INTRODUCTION

Can we predict which osteopathic medical students are at risk for lower levels of empathy using the MDEES scale?

What might be likely didactic teaching methods that could improve levels of empathy?

Is it useful to incorporate cultural sensitivity and self-reflection into didactic teaching methods? Data was analyzed to elucidate what factors may predict higher medical student empathy levels: a critical component to successful acquisition of osteopathic core competencies.

Targeted interventional curricular methods of teaching to medical students used problem based and case based learning as the vehicle to facilitate medical student attainment of culturally sensitive empathic core competencies.

METHODS

Undergraduate medical students, OMSII-IV (N=250, 136 female, 110 male, 4 Not-Specified) at the Philadelphia College of Osteopathic Medicine participated in a small-group, didactic intervention aimed at improving attitudes towards utilizing empathetic practices in patient care, with a particular emphasis on cultural sensitivity. Four sessions were conducted with each containing two hours of instruction. Teaching methods included utilizing group problem-based learning, group discussion and viewing of culturally relevant videos. A baseline measure of empathy for all subjects prior to the didactic intervention was obtained using the self-report Multi-Dimensional Emotional Empathy Scale (MDEES; Caruso & Mayer, 1998).

Prior to and after the instruction period, each student completed a ten-item Cultural Empathy Questionnaire, generating pre and post intervention scores. Subjects had 2 hours to decide whether or not to participate by completing the questionnaires and their participation had no impact on their didactic experience or grade in the course. A bivariate correlation analysis was conducted between a newly created variable, a pre-post difference-score, and the MDEES. The pre-post difference-score was calculated simply by subtracting pre from post scores, where a positive score indicated an improvement in empathic response and negative difference scores indicated decreased empathy.

The aim of the study was to reject the null hypothesis—the experimental intervention had "no effect," such that baseline scores and post-interventional scores did not differ with regards to improving attitudes towards empathy and cultural sensitivity in patient care. Below are the statements students were asked to rate on a 5-point Likert Scale:

1: not at all agree, 2: mostly disagree, 3: neutral, 4: mostly agree, 5: completely agree

1. I know everything there is to know about cultural sensitivity and empathy.
2. I don’t know anything about cultural sensitivity and empathy, and am not interested in it.
3. I want to learn more about cultural sensitivity and empathy so it pertains to clinical care.
4. I don’t think it is important to ask about my patient’s cultural and spiritual beliefs.
5. There is not enough time to have a conversation with my patients regarding their beliefs.
6. The use of video was helpful.
7. The use of PBL-style material was helpful.
8. The use of the role play was helpful.
9. The live discussion with the facilitator was helpful.
10. The live discussion with other students was helpful.

To determine the presence of empathy, pre-lecture responses were compared to post-lecture responses. If a decrease in response from pre- to post-lecture was observed, it was assumed that the student exhibited decreased empathy.

DATA AND RESULTS

Gender appeared to be predictive of higher MDEES scores, F(2,249) = 9.16, p < .01. Specifically, females outperformed males as more empathetic regarding: Mfemales = 116.7, SDfemales = 13.9, Mmales = 107.4, SDmales = 14.6.

The post mean of the 10-item pre-interventional questionnaire items were significantly positively correlated with MDEES (.145) albeit that relationship is much smaller than the pre-scores relationship with the MDEES.

Five of the 10 items stayed stable from pre-to post (no significant differences). However, the mean performance had a strong positive correlation with performance on the MDEES, with a correlation coefficient of 0.843, p = .01, as seen in Table 1.

The selected sample did not show any significant differences in MDEES scores based on ethnicity, marital status, sexual orientation, level of training, and age. None of the demographic variables had a statistically significant effect on the pre and post scores on the Cultural Empathy Questionnaire.

Additionally, statistical comparison of the pre and post scores on the Cultural Empathy Questionnaire showed a significant negative correlation on students’ attitudes toward empathy and cultural sensitivity after participating in the didactic intervention. The negative difference-scores on Cultural Empathy Questionnaire, indicated decreased scores post-intervention and negatively correlated with the total mean MDEES performance, r = .599, p < .01.

Despite the overall negative trend in improvement of empathy, analysis of the individual questions showing significant provide insight into specific areas of improvement. Pre-post scores on items 2, 3, 6, 8 and 10 of the Cultural Empathy Questionnaire, when analyzed individually, reached significance in two-tailed, paired t-tests, p < .05. A negative, decrease in mean value for question 2 indicated an improvement in level of empathy post intervention, given the syntax of the question. Similarly, a positive, increase in mean value for question 3 suggests an improvement in empathic attitudes. Lastly, an increase in mean for questions 6, 8, and 10 suggest positive response to intervention.

DISCUSSION

Contrary to some other studies, in our sample, only female sex was linked with a higher degree of empathy; however, not an improved response to the intervention. The strong positive correlation between MDEES and pre-interventional Questionnaire scores suggests that the tool is a useful predictor of empathic attitudes in medical students. The change in mean from pre to post intervention of the individual questionnaire items that showed significant correlation requires more analysis. Specifically, trends in items 2 and 3 may point to an increase in students’ confidence in dealing with culturally sensitive issues in medical practice, as well as increased interest in cultural competency after participating in the intervention. Lastly, increased means in items 6, 8, and 10 may suggest the use of video learning, role-playing, and peer discussion as useful techniques when developing similar interventions in the future.

CONCLUSION

There has been concern over osteopathic students self-reporting lower levels of empathy paralleling that in allopathic students. Problem based and case based approaches that use questionnaires provide an avenue to test and at the same time reinforce effective didactic teaching to build more empathetic future physicians. It will be a few years before we will know if the recent integration of the AAMA ACGME post graduate medical education process with the AOA post graduate medical education system for internship and residency training might impact cultural sensitivity and empathy. The data presented here suggests that empathetic attitudes in medical students can be successfully predicted, however more work must be done in developing educational practices that promote empathy and cultural competency. Future areas of investigation might include early identification of at risk students such as in the first or second year of osteopathic medical school.

REFERENCES


Sternberg RJ, Caruso D, Gennella S. The empathy of medical students. Med School News 1999;73:40-
