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SHORT COMMUNICATION

Cultural Sensitivity and Learning About Healthcare Equity for the Underserved: Experiential Learning in a Student-Run Free Clinic

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Abstract

With increased diversity in the USA comes a growing need to educate medical students on how best to manage diverse patient populations. Medical students on the board of a student-run free clinic (SRFC) were surveyed to determine how such a leadership experience might alter students' cultural sensitivity as it relates to healthcare equity. Forty-six students (42.2% response) reported their experiences helped them better understand patient's needs (4.37, 0.64; mean, SD), cultural barriers (4.44, 0.55), and racial/ethnic disparities (4.27, 0.70). Thus, service on the board of a SRFC improves cultural sensitivity.

Keywords Student-run free clinic · Cultural sensitivity · Experiential learning · Medical students

Background

Cultural sensitivity training remains an integral component of medical education. A medical provider's understanding of a patient's culture and perspectives with regard to their illnesses and treatment options has the potential to improve both patient satisfaction and adherence, ultimately improving patient outcomes [1, 2]. In 2000, the Liaison Committee on Medical Education (LCME)[3], the accrediting body for medical schools in the USA and Canada, introduced a standard of cultural competence with two goals: (1) to promote medical schools' responsibility to educate their students and faculty in the ways that different cultures/belief systems perceive health and illness and (2) to encourage students to recognize and address biases in healthcare delivery while maintaining the health of the patient as the priority. Service learning has been shown to be an effective tool in cultural competence and healthcare disparity education for nursing education [4–8] and graduate medical education [9, 10]; however, few studies have examined such benefits among medical students [11, 12].

Student-run free clinics (SRFC) are common in medical schools across the country. A study by faculty members at the University of California, San Diego, found that 106 of the 141 Association of American Medical College (AAMC) member institutions house student-run free clinics [13]. Extensive research has demonstrated the benefits SRFCs have on the care of the underserved populations they serve, namely, the impoverished, homeless, and undocumented populations [14–21]. However, the relationship between volunteering in SRFCs and development of cultural sensitivity among medical students has not yet been elucidated, particularly among students who hold leadership roles within these clinics.

Medical students have the opportunity to both volunteer and lead operations of SRFCs which serve different underserved and uninsured patient populations of various cultures, races, and ethnicities. This clinical experience may represent an underutilized opportunity for educating medical students on the management of culturally diverse patient populations via a hands-on experience.

This study explores whether service on the executive board of a SRFC serves as a valuable educational intervention for improving students' cultural sensitivity, especially with regard to healthcare equity.

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Activity

Institutional review board (IRB) approval was obtained from University of Central Florida's IRB office for this study. The IRB number is SBE-15-11590.

Setting

Second year medical students who served as SRFC board members from 2013 to 2018 completed an online voluntary de-identified survey at the conclusion of their 1-year term.

The student-run free clinic (KNIGHTS Clinic) operates bimonthly in downtown Orlando, Florida, a very culturally diverse location. The clinic is led by a student board of second year medical students at the University of Central Florida College of Medicine (UCFCOM). Medical students (across all four years of the curriculum) work with local counseling, social work, and pharmacy students as well as Orlando community physicians to provide both primary and specialty care to uninsured patients in the greater Orlando area. The clinic executive board consists of 29 second year medical students, roughly 25% of the second-year class. The executive board carries out all in-clinic and out-of-clinic operations, including but not limited to recruitment of physicians, student volunteers, and patients; patient scheduling; point-of-care services (e.g., labs, prescriptions); patient education; and fundraising and community relations.

Survey Tool

The survey contained 10 items. Two (2) items related to previous experiences as in Table 1, six (6) items related to cultural sensitivity as in Table 2, and two (2) items related to the experience's effect on the medical education experience as in Table 3. Students were asked to rate how strongly they agreed with statements assessing various aspects of cultural sensitivity, including understanding patients' needs, the need for counseling on lifestyle changes, common cultural barriers to healthcare, racial and ethnic disparities in healthcare, and issues associated with providing healthcare to the underserved. Students were also asked about how the clinic improved their medical skills, their overall education experience, and their ability to become a good, patient-focused physician. Responses were scored on a 5-point Likert scale (1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree). The survey was content-validated by five fellow students, three faculty members at the College of Medicine, and two lay people.

Data Analysis

Descriptive statistics including mean, SD, minimum, maximum, and median of the responses for each statement were calculated using Microsoft Excel. The differences between students with or without prior experience working in free clinics and those with or without uninsured family members or friends were studied in Microsoft Excel using an independent-samples *t* test with a significance level set at $\alpha = .05$. The average score for each response was calculated by averaging the scores among all the students for each particular item.

Results

Forty-six out of 109 student executive board members responded to the survey (response rate = 42.2%).

Prior Student Experiences (Table 1)

Eighteen students (39%) had prior experience working in free clinics, and fifteen (33%) had family or friends who are uninsured.

Cultural Sensitivity (Table 2)

Students reported that serving in the student board of a SRFC helped them better understand patient's needs (M = 4.37, SD = 0.64), importance of patient lifestyle counseling (M = 4.32, SD = 0.79), common cultural barriers to healthcare (M = 4.44, SD = 0.55), ethnic/racial disparities (M = 4.27, SD = 0.70), and other issues associated with providing care for the underserved (M = 4.61, SD = 0.49).

The average student score for improvement of cultural sensitivity (Statements 1-6, Table 2) was 4.45 ± 0.51 (minimum = 3.5, maximum = 5). Next, we analyzed whether the cultural sensitivity scores were different

Table 1 Prior experiences of the medical students on the student board of a student-run free clinic

		Yes N(%)	No N(%)
Statement 1	Have you volunteered in a free clinic before being part of the KNIGHTS Clinic Board?	18 (39)	28 (61)
Statement 2	Do you have any friends or family members that are uninsured?	15 (22)	31 (67)

Absolute numbers and percentages are presented for respondent who chose yes or no as the answer to the items

Table 2 Effect of serving in the medical student board of a student-run free clinic on cultural sensitivity

		Mean	Std dev	Min	Max
Statement 1	Being part of the KNIGHTS Clinic board has helped me identify patient's needs and explore how they can be met.	4.37	0.64	3	5
Statement 2	Being part of the KNIGHTS Clinic board has improved my understanding of the need to counsel patients on lifestyle changes.	4.32	0.79	3	5
Statement 3	Being part of the KNIGHTS Clinic board has improved my capability of becoming the good doctor.	4.54	0.62	3	5
Statement 4	Being part of the KNIGHTS Clinic board has helped me understand common cultural barriers to healthcare in our community.	4.44	0.55	3	5
Statement 5	Overall, being part of the KNIGHTS Clinic board has helped me understand racial and ethnic disparities in healthcare.	4.27	0.70	3	5
Statement 6	Being part of the KNIGHTS Clinic board has helped me understand the issues that are associated with providing healthcare to the underserved.	4.61	0.49	4	5

Responses to items 1 through 6 were scored on a 5-point Likert scale that were converted as follows: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

based on additional baseline student experiences. There was no significant difference in the cultural sensitivity score between those who had worked in free clinics prior to clinic (M=4.43, SD=0.55) and those who had not (M=4.51, SD=0.48), $t(44)=0.538$, $p= .594$. There was also no significant difference in the cultural sensitivity score between those with uninsured family and friends (M=4.45, SD=0.53) and those without (M=4.49, SD=0.50), $t(44)=0.244$, $p= .809$.

Overall Effect of the Experience (Table 3)

Students felt that their participation in the clinic executive board contributed to improvement in their medical skills (M = 4.09, SD = 0.69) and was a valuable educational experience (M = 4.57, SD = 0.58). When comparing these two concluding statements using a paired *t* test, there was a statistically stronger level of agreement with the statement that being on the board was a valuable education experience (M = 4.57, SD = 0.58) than the improvement in medical skills (M = 4.09, SD = 0.69), $t(45) = 4.90$, $p < .001$.

Table 3 Effect of serving in the medical student board of a student-run free clinic on medical education experience

		Mean	*Std dev*	*Min*	*Max*
Statement 1	Being part of the KNIGHTS Clinic board has improved my medical skills.	4.09	0.69	3	5
Statement 2	Being part of the KNIGHTS Clinic board has been a valuable education experience.	4.57	0.58	3	5

Responses to items 1 and 2 were scored on a 5-point Likert scale that were converted as follows: 1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

Discussion

Medical students serving on the executive board of a SRFC reported increased cultural sensitivity as it relates to healthcare equity for the underserved. Our study shows that while all characteristics of cultural sensitivity were improved, the greatest improvement was observed in the understanding of health equity for the underserved. This finding is not surprising because students received comprehensive training focused on providing care for the underserved, which is shown to increase desire and a sense of responsibility to provide equitable care [12]. This education was accompanied with an increase in knowledge about the special needs of this population, including counseling on lifestyle changes using culturally sensitive interventions. This finding is very significant since culturally sensitive interventions in a free clinic are essential for providing effective medical care [22, 23]. Students also reported increased understanding in racial and ethnic disparities, albeit to a lesser extent than with the other statements. This finding may suggest that additional training may be required to further enhance students' abilities to provide care to patients with varied ethnic and racial backgrounds.

There was no difference in improvement in cultural sensitivity between students with and without experience with free clinics as well as with and without uninsured friends and family. This finding is interesting because we were expecting that those with prior experience in free clinics or uninsured loved ones would demonstrate less perceived improvement in cultural sensitivity, since they began with exposure, and likely sensitivity, to the cultural and socioeconomic barriers to care that our patients experience. It is possible that an increase in the power of the study would yield different results. To our knowledge, stratified measurement of cultural

sensitivity based on previous experience in free clinics and insurance status of loved ones has not been explicitly studied. Most students strongly agreed that their time in the clinic improved both their understanding of the issues associated with providing care to the underserved.

One of the study limitations is that the data collected is subjective, perceptual data. We recognize that objective evaluation of students' cultural sensitivity skills, both before and after leadership on a SRFC executive board, would greatly strengthen the conclusions of this paper. Additionally, one might argue that students who volunteer in the leadership of SRFCs would be preferentially inclined toward health equity and justice and thus would over-estimate cultural sensitivity development of the general medical student population. To account for this potential skew, participants in this study were asked to rate their perceived change in various cultural sensitivity and how much KNIGHTS Clinic helped them develop this change, rather than rating their perceived cultural sensitivity level at a single point in time.

Students reported that their participation in the clinic board contributed to improvement in their medical skills and was a valuable education experience (with the later statement having significantly higher scores). These data suggest that the value of serving on the board of the clinic provided an educational experience that extended beyond traditional medical education within a classroom. Outside the scope of traditional medical education lie humanistic skills such as cultural sensitivity and ethical decision-making [17], thus providing a strong argument that work in a free clinic is valuable to the development of these skills. In conclusion, medical students serving in the executive board of a SRFC reported improvements in cultural sensitivity. This experiential hands-on approach could be used by other institutions to target future physicians with the goal of improving cultural sensitivity for the underserved.

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Author Contribution M.P. devised the project and collected the data. K.B., K.P., K.B., and S.L. each contributed substantially to data analysis and interpretation. All the authors discussed the results and contributed to the final manuscript.

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Data Availability The datasets generated and analyzed during the current study are available from the corresponding author, M.P., on reasonable request.

Declarations

Conflict of Interest The authors declare that there is no conflict of interest

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