ABSTRACT

This study aimed to identify and measure the impact of an osteopathic intervention for graduate students in multiple non-osteopathic programs. The goal was to increase awareness and understanding of osteopathic manipulative medicine (OMM) as well as to promote interprofessional collaboration. Students from various health professional colleges at Midwestern University in Glendale, AZ were recruited. Following an initial survey, an osteopathic intervention was provided which was composed of a brief educational presentation and a personalized demonstration of five commonly performed osteopathic techniques. At the conclusion, the students were administered the same survey. The survey results demonstrated that awareness and understanding of the osteopathic profession increased to a statistically significant degree in all post graduate programs. These results suggest that a low-cost intervention may be performed on similar colleges of osteopathic medicine with a comparable response. By increasing awareness and understanding of osteopathy in healthcare professionals, greater collaboration in the interprofessional community can provide a higher quality healthcare experience for all patients.

LITERATURE REVIEW

Interprofessional models have better health outcomes for patients but training in the health professions often occurs in isolation, which causes healthcare professionals in training to remain uncertain about their responsibilities and value of their related peers. Patient centered care requires that we be at the forefront of a collaborative model, and that misconceptions about D.O.’s scope of practice be addressed. An ideal place to approach other health professionals is during their training, as many student D.O.s share their campuses with other health professionals. This collaboration may facilitate communication and allow for better patient care in the future.
An Intervention to Improve Awareness and Perception of Osteopathic Medicine Among Students in Other Health Professions

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Methods

Subjects were recruited from the dental, podiatry, optometry, nurse anesthesia, speech/language pathology, physician assistant, occupational therapy, physical therapy, biomedical sciences, cardiovascular science, pharmacy, clinical psychology, and veterinary medical programs at Midwestern University in Glendale, AZ. Subjects were required to be OMM naïve. Students were recruited via a campus-wide email.

The intervention was conducted on October 31st 2018 over four one-hour blocks. The intervention consisted of the following:

1. Participants were administered an initial survey to evaluate their baseline understanding and perception of osteopathic medicine.
2. Participants were then given a brief presentation regarding the background, history, training, and scope of practice of osteopathic physicians.
3. Subjects received an OMT demonstration consisting of five different techniques performed by an OMM scholar/fellow or a member of the OMM department at the Arizona College of Osteopathic Medicine. The techniques were suboccipital release, muscle energy of an anterior innominate rotation, high-velocity low-amplitude of a posterior radial head, strain-counterstrain of the trapezius, and myofascial release of the thoracic inlet.
4. Following the demonstration, subjects were re-administered the same survey to assess for a change in their understanding and perception of osteopathic medicine.

RESEARCH METHODS
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METHODS

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DATA ANALYSIS

43 subjects (53% female, 47% male) met the inclusion criteria, attended the session and completed the surveys. Subjects included students from Biomedical Sciences (28%), Dental (21%), Physician’s Assistant (PA) (19%), Speech/Language Pathology (12%), Pharmacy (7%), Optometry (7%), and Clinical Psychology (2%) programs. Two students did not identify which program they attended. A paired t-test was performed on each survey question to determine changes in subjects’ knowledge and perceptions of osteopathic medicine before and after the educational intervention. An independent-samples t-test was also used to compare responses between male and female subjects before and after the intervention. Subgroup analysis was performed, using ANOVA, on three subgroups to assess differences between professions. The three subgroups were: Biomedical Sciences students (many of whom will apply to osteopathic medical school); the Physician Assistant and Pharmacy students (both of whom frequently work with osteopathic physicians in hospitals and other practice settings); and all other health professions students. The two survey responses which did not identify programs were not included. Tukey’s all pairwise comparisons test was conducted on the groups post hoc.
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INTRODUCTION

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METHODS

When applied to all of the survey questions, the paired t-test yielded a P-value of <0.0001. There was no statistically significant difference between the pre-post change in mean scores for the responses from male and female subjects. The ANOVA yielded significant differences for five of the 11 survey questions. These questions were “I understand the difference between a D.O. and an M.D.” (p=0.0473), “I understand the difference between an osteopathic physician and a chiropractor” (p=0.0121), “I understand the difference between osteopathic manipulative treatment and chiropractic treatments” (p=0.0214), “I feel comfortable explaining osteopathic medicine to another person” (p=0.0297), and “OMT can reduce pain due to trauma” (p=0.0136).

The results of the Tukey’s all-pairwise comparisons post hoc test was as follows:

For one of the statements in the survey, “I feel comfortable explaining osteopathic medicine to another person,” Biomedical Sciences students had statistically significantly more agreement than the Pharmacy/PA group (adjusted p=0.0231). For the other four statements tested above, Biomedical Sciences students were statistically significantly higher in agreement with the statement compared with the all-other-professions group. Finally, for the statement, “I understand the difference between a D.O. and a Chiropractor,” Pharmacy/PA students had statistically significantly greater agreement than the all-other-professions group.

RESULTS
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The results of the Tukey’s all-pairwise comparisons post hoc test was as follows:

For one of the statements in the survey, “I feel comfortable explaining osteopathic medicine to another person,” Biomedical Sciences students had statistically significantly more agreement than the Pharmacy/PA group (adjusted p=0.0178). For the other four statements tested above, Biomedical Sciences students were statistically significantly higher in agreement with the statement compared with the all-other-professions group. Finally, for the statement, “I understand the difference between a D.O. and a Chiropractor,” Pharmacy/PA students had statistically significantly greater agreement than the all-other-professions group.
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DISCUSSION

Our study demonstrates that an intervention in interprofessional education during health professions training can lead to increased understanding of osteopathic medicine among health profession trainees. Compared to pre-intervention, post intervention scores were statistically significantly higher for each statement of understanding. Highest scores were achieved by professions that were more likely to work with osteopathic physicians; however though they did not have the highest mean scores, the all-other professions group had the largest average mean increase in scores.

Limitations included the single-site setting of the study, the relatively small group size (especially for subgroup analyses) and the brevity of the intervention. The lack of a comparison group, and the absence of randomization into the intervention, are also methodological weaknesses. More research is needed to determine if the impact of this type of intervention is generalizable to other settings. Additionally, further study may determine the reason for the subgroup differences described in our study.

REFERENCES


