingham Institutional Review Board and classified as quality improvement for course design.

Participants
Thirteen students participated in this travel course. The course was available to students at all degree levels and academic disciplines. The composition of the sample included the following: Undergraduate students (6), Master’s level students (6), and Doctoral level students (1). Students represented the following majors and/or concentrations: General Public Health (5), Health Behavior (2), Epidemiology (1), Health Education/Promotion (1), Biology (1), MPH/MPA (1), MPH/MD (1), and Global Health Certificate (1). Of the 13 students, nine self-identified as White, non-Hispanic; four Black, non-Hispanic; one Asian/Pacific Islander; and one Multicultural. Only one self-identified as male. Due to the small number of participants, the team assigned pseudonyms to participants to ensure confidentiality. Under the Common Rule, this project was classified as quality improvement for course design.

Setting
Panama is a country located in Central America; it is bordered by Costa Rica to the north and Columbia to the south. Panama serves as a natural land bridge that connects North and South America. Panama has a total population of approximately 4.1 million, and more than half of Panama’s residents live in the Panama City-Colón metropolitan area. The primary language is Spanish, although different languages are spoken among its indigenous populations, and the vast majority of Panamanians (85%) are Roman Catholic. One of the most prominent features of Panama is the Panama Canal, which connects the Atlantic and Pacific Oceans and serves as a strategic trade route.

Findings
Based on a review of student-produced work, our team noted that population health issues, such as health priorities and access to care, were frequently influenced by social determinants of health as well as characteristics of Panamanian culture (e.g., history, religious beliefs, social habits). Additionally, through service-learning activities, students discovered the dynamic ways in which culture can influence individual and community health practices. We derived three overall themes based on deductive analysis: (a) population health, (b) barriers to health access, and (c) cultural practices to promote health behaviors. For each theme, we provide context and representative quotes.

Population Health
Vaccinations as a National Health Priority
Prior to departure, students learned about the economic impact of the Panama Canal as well as its historical significance regarding national health policies. Students documented the heavy toll of lives lost during construction of the Panama Canal due to yellow fever and malaria, and noted that Dr. Gorgas and other physicians with ties to Alabama were sent to Panama to establish vector control, storm water runoff, and sanitation systems to protect against these highly transmissible infectious diseases.

While in Panama, students observed how these early and successful efforts with disease epidemiology “defined the culture for the acceptance of vaccina-
tions for the country.” At the Chitré Health Center, a Ministry of Health facility focused on prevention, Makay-la stated, “We were impressed to learn that they (clinic staff) immunize 95% of people (in their community), which they believe is their greatest method to preventing mortality and morbidity. They even travel to people to ensure that everyone is getting the vaccinations they need.” Moreover, this high vaccination rate extended to the HPV vaccine, which students noted has struggled to gain traction in the United States. Throughout the experience, students heard a common refrain from health officials: “It is less expensive to vaccinate than to deal with an epidemic.”

Environmental Concerns

Water and sanitation. Despite progressive policies on disease control, students detected water and sanitation issues in rural and underserved areas of Panama. Recalling a pre-trip presentation on environmental health, students described how the hydrologic cycle, or the continuous movement of water, can help safeguard water, sanitation, and food. According to Nora, “if water is contaminated in the cycle, it will flow to our supply of (drinking) water which in turn can cause illnesses to the community, including livestock and wildlife.”

In Chitré, Cole described a landfill that was adjacent to an elementary school: “They (residents) just take all of the trash and dump it in a residential area. There were a lot of livestock around, essentially sitting in the trash.” Zoe added, “The animals eat the trash… and the trash contaminates the river, which people use for subsistence fishing.” Considering Panama’s stance on preventable diseases, students seemed troubled by this disruption in the hydrologic process. Nevertheless, they recognized that clean water and sanitation remains problematic for the poor and underserved in all parts of the world.

Vector control. Panama’s tropical atmosphere contributes significantly to vector-borne diseases like dengue fever and chikungunya. In coordination with the Ministry of Health in Las Mañanitas, students accompanied Environmentalists to scan for conditions that contribute to disease spread. Zoe observed, “Three times a year, they (Environmentalists) go the residences of everyone in the community and look for standing water, because that is the breeding grounds for vectors.”

Students stated that the Environmentalists not only eliminated the standing water but took time to explain to residents how mosquitoes can harm people when they breed and carry diseases. Notwithstanding these “small wins”, students noted that efforts to mitigate vector-borne diseases were severely limited due to understaffing. Currently, there are only four Environmentalists in Las Mañanitas who serve a community of 60,000 residents.

Barriers to Health Equity

Three-tier system of care

According to students, access to health care in Panama is divided by class and socioeconomic status. The Ministry of Health primarily serves the poor and indigenous populations while the Social Security Fund serves the working class who pay into the system. Middle and upper class citizens, approximately 10% of the population, receive services from the
private health care system. Student photographs of facilities clearly demonstrated resource disparities between social classes; students noted that top-of-the-line medical facilities are only available to individuals who can pay for them.

While in Panama, students visited multiple Ministry of Health clinics that offer a wide range of services. The clinic in Las Mañanitas, for example, provides primarily preventative health care. The clinic has a limited number of health providers, and lines to see a doctor usually start at 5:00 a.m. Stella stated: Basically this one clinic and health care team serves those that are retired but do not have a pension, those that don’t work, (and) any and all who do not have the means to pay for other health services offered by the government. In addition to the size of the community, Stella described challenges to serving the community’s differing health needs including “a diversity of customs, hygiene habits, and (health) behaviors according to each group’s cultural, historic and geographic backgrounds.”

Stigma
In Panama City, students toured Hospital Santo Tomás, which provides comprehensive services to the country’s most vulnerable patients. While there, students met with an infectious disease specialist who discussed the HIV/AIDS epidemic in Panama. The speaker noted that the number of individuals who are infected with HIV is high, but those who are diagnosed, in treatment, and virally suppressed is low.

Due to religious beliefs and cultural norms, stigma related to HIV/AIDS is extremely prevalent in Panama. Paisley observed: “People who come in to get tested do not come in until the patient’s condition has progressed to AIDS in its late stages. They (patients) are often very symptomatic and very ill. This is part of why the mortality rates remain so high.” According to Gabriella, limited STI test, abstinence only education, and lack of pre-exposure prophylaxis (PrEP) further exacerbates the situation.

Proximity and cultural beliefs
There are seven indigenous tribes in Panama that represent 13% of the overall population. These individuals live in rural and mountainous regions of the country, which makes access to clinics and healthcare facilities difficult. Moreover, the vast majority of indigenous people live in extreme poverty. While visiting the Emberá tribe, Caroline noted that transportation and language were both potential barriers to healthcare. According to the chief, healthcare providers in the tribe include a shaman, herbalist, and midwife. The nearest hospital is at least an hour away, and the Emberá tribe’s primary mode of transportation is canoe.

Quoting the chief, Caroline wrote: “someone who becomes incredibly ill may present in the ED (Emergency Department) of Santo Tomás not only with their condition, but face language or terminology barriers in trying to explain the condition,” since Spanish is not their native language. Additionally, students learned that the Emberá people refer to unknown diseases simply as “cancer”, which can further delay care. Caroline concluded: “This visit (to the Emberá tribe) really challenged to me to think about where the lines of culture and medicine should cross…I have no immediate answers, but the seed has definitely
been planted to use as a frame of reference when I encounter new cultures and viewpoints both domestic and abroad.”

Cultural Practices to Promote Health Behaviors

Based on input from community partners, students engaged in service-learning with two elementary schools and one adult care facility. Health topics included oral hygiene and handwashing for kindergarten and first graders, vector control for fourth graders, and physical activity for the elderly. In the schools, students used songs and games to reinforce instructional demonstrations about healthy behaviors.

Dancing

For their service-learning activity with elderly adults, students prepared low-impact exercises that individuals could engage in from a seated position. Students were informed prior to the trip that they would be working with older patients in a waiting room area. In reality, students discovered a group of vibrant women between the ages of 70 and 85 who were meeting in a large community center. Based on this new information, students asked the women what exercises they liked to do, to which they responded, “Walking…and DANCING!”

Students plugged in a portable speaker and led the whole group through several popular dances including the Cha Cha Slide and the Macarena. One of the women in the group said, “We want to teach you our (Panamanian) dances.” Mila remarked, “Everyone was dancing, laughing, interacting, and being physically active. Language barriers deteriorated and everyone was enjoying themselves… Both groups benefited from a morning of bonding across cultures through music and movement.”

Discussion

In summer 2019, 13 undergraduate and graduate students participated in a four-week travel course to explore the complex and interrelated concepts of population health, health equity, and social determinants of health. Through observations and field experiences, students had a unique opportunity to see how historical developments, societal expectations, and cultural beliefs shaped individual health behaviors, and to begin to understand a system of care that is both similar and different from their own. Interactions with health officials and community members encouraged students to challenge their own biases and assumptions, which is a first step towards developing cultural competency (Shepherd et al., 2019).

Through visits to clinics and health facilities as well as service-learning activities, students identified strengths and challenges to health and healthcare in Panama. Students described Panama’s vaccination program as a national asset and suggested that a similar commitment to community health in the United States would strengthen the overall system of healthcare. Students also had multiple opportunities to observe and participate in the rich cultural life of Panama through dance, noting that dancing strengthens community bonds while simultaneously yielding positive health benefits to individuals.

Not surprisingly, students encountered conditions in Panama that undermined healthy living, such as water contamination and vector-borne...
diseases as well as barriers to health access based on socioeconomic status, religious and cultural beliefs, and proximity. Students acknowledged the difficulties in addressing these types of systemic issues yet expressed the belief that clean water, sanitation, and access to healthcare are basic human rights. Therefore, even as students wrestled with notions of equity and fairness, they solidified their professional commitments to caring for the poor and underserved both domestically and abroad.

Despite the short duration of this travel course, instructors used intentional pre-trip activities and readings as well as daily reflective essays to scaffold student learning (Coulson & Harvey, 2013). Learning activities were designed to provide both structure and flexibility to engage students in purposeful and active learning (Pipitone, 2018), and students’ active engagement in developing shared definitions of core concepts prior to the trip gave them greater ownership and commitment of their learning, which allowed them to more easily recognize these concepts while in Panama.

Reflective writing assignments provided students an outlet to record their observations of external expressions of culture (i.e., customs, rituals, styles) and internal expressions of culture (i.e., attitudes, habits, norms) and to discuss their relevance in terms of health behaviors (McAuliffe, 2013). This level of deep reflection compelled students to engage more fully in their own learning experience.

**Limitations**

While this qualitative investigation provides useful contextual data from undergraduate and graduate students who participated in an international study abroad program, it is not without limitations. Findings were based on the perceptions of a small yet purposeful set of students who participated in a four-week travel course; therefore, results cannot be generalized beyond program participants. Additionally, this course occurred prior to COVID-19, which undoubtedly placed additional pressure on an already under-resourced healthcare system. Attitudes and behaviors of Panamanians regarding health and health systems may have changed dramatically since the pandemic due to shifts in healthcare priorities. Finally, this investigation did not capture the perspectives of instructors, community partners, health providers, or other key stakeholders, which represents a logical next step for future research.

**Implications for Practice**

This travel course broadened students’ worldviews and allowed them to explore health behaviors and healthcare delivery through a cultural lens. Students observed health challenges that were contextually unique (e.g., canoes as primary vehicle, indigenous dialect) but which spoke to larger issue of health access (e.g., transportation, language). Moreover, they discerned how cultural norms and beliefs as well as social determinants of health contributed to health behaviors. As documented in the research literature, developing a greater understanding of cultural factors that affect health can reduce disparities in healthcare and improve patient outcomes (Betancourt & Green, 2010; Henderson et al., 2018).

Debriefing and journaling provided students a structured way to reflect on their own cultural values (i.e., reflective
awareness) and process their reactions to different cultural settings. Furthermore, students engaged in an intensive debrief once they returned to the United States and delivered a presentation for others to solidify their learning and demonstrate their cultural competency. Finally, course activities challenged students to consider the day-to-day experiences of healthcare providers in lower- and middle-income countries and gauge their interest in working under such conditions (Lichtveld, 2016).

Faculty interested in establishing an international study abroad program with a service-learning component should work closely with institutional offices of experiential education, study abroad, and/or service-learning to take advantage of their knowledge and expertise. Faculty may also benefit from a review of peer-reviewed literature regarding best practices for designing highly structured, short-term study abroad courses (e.g., Donnelly-Smith, 2009; Rohort & Fisher, 2013). If the country of interest is new to the institution, it may also be worthwhile for faculty to reach out to other institutions that have established relationships with local officials and community leaders. In Panama, these individuals served as cultural brokers for the country; the opportunities they negotiated provided both depth and authenticity to the learning experience.

Conclusion
Effective healthcare and preventive measures requires culturally competent public health and healthcare providers. Cultural competency, however, requires a deep and profound understanding of individuals who are shaped by different life experiences than one’s own. We suggest that cultural competency can be strengthened through immersive opportunities, like the one students experienced in Panama. Interactions with providers and community members in Panama encouraged students to think beyond their own experiences of public health and healthcare and consider the experiences of others.

Study abroad and service-learning activities proved to be valuable strategies for promoting student learning in the areas of population health, health equity, and social determinants of health. Through reflective writings, blogs, and photos, the travel course encouraged students to explore healthcare and health behaviors based on history, beliefs, customs, and traditions. Moreover, it challenged students to reflect on their own biases and assumptions and commit to standards of professional integrity as emerging public health and health practitioners.

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