

## ABSTRACT

As a result of the increasing diversity of the United States, it is imperative that physicians understand and acknowledge the need to be culturally competent while treating their patients. The Global Health Seminar was a course offered at six different medical schools. Prior to the start of the course the participants took a pretest where they answered several questions giving insight on their self-reported competencies. After completing the course, a post test was given where the participants again gave their self-reported competencies. Both cultural and competency scores improved indicating positive learning outcomes as a result of the class.

## BACKGROUND

Due to the increase in population diversity in the United States, doctors must comprehend cultural competency and collaborative skills to effectively treat their patients. Crucial factors contributing to a disease can be missed without the understanding of language barriers, diets, living conditions, and traditional beliefs.

## OBJECTIVES

The demographic and culture of an individual may be related their perspective and self-reported responses to competency development in a global health seminar course survey. The objective of this study is to explore the relationship between demographic factors and self-reported levels of competencies through a pretest and posttest. Results will provide insight to improve teaching and learning.

The hypothesis is there will be a significant increase in cultural and general competencies associated with Global Health Seminar completion.

## METHODS

- The research population consisted of 82 medical students from six medical schools including Edward Via College of Osteopathic Medicine (Virginia, Alabama, and Carolinas campus) in the U.S., UNITEC in Honduras, INTEC in the Dominican Republic and UEES in El Salvador. Students were required to meet three criteria: English proficiency, self-selected application and approval of the school Dean.
- Four global health topics included population, nutrition, infectious disease and water access. The course used a weekly discussion-based format and a monthly videoconference session with all six institutions. During the videoconference, students from each institution presented their solution to a case followed by a group discussion. A 61-item pretest and posttest survey was administered using a 10-point Likert scale (1=None, 10=Very High).

## RESULTS

Two competency scales were analyzed both independently and in comparison with two demographic factors using a Oneway ANOVA. The means for the General Competencies scale prior to completion of the course was 6.52 and after completion was 8.32. The Cultural Competencies prior to completion was 6.39 and after completion was 8.33. Both general and cultural competencies differences in means were statistically significant with  $p < 0.001$ .

For self-reported *Ethnicity* (including Caucasian, African-American, Hispanic, Asian and other), there was a statistically significant difference on Cultural Competencies on the pretest ( $p=0.012$ ) but not a significant difference on the posttest ( $p=0.556$ ). There was no significant difference for General Competencies at  $\alpha=0.05$  on the pre and posttest.

By *Campus*, there was no significant difference at  $\alpha=0.05$  for General Competencies on the pretest and posttest. The p-values for Cultural Competencies were significant by *Campus* on the pretest ( $p=0.007$ ) and posttest ( $p=0.034$ ).

Oneway ANOVA	Pre-Test (N=82)	Post-Test (N=821)	P-value (<0.05)
General Competencies	Mean = 6.52	Mean = 8.32	<0.001
Cultural Competencies	Mean = 6.39	Mean = 8.33	<0.001
General Competencies by Ethnicity	P value = 0.871	P value = 0.482	N/A
Cultural Competencies by Ethnicity	P value = 0.012	P value = 0.556	N/A
General Competencies by Campus	P value = 0.302	P value = 0.225	N/A
Cultural Competencies by Ethnicity	P value = 0.007	P value = 0.034	N/A

## Conclusion

The statistically significant difference between the pretest and posttest for Cultural and General Competencies indicate positive learning outcomes and acceptance of the research hypothesis. For *ethnicity*, the lack of significant differences on the posttest ( $p > 0.05$ ) indicates students developed understanding across ethnic groups. Significant difference by *campus* probably represents the diversity of multinational participants. Reduction in the differences in Cultural Competencies could be associated with participation in the Global Health Seminar, thus suggesting a successful model for cultural competency development. Further research is recommended on diversity among campuses, lecture styles and medical schools' approach to diversity, global medicine and cultural competencies that could have implications to empathetic medical treatment.