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# Assessing Clinical Teaching Skills of Senior Medical Students at Canadian Universities:

## A survey of teaching knowledge, skills, and attitudes

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### BACKGROUND

Postgraduate medical trainees (residents) in Canadian universities provide a significant portion of clinical teaching to medical students. Despite being expected to shoulder this responsibility, residents have little opportunity to hone their teaching skills and receive feedback on their abilities. Medical schools can offer clinical teacher training to their medical students to better prepare them for their future formal teaching roles. Presently, the University of Ottawa is the only institution that offers such an elective to senior medical students.

Objectives:

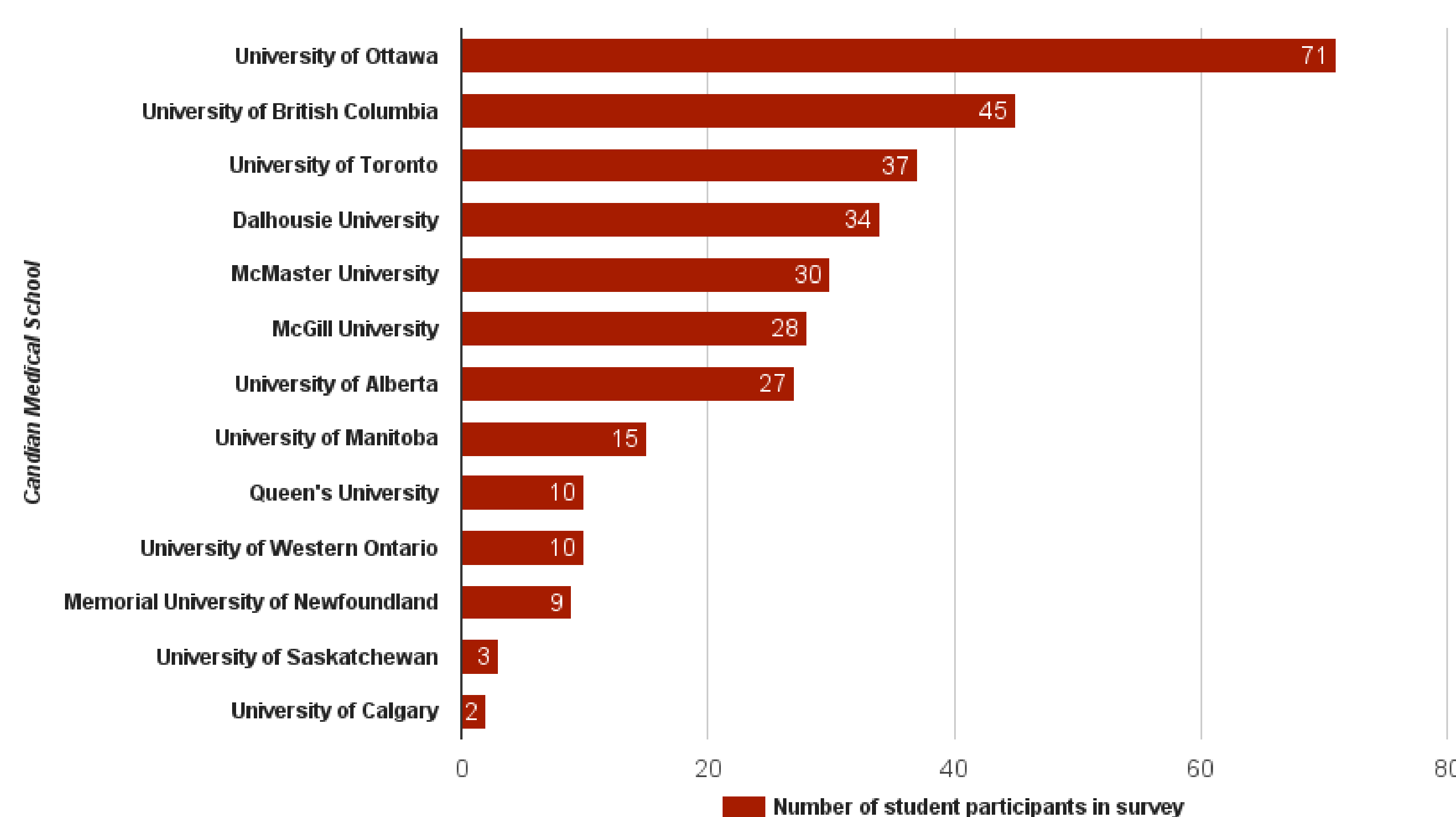
- Gauge perceived areas of confidence and deficits in clinical teaching skills among senior Canadian medical students.
- Assess the likelihood that students would enroll in a clinical teaching elective during their final year of medical school training.

### METHODS

This was a descriptive cross sectional study of medical students' experience, attitudes and perceptions regarding clinical teaching skills. A bilingual, anonymous survey of 15 questions was developed and conducted via the online Survey Monkey platform. Ethics approval for the study was given by Ottawa Health Science Network Research Ethics Board. The survey was then distributed via the Canadian Federation of Medical Students (CFMS) to senior medical students across Canada. Simple descriptive statistics (frequencies and percentages) were computed for each survey question.

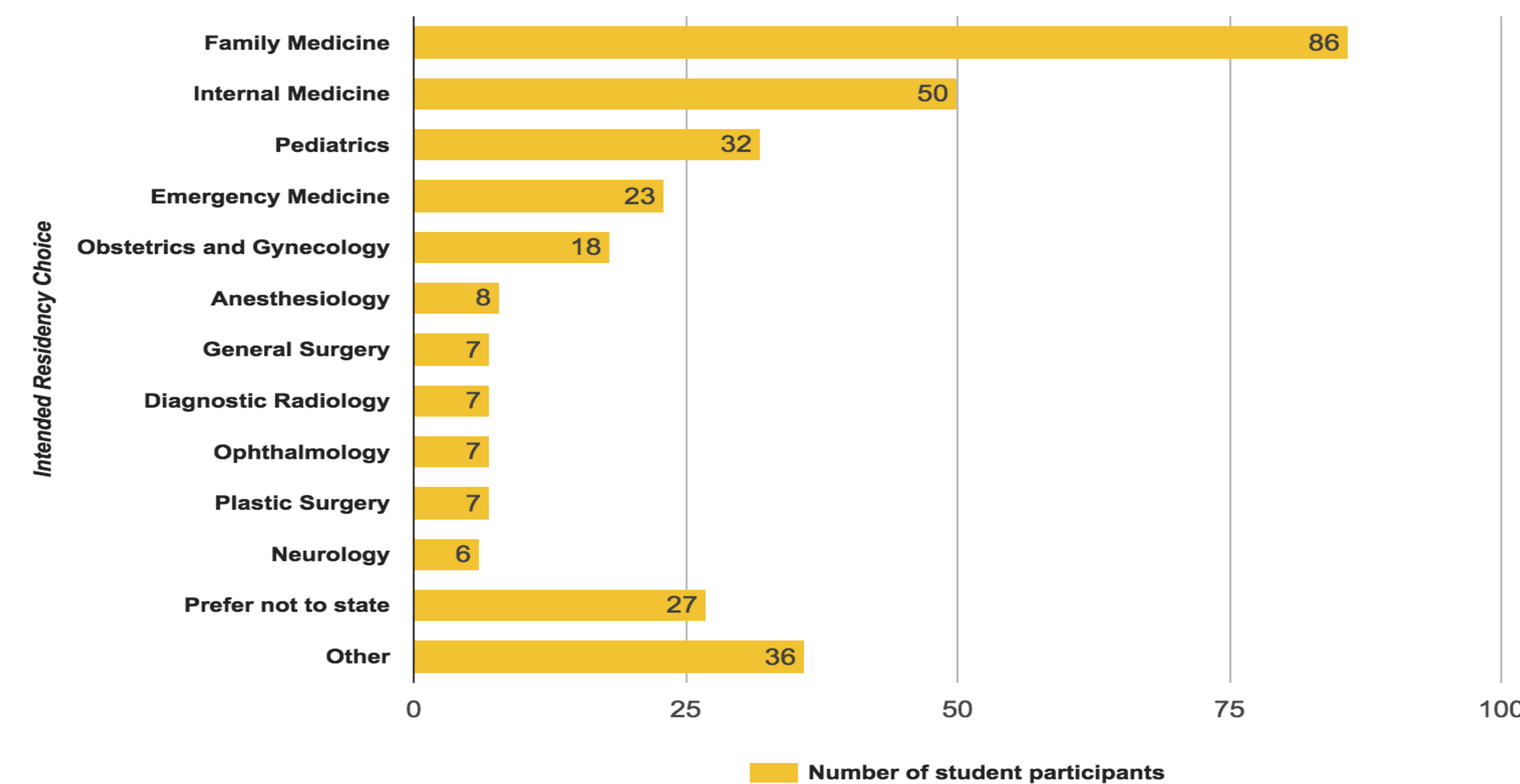
### RESULTS

Medical students at 14 of the 17 Canadian medical schools received the survey. A total of 321 participants completed the survey. 91% of students participating were between 19-29 years of age, with a sex distribution of 69% female, 30.7% male.



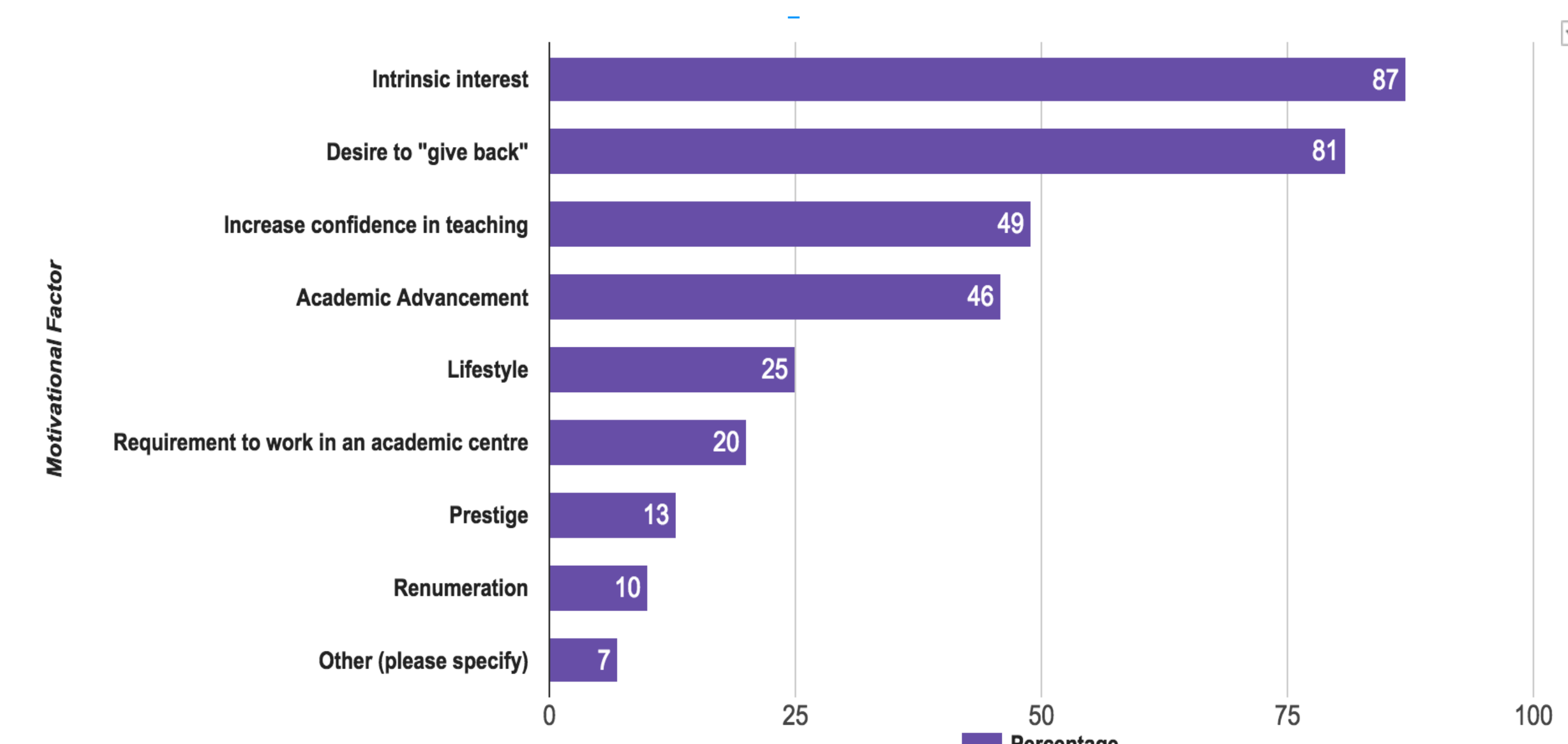
**Figure 1 - Distribution of survey participants across Canadian Medical Schools (N=321)** 311 students responded to the survey in English. 10 students responded to the survey in French, all of whom were University of Ottawa students.

- 95% of participants plan on pursuing clinical teaching for medical students and residents upon completion of residency.
- 71% of participants plan on working in an academic hospital.
- 6% total response rate given known medical school enrollment



**Figure 2 - Survey participants' intended residency choice. N=314**

- 72% of participants have not undertaken any research in medical education.
- 74% of participants indicated prior teaching experience such as tutor (83%) and teaching assistant (44%).



**Figure 3 - Survey participants' response to "Indicate which factors motivate you to engage in clinical teaching". N=309**

- Confidence in a teaching area ranged as follows: giving presentations (75%), facilitating small group sessions (71%), bedside teaching (47%), teaching sensitive issues (42%), presenting at journal clubs (42%), as well as giving verbal (67%) or written (74%) feedback.
- **75% agreed or strongly agreed that they would participate in a clinical teaching elective during their last year of medical school** (15% : neutral, 10% disagreed or strongly disagreed)
- The preferred elective duration showed: two-weeks (61%), one-week (31%), and one month (4%). Some indicated interest in a longitudinal elective.
- Most students felt teaching at the bedside (85%), teaching physical examination skills (71%), effective moderation of small group learning (63%), and mentorship in medicine (60%) were pertinent teaching elective topics.
- Participant comments included:
  - "I would not do an elective in clinical teaching because my program is only 3 years - I don't have the time to spare."
  - "I think it would be cool to integrate a teaching program into an elective... a family medicine elective for example, that incorporates how to be a good teacher in the family medicine setting."
  - "I might be interested in completing an online certificate with recognized value."

### DISCUSSION

Our work and the work of others (1) indicate that medical students, in general, have a strong interest in medical education but appear to have little access to improve their abilities as teachers. Peer-to-peer education, tutoring, or previous teaching roles are a few examples of how medical students teach, or have taught. However, previous research suggests that there is little support available for those who aim to improve their teaching abilities in medical school.(1)

With this project we attempt to show the value of formalizing a teaching elective at other Canadian medical schools by establishing medical student interest. The overwhelming anecdotal response to the University of Ottawa's teaching elective has shown its viability on a small scale.

Unfortunately only a small portion of senior medical students responded to our survey. Our response rate was likely due to limitations in establishing contact and responses from other medical faculties. As we distributed the survey to third parties, their advocacy on our behalf was essential to increase responses. A clear indicator of this is the marked difference in response rates between UBC and the University of Calgary. Quebec medical schools demonstrated a unique challenge, with the notable exception of McGill, as they are not members of the CFMS. Hence, we could not establish an effective way to survey their students, resulting in exclusion from our study.

Of course, those interested in clinical teaching are more likely to respond which introduces a response bias. In addition, the largest senior medical student response rate was from the University of Ottawa, where the elective is uniquely offered. Despite these facts, it is clear that there exists a strong interest in clinical teaching among medical students. Further work to clarify the composition, dissemination and structure of a teaching elective would be needed in the future.

### CONCLUSION

Senior medical students at Canadian universities have an interest in developing clinical teaching skills, with a particular interest in participating in an elective during medical school training.

### REFERENCES

Peluso MJ, Hafler JP. Medical Students as Medical Educators: Opportunities for Skill Development in the Absence of Formal Training Programs. *The Yale Journal of Biology and Medicine*. 2011;84(3):203-209

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