Student Perception of Travel Service Learning Experience in Morocco

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Abstract

Purpose: This study explores the perceptions of health profession students participating in academic service learning in Morocco with respect to adapting health care practices to cultural diversity.

Methods: Authors utilized semi–structured, open–ended interviews to explore the perceptions of health profession students. Nine dental hygiene and nursing students who traveled to Morocco to provide oral and general health services were interviewed. After interviews were recorded, they were transcribed verbatim to ascertain descriptive validity and to generate inductive and deductive codes that constitute the major themes of the data analysis. Thereafter, NVIVO 8© was used to rapidly determine the frequency of applied codes. The authors compared the codes and themes to establish interpretive validity. Codes and themes were initially determined independently by co–authors and applied to the data subsequently. The authors compared the applied codes to establish intra–rater reliability.

Results: International service learning experiences led to perceptions of growth as a health care provider among students. The application of knowledge and skills learned in academic programs and service learning settings were found to help in bridging the theory–practice gap. The specific experience enabled students to gain an understanding of diverse health care and cultural practices in Morocco.

Conclusion: Students perceived that the experience gained in international service learning can heighten awareness of diverse cultural and health care practices to foster professional growth of health professionals.

Keywords: service learning, culture, inter–professional healthcare, health professions and access to care

This study supports the NDHRA priority area, **Health Promotion/ Disease Prevention:** Investigate how diversity among populations impacts the promotion of oral health and preventive behaviors.

Introduction

The vision of this pilot study was to understand student perceptions of service learning experience in a foreign country. The authors endeavored to collaborate with the Volunteer Morocco Organization to incorporate an oral health component in their academic service learning program. At the benefits of participating with the Volunteer Morocco, an interdisciplinary team was already established in Morocco, with supervisors who facilitated with transportation and government's rules and regulation besides offering scholarships. The members of the organization who speak languages of Morocco and know its culture accompanied the students throughout the trip.

The authors trained nursing and dental hygiene students at the Esther M. Wilkins Dental Hygiene Clinic at Massachusetts College of Pharmacy and Health Sciences–Forsyth School of Dental Hygiene. The dental hygiene school established a prevention clinic to provide oral health education and fluoride varnish to children and adults. All of the students applied this education and training in Morocco to lead oral health clinics. They also provided care to the underserved in health clinics, hospital and orphanages. Donated oral health aids, such as brushes, floss, toothpaste and fluoride varnish from dental companies were instrumental in addressing the oral health needs of the population. A minority of the participants had previous service learning experience, and few had served abroad.

The literature points to the benefits of travel service learning in terms of bridging a perceived theory–practice gap, taking advantage of inter–professional learning, meeting the needs of under–resourced communities needing improved health care, addressing ethical dilemmas associated with these communities, and aiding in professional growth.

Service Learning

Jacoby defines service learning as "a form of experiential education in which students engage in activities that address human and community needs together with structured opportunities intentionally

designed to promote student learning and development."[1] Yonder noted that integration of service learning in dental and dental hygiene education encourages graduates to work effectively with diverse populations and function dynamically in the arena of health policy.[2] Service learning is a significant national movement at all educational levels, and is particularly important in undergraduate education. It is widely recognized that connecting academics with community service through structured reflection contributes to deeper learning, is longer lasting and more applicable to new situations.[3]

In a qualitative study, the outcomes of a special needs service–learning course for dental hygiene students were evaluated. Student/faculty reflections and community coordinator feedback were employed to determine that service learning led to a deeper understanding of the subject and provided opportunities for increased awareness of professional and social issues associated with the oral care of special needs patients.[4] Lautar reviewed the literature on service learning to recommend that dental hygiene educators need to embrace the philosophy of service learning to lead its integration in the curriculum.[5] Tonkin and Quiroga noted that international service learning led to cultural integration, broadened horizons and prepared students for global citizenship.[6] Activities such as experiential and reflective learning in such settings have been found to enable students to acknowledge underling "differences" and to develop a sense of global citizenship.[7]

Interdisciplinary Collaboration

The complexity of health issues experienced by patients makes it difficult for one discipline to provide comprehensive care to individuals. The interdisciplinary learning methodology invites learners from varied disciplines to work closely together to contribute their knowledge, skills and experiences.[8] The Institute of Medicine (IOM) recommends that health professionals practice in inter–professional teams.[9] The complexity of the medical issues experienced by patients today warrants inter–professional collaboration.[10] An inter–professional health care approach can enable providers from each discipline to achieve the shared goal of augmenting a patient's health.[10] In one series of 3 articles, authors emphasized dental and medical collaboration.[11–13] Cross–disciplinary training and increased collaboration between dentistry and other health professionals can better address the needs of elderly, individuals with intellectual and developmental disabilities and other special needs.[11] This gains in significance given that a decline in the number of dental providers per capita has reduced access to dental care among disadvantaged and special needs groups. One approach suggested to alleviate this was to train medical providers to prevent diseases of the oral cavity.[13] Partnerships with medical providers can be further strengthened, by re–emphasizing the importance of general health in dental education.[12]

Cross–Cultural Awareness

An IOM study recommends integrating cross–cultural education into the training of practicing and future health care providers.[14] Service–learning opportunities to dental students in diverse communities can enrich an awareness of varied cultural influences interwoven in treatment decisions.[15] After a set of baccalaureate students enrolled in a community health nursing course with a service learning component, students perceived an increase in their cognitive, affective and practical faculties.[16] Rubin found that service learning–based models and reflective journaling in non–dental public health settings led to better cultural understanding among dental students.[17] The institution of cultural competence in the process of care is instrumental in providing optimal care.[18] In a multicultural society, cross–cultural education strategies and peer/patient interactions within curricula promote competency in providing cross–cultural care among students.[19] Dental hygiene students need to play a key role in seeking solutions to eliminate health care disparities.[20]

Access to Care in Morocco

Significant health disparities exist within the health care system in Morocco, a country with a shortage of health care professionals. The World Health Organization (WHO) has reported that in Morocco the condition of dental caries affected 72% of children under 12 years, 82.5% of adolescents 15 years old, and 97.7% of adults between 35 and 44 years.[21] Using a scale of 2.5, 2.5 to 5.0 and 5.0 or more per 1,000 population to identify the density of health workers as low, medium or high, respectively, WHO found health workers in Morocco was rated from 1.4 to 1.9 between 1996 to 2006.[22] Clearly, Morocco was found to suffer from a chronic shortage of health care workers.[22,23]

While research has pointed to the potential benefits of cross–cultural training and academic service learning in dental and dental hygiene student training, student perception is currently understudied. To explore student perceptions of inter–professional–oriented, academic service learning in a region with evident and pressing needs, the authors conducted this qualitative study. This study explores the perceptions of health profession students participating in academic service learning in Morocco with respect to culturally diverse health care practices.

Methods and Materials

This study explores the perceptions of health profession students participating in academic service learning in Morocco with respect to adapting health care practices to cultural diversity. The authors utilized semi–structured, open–ended interviews to explore the perceptions of health profession students.

Participants and Procedures

Participation in this study was open to all students in the college consortium, who were invited to participate in this project. Participation was voluntary and privately funded by the participants. Nine students, 8 female and 1 male, who agreed to participate, were recruited from 2 institutions in a Northeastern state of the U.S. The participants' age ranged between 19 and 23 years with a mean age of 21 years. Eight participants (89%) were White Caucasian and only 1 (11%) Asian. The majority of the participants are from a middle socio–economic class – they attend private college and were able to fund their trip to Morocco. The study subjects represented dental hygiene and nursing majors. Eight participants (89%) represented nursing discipline and only 1 (11%) represented dental hygiene. The subjects were recruited via email invitation, and reminders were sent to increase the response, which was 100%. All 9 participants who travelled to Morocco volunteered to participate in the study. The purposeful study sample adequately captured the heterogeneity of this group.[24,25]

The research employs a qualitative design to understand student perceptions of their academic service learning experience in Morocco. In January, 2011, approximately 2 weeks after student's return from Morocco, data was collected via a semi–structured interview protocol with open–ended questions. The questions were aimed at understanding the perceptions of students regarding access to care issues in Morocco, their view of the significance of inter–professional collaboration, and their views regarding the impact of diverse cultural and health care practices on their growth. The researchers recorded the interviews verbatim for data analysis. Each interview was 60 minutes in length, and cumulatively generated approximately 200 pages of data (average line count of 30) that was analyzed systematically. Institutional Review Board approval was obtained for this study.

Data Analysis

Several steps were implemented to ensure the validity of the study. Interviews were transcribed verbatim to assure descriptive validity. Deductive codes were derived from theories employed and literature sources, and inductive codes emerged from unanticipated themes and concepts after a careful reading of the data. Theoretical validity was ascertained by comparing themes emerging from interview data with established research noted above. Interpretative validity was determined by comparison and verification of independently determined codes and themes, prior to independent application on raw data. The authors compared codes to establish intra–rater reliability, with 95% agreement. The software NVIVO 8© was used to determine the frequency of codes rapidly.[26]

Results

The results describe major themes and subthemes found for student perceptions of the service learning experience in Morocco. Table I summarizes the results based on the interviews of 9 participants who traveled to Morocco.

Internal Motivation to Serve Underserved Countries

Motivation to serve emerged as a code during the analysis of the data. We define motivation as an internal aspiration to provide care to the underserved. Motivation inspired participants to pursue the academic service learning opportunity. One hundred percent of the participants were motivated to serve in underserved areas. Participant 5's enthusiasm was typical: "I have always believed in just giving back to the community. When I was little, [with] my father, we went to India and we did a volunteer mission in India and I helped the way I could." Similar interest was echoed by participant 2 "I went to India with my aunt's] family and I saw a lot of the poverty, and I saw [how] my uncle used to be in a health clinic, and I kind of wanted to do that work helping people." Overall, a personal motivation to serve the underprivileged in a foreign land encouraged participants to serve in Morocco.

Bridging Theory Practice Gap

A second theme that emerged during analysis focused on "bridging the theory–practice gap." This is defined as an opportunity to serve a community by applying knowledge learned. Eighty nine percent of the participants noted that the academic service learning provided a platform to apply knowledge learned in their programs. Participant 5 said:

"So we had a health clinic, we had to do blood pressure and I remember every lab, you do blood pressure and you have to listen… You have to begin an assessment for vital signs, so we were doing that in Morocco."

The experience gained in Morocco inspired 89% of the participants to apply learning to health care

Table I: Themes and Sub–themes Derived from Qualitative Analysis, with Illustrative Data

Major Themes	Subthemes
Internal motivation to serve underserved countries	
Bridging theory–practice gap	• Applied knowledge gained at school • Apply experience from academic service learning to healthcare, academics and professional life in the US
Bridging inter–cultural gaps and the urban–rural divide	• Language Barrier • Cultural shock • Adaptation to a different culture • Difference in village and city culture • Difference in US and Moroccan culture and health care
Inter–professional learning and collaboration	
Lack of access to care and ethical issues	
Professional growth as a health care provider	

practice, academics and professional life in the U.S. Participant 4 noted:

"I'll apply everything I have learned about the culture there to my healthcare. What I learned from the doctors, taking your time… being very comprehensive in your assessment. Which I know, I have learned here in class and everything, but that was the first time I have really seen it in action."

Participant discourse suggests that knowledge learned about the culture, religion and health care practices in Morocco was considered invaluable and inspired them to apply this knowledge in their home country. Their descriptions testify to a bi–directional learning experience by which the theory–practice gap is narrowed through the application of academic knowledge in experiential learning abroad (in this case Morocco), whose lessons in turn come back to inform both academic learning and health care practice at home (in the U.S.).

Bridging Inter–Cultural Gaps and the Urban–Rural Divide

A third theme emerged – participants' noted significant differences in health care practices related to differences between U.S. and Moroccan culture. Among them, they illustrated language was as a barrier. Differences between village/city life and health care practices were also noted. Despite the evident cultural differences, participants were successful in adapting to the new culture. Fifty–six percent of the participants shared perceptions of "culture shock," but it is important to note again that most of these students had not previously traveled abroad. Participant 1 describes being taken aback by elements of the Morrocan countryside:

"When we finally started the health clinic, the one into the countryside, it was shocking and a little bit hard to handle, just because of the culture shock of anywhere between, using different kind of toilet or having little kids in the clinic, run up to you and beg you for a toothbrush."

In general, significant differences were noted between city and village culture and health care practices by 67% of participants. Participant 5 lamented inequalities in resources and access to care:

"The government spends more money for healthcare in the cities… There are many people in the real villages, who live three hours from the city and don't have the car and they can't get there. So, to go to the city, it's a big thing. They only got to go once a year maybe. And there are lots of dispensaries to provide healthcare to the patients in the villages, but they are understaffed and under–stocked. The patient might need emergency care, but they can only get like primary care at the dispensary or very limited emergency care in the village and many women… they deliver their own babies in the villages. They don't have an OB doctor who can come out to the village and see them. They just don't have it and that's what they are used to."

The participants were not well versed in Arabic or French. Participant 7 expressed a universal sentiment (100% of the participants) about the difficulties presented by a language barrier:

"In terms of working with the other doctors or other professionals on like many of clinics, it was a challenge, I think at times mostly because of the language barrier, because none of us from the trip, one person spoke Arabic, but none of us were really even knew any words of Arabic or French, so that was definitely a challenge."

Seventy–eight percent of the participants noticed differences in U.S. and Moroccan health care practices. For example, participant 4 noted:

"We worked with a lot of Moroccan physicians, and pharmacists and nurses and I noticed that they all work at a very slower pace, which doesn't mean they weren't providing good care, but here as you know, it's very fast paced and rushed and everyone's stressed and tensed."

Despite the evident differences in the cultural practices 100% of the participants had managed to adapt well to the Moroccan culture. Participant 4 captures this aspect quite well:

"I felt like when I came back here, I kind of missed everything taking showers that weren't showers, there were bucket bath, my first shower back was like, now I feel adapted back to American culture, which I never thought in two weeks you would become so comfortable with a different culture that you have to adapt to your own culture."

The majority of the participants were successful in adapting to Moroccan culture despite a language barrier, a period of culture shock and evident differences in culture and health care practices.

Inter–professional Learning and Collaboration

Academic service learning provided numerous opportunities for participants to practice health care in an inter–professional environment, which appeared as another major theme in our results. The participants collaborated and learned from a variety of health care occupations (for example, from physicians, nurses, pharmacists and peers) involved in varied professions such as medical sub–disciplines (including dental hygiene, nursing, pharmacy and communications). Dental hygiene students worked in hospital settings, and nursing students provided oral care instructions and applied varnish to children and adults. These experiences were considered significant to their learning and growth by 100% of the participants. Participant 7 noted a greater appreciation for the benefits to the patient from inter–disciplinary collaboration:

"We were working with so many different professions over there that it just gave me more experience in terms that I can then apply back here when I am working with different professions. So I think having opportunity [to] interact with other departments, was [a] good experience. It made me more aware of how important it is for all departments to work together, and all disciplines were necessary for the care of the patient."

Participant 9 noted the value of inter–professional learning from a dental hygiene peer "the dental hygiene student was very helpful during the ... dental [clinics]. It was really helpful to have them show us like the techniques and explain how we're supposed to do things."

The participants noted the value of inter–professional health care practices in providing optimal care to the patients in oral and general health settings, such as oral/general health clinics and hospital.

Lack of Access to Care and Ethical Issues

In this study, all of the participants noted a lack of access to health care resources in both Moroccan cities and villages, another major theme. As mentioned above, this lack of access was far more evident and significant in the village. Participant 1 noted:

"In the village, you couldn't get to everybody. There were… men standing in front of doors to hold all of the people from trying to get in, to see doctors, and there were people who were always just demanding prescriptions… we did run out of toothbrushes and so these kids were just distraught, but that was hard… It was especially hard in the city because going to the hospital, I completely expected less…didn't think they'll have all that kind of technology, but it was so much more than that… the amount of people coming to this one hospital and for that amount of people, it was very small hospital."

Participants recognized that across the board health care resources – providers, clinics, hospital beds, etc. – were inadequate to meet the needs of the population both in the city and village.

The participants described varied instances of unethical issues observed in the Moroccan health care environment. Participants noted that health care providers could be bribed to prioritize care. As participant 7 observed:

"In the emergency room in Morocco, you were seen based on if you could slip the guard money. For example, we had a patient who was having an asthma attack and she was just kind of left there even when she fell out of her chair, she was just left on the ground. It was us who went over and picked her up."

A lack of resources created an environment ripe for ethical issues to arise. For instance, participant 7 described an instance where up to 4 babies were forced to share an isolate in the Neonatal Intensive Care Unit (NICU) and were not hooked up to appropriate monitoring/ medical devices:

"So I did a day in the NICU… they had four babies in each isolate… usually it's one baby per isolate… they didn't have ventilators for them. They had probably one cardiac machine that was like monitoring their one baby's heart rate. So they have an average of about 5 to 6 deaths per day in the NICU."

Here a lack of equipment became a matter of an infant's life or death. Ethical dilemmas such as these, as well as the aforementioned corrupt practices (such as bribery) which all lead to serious implications for health care practices in Morocco, left an indelible impression upon participants.

Professional Growth as a Health Care Provider

A substantial 78% of the participants saw the opportunity to provide inter–professional health care services under supervision in a foreign environment as a growth experience. Participant 1 explicitly commented with enthusiasm that "it was interesting and also a growth experience, you get to see different things and especially in the clinic it was really cool." Participant 6 appreciated the opportunity to lead a health clinic:

"I would never be allowed to run a clinic [in the U.S.]…. what it's really shown me is that I would love to move on with my education. I would love to go on, become a nurse practitioner or maybe surgical nurse practitioner, so I would have a broader scope for practice, it's… pushed me."

Without exception, the participants perceived their academic service learning experience as a significant factor in their growth as a health care provider. The opportunity to lead oral health clinics, observe varied medical procedures and learn new skills inspired them to pursue higher education in the future.

Discussion

Internal Motivation to Serve Underserved Countries

Internal motivation to serve the underserved population in a non–native country inspired participants to seek the Morocco service learning project. They embraced the opportunity to serve abroad despite a lack of previous service learning experience among a majority of the participants. The sources of motivation were familial influence and internal motivation. Family's engagement in community service as well as personal motivation of the participants inspired them to seek academic service learning opportunities in underserved countries.

Bridging Theory Practice Gap

The academic service learning experience provided innumerable opportunities for the students to apply learning from their academic programs. The inter–professional oral health education received at the Forsyth clinic encouraged participants to lead oral health clinics where fluoride varnish and oral health instructions were provided. Within the hospital settings participants were trained and encouraged by practitioners to provide services such as intra muscular injections, sutures, casts and assistance with deliveries. These experiences further enhanced their knowledge and skills. Upon return to U.S., the participants indicated an increased comfort with patient care and valued the clinical experiences gained in Morocco. The bi–directional learning experience bridged the theory–practice gap as the academic service learning experience provided numerous opportunities to apply knowledge and skills learned in Morocco and the U.S.

Bridging inter–cultural gaps and Inter–professional Learning

Participants experienced varied cultural differences between U.S. and Moroccan culture related to lifestyle, resources, beliefs, language, religion, health care and cultural practices. These factors contributed to cultural shock initially, but participants successfully adapted to the new culture. In fact, some of the participants immersed themselves so completely that they felt they missed the Moroccan culture and lifestyle upon return to U.S. Rubin found that service learning based models in non–dental health settings enhanced cultural understanding and community spirit among students.[17] International service learning can enable students to grow as culturally sensitive providers by increasing their understanding of diverse cultural and healthcare practices.

The Institute of Medicine (IOM) recommends health care providers to practice in inter–professional teams.[9] The complexity of the medical issues experienced by patients today warrants inter–professional collaboration.[10] The participants collaborated and learned from varied health professionals, such as nurses, pharmacists and physicians. The oral health training acquired by the nursing students at the Forsyth clinic enabled them to provide oral care to the Moroccan population. The dental hygiene student, in addition to leading oral health workshops, took the opportunity to understand the general health practices in the Moroccan hospital, health clinics and orphanage. The inter–professional practice experiences encouraged participants to value inter–professional collaboration in improving the

health of the public. Results suggest service learning experiences can prepare students to function effectively in an inter–professional health care arena.

Lack of Access to Care and Ethical Issues

The lack of access to dental care in the village became clear from the sheer number of people seeking care at the local oral health clinics organized by the Volunteer Morocco organization. The WHO reports that dental caries affect 72% of children and 97.7% of adults in Morocco.[21] Approximately 700 people arrived seeking care at the oral health clinics where students led the program. Services included providing fluoride varnish, oral health instructions and oral health aids such as brush and floss. Many were unable to access care due to a shortage of providers and oral health aids. Morocco has a chronic shortage of health care providers, as the density of health care workers was 1.4 to 1.9 from 1996 to 2006, respectively.[22,23] The city hospital's lack of providers and medical resources led to various ethical issues such as lack of medical/monitoring devices in the NICU, single NICU isolet shared by approximately 4 infants, approximately 5 to 6 deaths in the NICU and overcrowded maternity wards where suction was used to expedite deliveries. Participants raised ethical concerns when a physician in the Intensive Care Unit ignored the needs of a patient undergoing a severe asthma attack to provide care to patient with a small cut after receiving a bribe. Issues related to access to care in the underserved countries can be addressed by implementing international service learning programs such as Volunteer Morocco. These programs can not only increase access to providers and resources but also heighten cultural awareness of the providers.

Professional Growth as a Health Care Provider

Service learning is defined as a form of experiential education where in students engage in activities that address community needs along with structured opportunities aimed at promoting student learning and development,[1] The participants acquired new clinical skills and applied education and skills learned in their programs to address community needs in Morocco. These experiences not only increased their knowledge but also inspired many to pursue graduate education. The study findings indicate that international service learning in a diverse cultural environment fosters professional growth of the participating students.

The results of the study enable researchers to imply that it is feasible to award academic credit for service learning within nursing and dental hygiene programs. This can further encourage students to pursue academic service learning that results in greater understanding of diverse cultural and health care practices.

Limitations

The aim of this research was not to look through the gendered lens. The under representation of male students might be a potential limitation of the study. The researchers acknowledge that this under representation might have skewed some gender patterns. This aspect is worth exploring in future research. This is a qualitative study based in Morocco and may not be generalized. The vast majority of the participants were primarily females, White Caucasians and from a middle socio–economic class. The similarity of participants in age, ethnicity, gender, socio–economic status and educational background may constitute an additional limitation to this study. The authors acknowledge that lack of diversity in the students' characteristics could have influenced the culture lens of the participants. It is recommended that future studies could include a diverse population.

Conclusion

Student participating in the study perceived international academic service learning as effective in promoting inter–professional collaboration in diverse settings. They felt that an increase in international health care providers in the underserved countries could help resolve some of access to care issues. From student perceptions, the study identified the application of knowledge and skills learned in the academic programs and academic service learning settings was commonly perceived to be a means of bridging the gap between theory and practice. The academic service learning experience emerged as a way to heighten awareness of diverse cultural and health care practices to foster professional growth of health professions students. The opportunity for this pilot project presented itself and there was a dental hygiene need in Morocco that the authors could fulfill to emphasize cultural diversity and interdisciplinary teamwork. In the future, the authors will use the data from this pilot study to establish service learning programs locally, regionally, nationally and internationally.

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