

# A survey of undergraduate medical students' knowledge and attitudes about gender bias:

## The Newfoundland and Labrador perspective

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### BACKGROUND

Medicine has historically been a male dominated profession. However, in recent years the number of female physicians has been increasing.

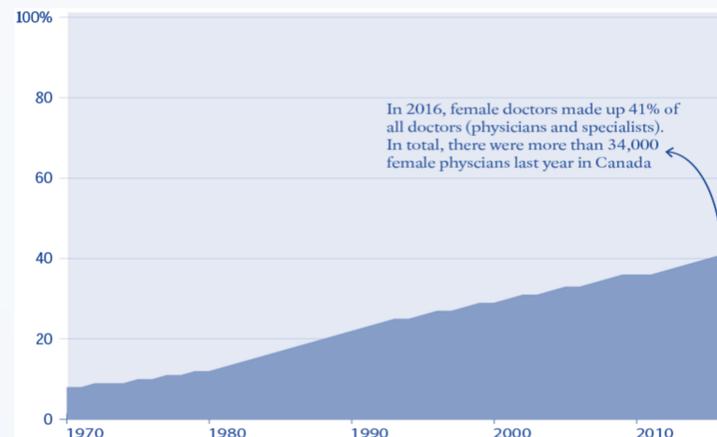
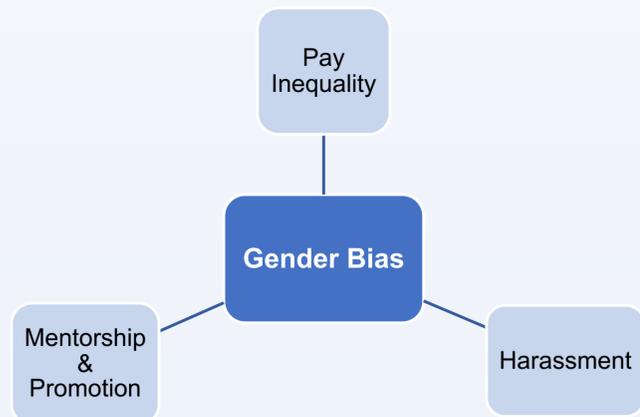


Figure 1. Proportion of female doctors over time, 1970-2016 (Cioffe, 2017).

Despite the ratio of female to male physicians becoming more equal, a deeply engrained gender bias still exists for female physicians.



As current medical students are the future of medicine, there is a need to understand whether they are aware of this bias and the extent to which they are aware of it.

### OBJECTIVES

1. To explore medical student awareness and understanding of the gender bias in medicine.
2. To determine whether or not there are differences in the level of awareness and understanding based on gender and home region.

### METHODS

This project received ethics approval through the NL Health Research Ethics Board. We performed an exploratory survey of medical students at Memorial University in St. John's, NL.

#### Recruitment

- October 2020 to April 2021
- Facebook groups
- Emails sent by the medical school Office of Learner Wellbeing and Success

#### Survey

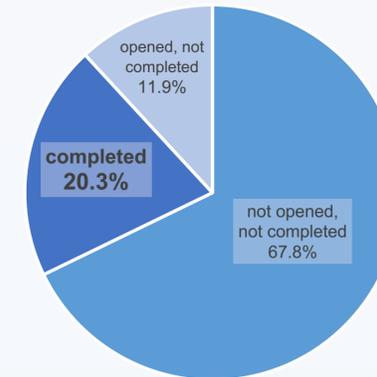
- Qualtrics
- Questionnaire by Anderson et al.
- 5-point Likert scales
- 3 parameters: gender sensitivity, gender role ideology toward patients (GRIP) & doctors (GRID)
- Demographic questions

#### Analysis

- Microsoft Excel & SPSS
- Generated a score for each parameter
- T-tests to compare gender and region

### RESULTS

The survey response rate was **20.3%**.



**Table 1.** Gender comparison of mean scores with standard deviations and p values. For gender sensitivity a higher score indicates more sensitivity and for gender role ideology a higher score indicates more stereotyping.

Gender Bias Scoring Categories	Gender		T-test p value
	Male	Female	
Mean gender sensitivity (SD)	4.00 (0.48)	4.08 (0.47)	0.55
Mean gender role ideology towards patients (SD)	1.86 (0.50)	1.53 (0.44)	0.01
Mean gender role ideology towards doctors (SD)	2.03 (0.64)	1.93 (0.50)	0.56

**Table 2.** Region comparison of mean scores with standard deviations and p values. For gender sensitivity a higher score indicates more sensitivity and for gender role ideology a higher score indicates more stereotyping.

Gender Bias Scoring Categories	Region		T-test p value
	Rural	Urban	
Mean gender sensitivity (SD)	3.98 (0.44)	4.09 (0.48)	0.38
Mean gender role ideology towards patients (SD)	1.72 (0.50)	1.59 (0.48)	0.32
Mean gender role ideology towards doctors (SD)	1.97 (0.55)	1.95 (0.55)	0.90

### DISCUSSION

Most differences across gender and region were not significant, except for gender differences in GRIP (p=0.01).

- Andersson et al. found that female and male scores differed significantly only in GRIP, with women having a lower score and demonstrating less stereotyping towards patients than men.

Female students had trends of higher gender awareness. This corresponds with research showing that women perceive a higher level of gender inequality than men.

Urban students had trends of stronger gender awareness than rural students. This may be related to evolving critical pedagogy and the accessibility of education for urban students.

### CONCLUSIONS

Memorial University medical students have a high level of awareness and understanding of gender bias and gender issues in medicine and their awareness does not vary significantly based on gender and region.

This is determined by high gender sensitivity scores and low gender role ideology towards patients and doctors scores, which indicate high gender sensitivity and low stereotyping, respectively.

Overall, students had largely non-biased ideologies surrounding gender in medicine.

Limitations: response rate, participation bias, generalizability



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