

Quality of Preclinical Medical Student Otolaryngology Shadowing Experiences in the Operating Room.

Yi Cai, AB^{1,2}; Kyle Zuniga, BS¹; Joseph Haddad Jr., MD².

1. Department of Otolaryngology-Head and Neck Surgery, Columbia University Medical Center
2. Columbia University College Of Physicians & Surgeons, New York, NY, USA

INTRODUCTION

In recent years, medical student education has increasingly emphasized primary care during third year clerkships and decreased the amount of medical student exposure to surgery. Furthermore, exposure to surgical specialties may become scarcer as medical school class sizes continue to increase. For example, a recent survey of medical schools in the United States showed that only 7% required an otolaryngology clinical rotation [1], compared to 34% in a survey conducted in 2001 [2], when the number of students entering medical school was 30% less [3]. Though students may have preclinical exposure to surgical specialties with anatomy lectures or observing a surgeon in clinic, few opportunities exist for preclinical students to gain clinical experience in the operating room (OR).

At Columbia University College of Physicians and Surgeons, the Otolaryngology Student Interest Group regularly coordinates OR shadowing opportunities for medical students (averaging 10 available sessions per week), providing an opportunity for preclinical exposure to the OR. Such OR shadowing experiences have the potential to be valuable educational experiences to supplement the formal medical school curriculum. However, the OR may be a daunting environment for a preclinical student who has not been trained in gowning, gloving, scrubbing, and aseptic techniques. This barrier may limit the educational potential of preclinical OR shadowing experiences or turn students away from shadowing in the OR altogether.

This study seeks to understand the experiences of students shadowing in the OR through the Otolaryngology Student Interest Group via an electronic survey administered after shadowing sessions. Results from this study may identify the successes and limitations of otolaryngology OR shadowing experiences, and potentially pave the way towards improving OR shadowing experiences in otolaryngology or other subspecialties.

METHODS

This study surveyed medical students who participate in OR shadowing experiences organized by the Otolaryngology Student Interest Group at Columbia University College of Physicians and Surgeons in a prospective study. Electronic surveys were sent to the 48 students who completed a shadowing session in 2016. Data was collected via an online survey hosted on cumc.co1.qualtrics.com. Survey participants were not required to provide their name or identifying information. The survey utilized Likert-scale questions probing around issues such as level of interest in the case, comfort in the OR, and interest in otolaryngology or surgical specialties. Two-tailed T tests were conducted to compare comfort in the OR before and after shadowing.

Example survey questions

How comfortable did you feel in the OR?

Rate the following factors in how they contributed to your comfort in the OR.

- Familiarity with gowning and gloving
- Familiarity with sterile technique
- Understanding of the operation
- Understanding of the roles of the teams in the OR
- Understanding of the anatomy

Rate the following interactions in how they contributed to your comfort in the OR.

- Interaction with the ENT attending
- Interaction with the ENT resident(s)
- Interaction with members of the nursing team
- Interaction with senior medical student(s)

How interesting did you find your experience in the OR to be?

Rate the following factors in how they contributed to your level of interest in the OR.

- Familiarity with gowning and gloving
- Familiarity with sterile technique
- Understanding of the operation
- Understanding of the roles of the teams in the OR
- Understanding of the anatomy

Rate the following in how they contributed to your level of interest in the OR.

- Interaction with the ENT attending
- Interaction with the ENT resident(s)
- Interaction with members of the nursing team
- Interaction with senior medical student(s)

Please rate how likely you are to shadow in an ENT OR again.

Please rate the validity of this statement: my ENT shadowing experience has increased my interest in otolaryngology-head and neck surgery.

ACKNOWLEDGEMENTS

We would like to thank the medical students who participated in this study as well as the residents and faculty at Columbia for their teaching in these shadowing experiences.

RESULTS

Of the 32 respondents, 26% had never been in an OR before and 74% had been in an OR fewer than three times. The most common subspecialties that students observed were head and neck surgery (14 students) and otology (9 students). Approximately 31% of students were given the opportunity to scrub into surgery during their shadowing session. Familiarity with sterile technique and interaction with attending or residents were rated highly as factors contributing to comfort in the OR setting. Only 42% rated themselves as being moderately to extremely comfortable in the OR. However, 74% of students found the experience to be a valuable learning experience and 81% reported being likely to pursue shadowing again; 59% reported that the experience increased their interest in OTO-HNS.

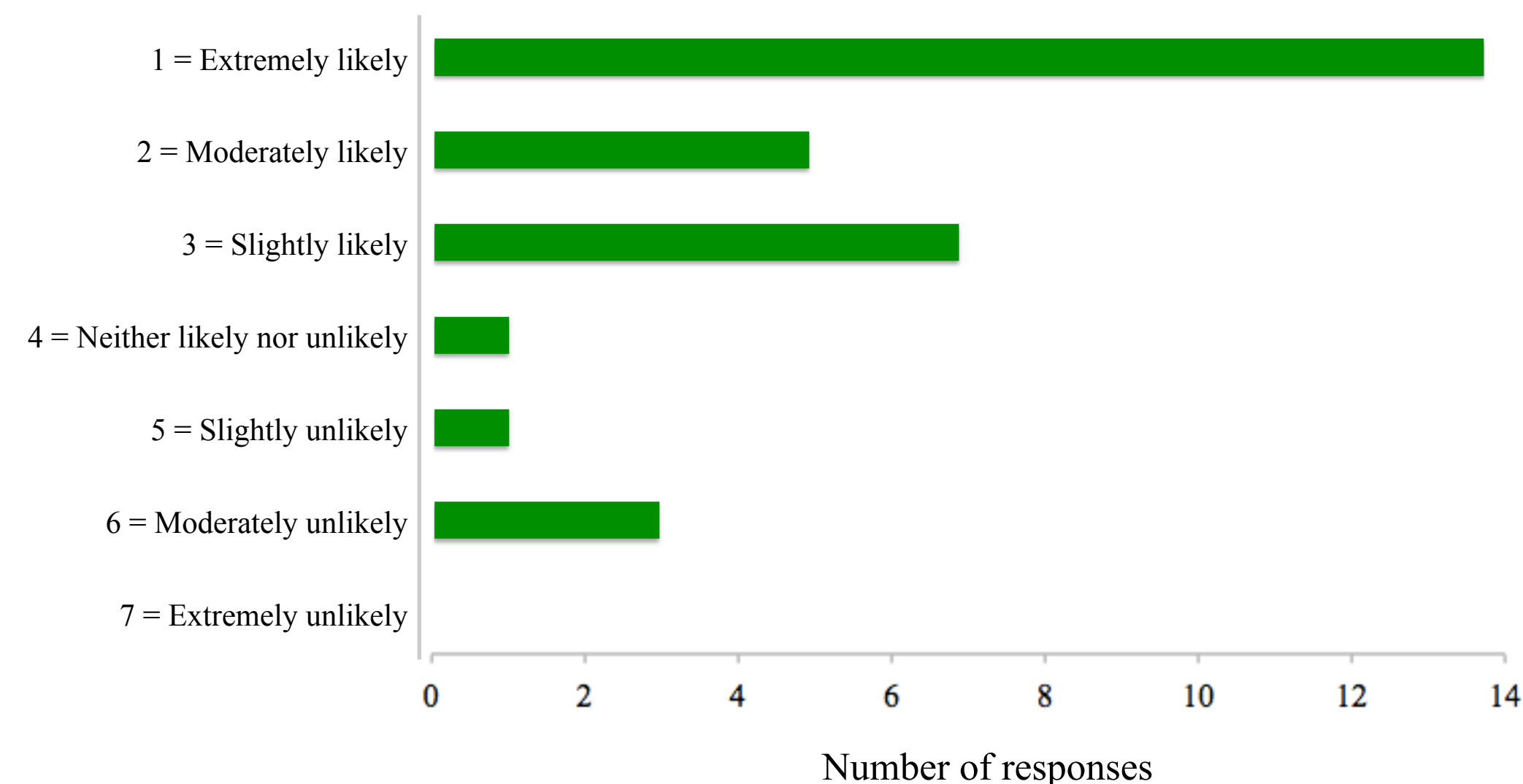


Figure 1. Responses when survey participants were asked to rate the likelihood they would seek out another shadowing experience in an otolaryngology OR.

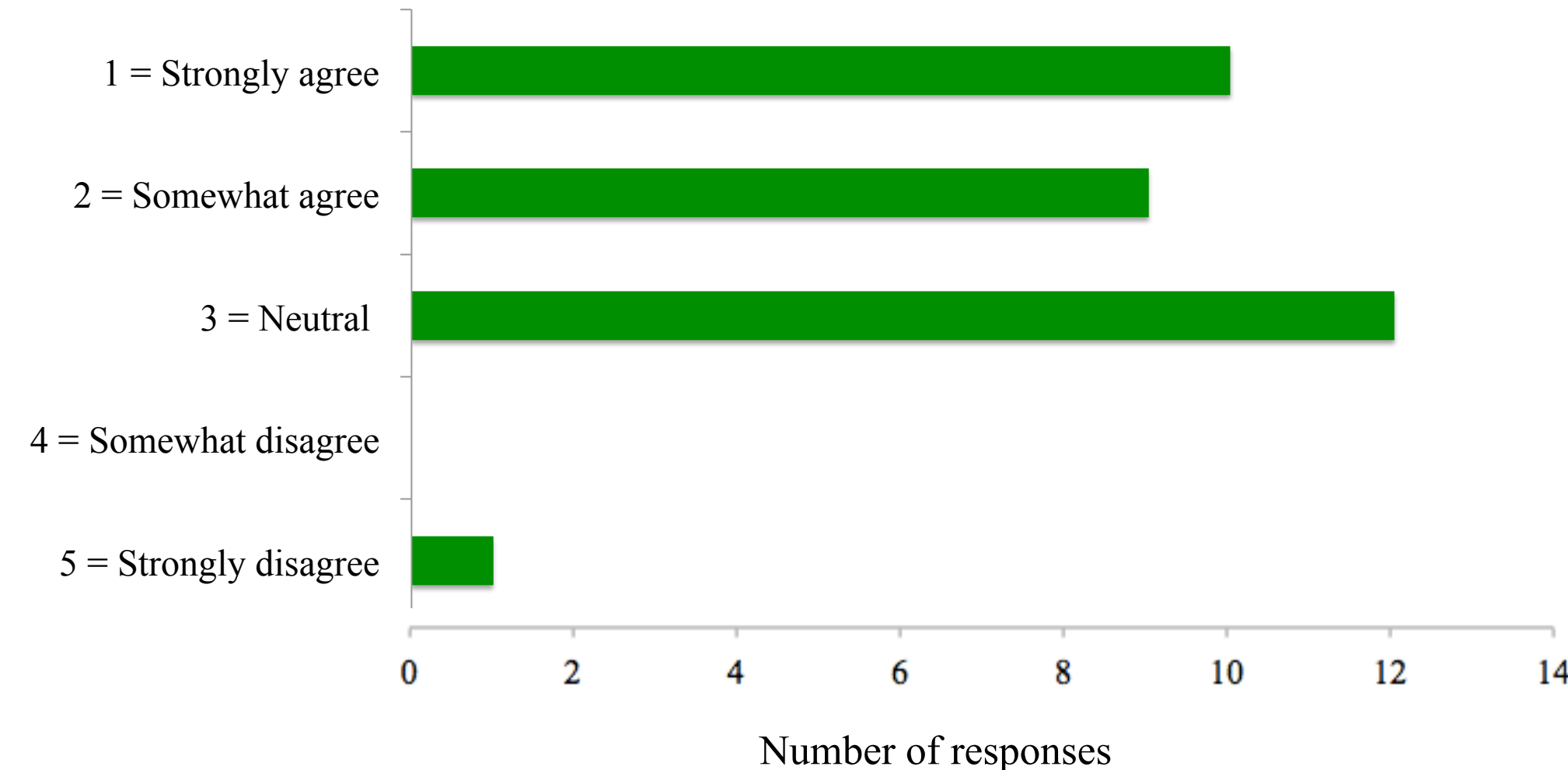


Figure 2. Responses when survey participants were asked to rate the validity of the following statement: "My ENT shadowing experience has increased my interest in otolaryngology-head and neck surgery."

CONCLUSION

Extracurricular OTO-HNS shadowing in the OR is a valuable experience for preclinical students: it may be one of their first exposures to the OR and increases their interest in the field. These opportunities may be further improved by identifying factors to increase the student level of comfort in the OR.

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