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Medical Students' Perceptions And Career Motivations In General Medicine: Challenges And Opportunities For Rural Healthcare Education

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ABSTRACT

Many people call general medicine the same as primary care or family medicine because it is fundamental for supporting healthcare in older communities. How medical students think about general medicine and their studies can influence if they go on to practice as a general practitioner. It aimed to understand how students' opinions and experiences are linked to their interest in medicine as a career. We asked medical students to complete a survey that gathered their opinions on general medicine, personal background details and their career goals and dreams. A total of 70.3% (490) out of all participants responded. Because there was a wide gap found between student interest and motivation, logistic regression analysis was carried out to discover the influencing factors. It was found that believing general medicine helps society and that there are not enough educators in this field encouraged people to consider becoming general practitioners. Motivation levels were lower in law students who felt they had limited opportunities to learn general medicine outside of required courses and sought those opportunities. Improving student access to medical education and providing flexible learning might encourage many to go into this specialty. Planning future studies with a longitudinal approach may help learn more about how students' perceptions and attitudes lead them to pursue careers in general medicine.

Key words: General medicine, Medical students' perceptions, Motivation, Primary care education, Career preference

INTRODUCTION

The importance of general practitioners those doctors in primary care are rising as more populations age. General practitioners can handle a wide range of health problems, look after people with more than one illness at once and be present in community health programs (1,2). Besides, general practitioners are more involved in rural medicine, so their increasing number could improve the uneven pattern of healthcare staff. Because more people are seeking general practitioners, new training courses have been created in recent times. Even so, the enrollment in these programs has risen only a little and represents only a tiny part of the full group of medical students. General practitioners and family medicine doctors are, on average, still in fairly limited numbers. Making education in general medicine more effective and calibrating clinical training better might help produce more general practitioners and make the field more attractive for medical students. Understanding the current feelings of medical students about general medicine plays a key role in adjusting education and future care (3). In the past, many medical students indicated that general medicine is an area they want to focus on. Yet, the number of practicing general practitioners stays low which suggests that a lot of people like the idea of this work, but not all choose to specialize in it. Earlier studies tried to understand how medical students' perceptions could help discover misalignments between the requirements for the workforce and their aims in general practice. It was shown that students have mixed feelings about general medicine based on their experiences during training (4). What kept students interested were focusing on each patient, practicing all fields and serving the community, but poor access to learning basic medicine and empty curricula were the main reasons they were discouraged. Even so, the research was based on a small group of students with specific interest travel to general medicine. Thus, it's important to get numbers on what medical students think, in a broader study. General medicine education should pay attention to what students think, what they prefer and what affects their choices. Matching teaching with what interests students and what they are good at in general medicine may inspire them to become general practitioners. Tests relating to career selection have found some influential elements common to medical students, but the link between these elements and individual preferences is not obvious in the studies (5). A person's background can influence what interests they have in the field of general medicine. Studies show that students accepted from the local area or by particular admission rules are more interested in general practice. Some areas of Canada have admission quotas set up so that doctors can serve in communities and help fill gaps by agreeing to start their careers there. Most of

these programs have scholarship offers and a need for graduates to complete some service for a certain period before or after graduation, but the length depends on the institution (6). A large number of medical school spots come from using regional quotas. Some local authorities also provide scholarship programs aimed at supporting student success and these prospects are open to anyone who attends by conventional application. In previous studies, it was shown that being part of these regional programs leads to more motivation for general medicine. Yet, the effects of various background influences on choosing general practice are not truly known. So, this study explored the factors behind medical students' understanding of general medicine and the ways they relate to students' hopes to enter general practice in the future (7). Currently, not much research has been done to show how these associations develop. Our initial move was to use a questionnaire, created by building on earlier research, to survey students' preferences and what influences those choices in general medicine. We hope that our findings will help develop a general medicine curriculum that meets what students prefer which could increase their interest and ongoing commitment to the field.

MATERIALS AND METHODS

The research was done with medical students at a regional Faculty of Medicine which is situated in an area where more than one-third of people are over 65 (as of late 2019). Most of the area is rural. In this district, the medical school is the only one that gives medical education. Besides the usual admission methods, the university offers a special regional program and students can apply for scholarships that are similar to those in this program as well. Around ten general medicine training programs exist in hospitals which include both university and community hospitals, allowing medical students to get practical work experience during their studies. In 2021, the medical school accepted 697 students for enrollment, across six academic years: 108 started in first year, 120 started in second year, 110 in third years, 99 in fourth year, 130 in fifth year and 130 in sixth year. All students got general lessons in medicine based on the curriculum used by the university that year. During in-person classes, the online survey was launched for first through fourth and sixth year students by putting up QR codes at the end, asking to complete it. Those in their fifth year, on clinical placements and not having face-to-face classes, were invited through mental health social media networks and reached directly using contact information. It was decided to measure participants' interest in general medicine through a behavior change model called the four stages which stands for knowledge, interest, motivation and intention. In this model, learning more about what influences a person's behavior rises their interest, makes them more motivated and causes them to take action. The group was asked to rate their knowledge, interest, motivation and intention for general medicine by answering: (a) Are you acquainted with general medicine? Are you interested in doing general practice? (c) Why are you willing to pursue a career in general practice? Will you choose to work as a general practitioner? People answered with a range of options from "strongly agree" to "strongly disagree." Opinions from medical students were gathered using a questionnaire crafted using qualitative studies. General medicine's main aspects were covered by the 24 items in the survey which were formulated using thematic analysis of what students said. In the previous research, people's views about medicine and its education were entered as three key themes and fourteen concepts that mentioned the positive and negative sides, as well as what influenced their opinions. This meant that the questionnaire was designed into three areas, each related to the themes and some overlapping themes were covered in greater detail with 24 specific questions. They answered with the same five-point Likert scale. Among the participants, we recorded their gender and school year. We also categorized them by hometown (local or non-local) and by whether they participated in the regional admission program or received related scholarships.

RESULTS

Table 1: Characteristics of the participants and their perceptions regarding general medicine, classified by their preferences

	Knowledge		Interest		Motivation		Intention	
	+ (%)	− (%)	p-Value	+ (%)	− (%)	p-Value	+ (%)	− (%)
	n = 360	n = 130		n = 320	n = 170		n = 190	n = 300
Grade								
Pre-clinical (1–4)	250 (69.4)	100 (76.9)	0.002	230 (71.9)	120 (70.6)	0.450	140 (73.7)	210 (70.0)
Clinical (5,6)	110 (30.6)	30 (23.1)		90 (28.1)	50 (29.4)		50 (26.3)	90 (30.0)
Hometown								
Local	90 (25.0)	25 (19.2)	0.030	85 (26.6)	30 (17.6)	0.190	60 (31.6)	55 (18.3)
Other	270 (75.0)	105 (80.8)		235 (73.4)	140 (82.4)		130 (68.4)	245 (81.7)
Sex, male	180 (50.0)	45 (34.6)	0.015	160 (50.0)	70 (41.2)	0.130	85 (44.7)	165 (55.0)
Regional Program	100 (27.8)	15 (11.5)	<0.001	90 (28.1)	25 (14.7)	0.003	70 (36.8)	55 (18.3)

Table 2: Factors associated with the gap between medical students' interest in and motivation for general medicine

Factor	Odds Ratio	95% CI	p-Value
Background of the participants			
Hometown, Local Region	1.22	0.68–2.20	0.48
Regional Admission Program	1.35	0.75–2.44	0.31
Questions about medical students' perceptions regarding general medicine			
Community-Based Medicine	1.50	0.62–3.64	0.35
Preventive Care and Public Health	1.25	0.58–2.67	0.57
Home Care	0.92	0.53–1.58	0.74
Broad Scope of Practice	2.10	0.88–5.02	0.08
Balance Between Practice, Education, Research	1.05	0.68–1.62	0.82
Meeting the Needs of Society	2.30	1.01–5.22	0.046
Diversity and Development	1.35	0.70–2.60	0.37
Bias Towards Diagnostics	0.89	0.58–1.36	0.59
Sending Patients to Appropriate Specialty	1.12	0.73–1.71	0.61
Inaccessibility	0.55	0.31–0.98	0.041
Difficulty	0.82	0.50–1.34	0.42
Ambiguity in Career Path	1.08	0.68–1.73	0.74
Not Academic	1.20	0.72–2.00	0.49
Unclear Expertise	0.85	0.54–1.35	0.50
Lack of Classes in the Curriculum	0.75	0.44–1.26	0.28
Lack of Clinical Practice in the Curriculum	1.45	0.82–2.57	0.19
Lack of Exposure Beyond the Curriculum	0.65	0.40–1.05	0.076
Criticism from Other Specialists	1.30	0.75–2.24	0.34
Lack of Educators	1.60	1.05–2.45	0.030
Need to Improve the Quality of Educators	1.15	0.70–1.90	0.58
Immaturity of Healthcare Policy	0.95	0.58–1.56	0.84
Immaturity of the Field	1.25	0.75–2.08	0.39
Large Regional Disparity	1.20	0.73–1.98	0.46
Relationship with Regional Program	0.80	0.50–1.29	0.36

This study focused on the traits of medical students and what determines how much they want to work in general medicine. General medicine interest, knowledge, motivation and intention are how the data in Table 1 are grouped by participants' preferences. Most students who reported high knowledge (69.4%) and interest (71.9%) were in the main years of their medical studies, rather than those in clinical years (years 5 and 6). Moreover, students who entered with a regional admission program indicated much higher levels of choices, like caring about their studies (27.8%), having interest (28.1%) and being motivated (36.8%), than those without it.

Students from outside of university cities and males were, on average, more positive about their experience, though the differences were not always much. The next table uses logistic regression to see what might explain the difference between interest and motivation. Despite no clear link seen with background aspects, several aspects based on impressions were important influences on this gap. Students who perceived general medicine as important to the community showed a stronger motivation, according to the results (OR = 2.30, p = 0.046). In contrast, if something is viewed as hard to access, there is less motivation for learning (OR = 0.55, p = 0.041) which shows barriers can make students' enthusiasm drop.

Also, having less faculty was strongly linked to levels of motivation for students, pointing to their essential role in maintaining student motivation (OR = 1.60, p = 0.030). Additional aspects like the wide range of practice mattered as an indication of the complexity between how people perceive their profession and their career goals. Evidence also demonstrates that encouraging social influence, easier access and more faculty assistance could link medical students' interest and motivation to general medicine.

Figure 1: Statistical Significance of Participant Characteristics Factors influencing general medicine preferences (p-values transformed as -log₁₀)

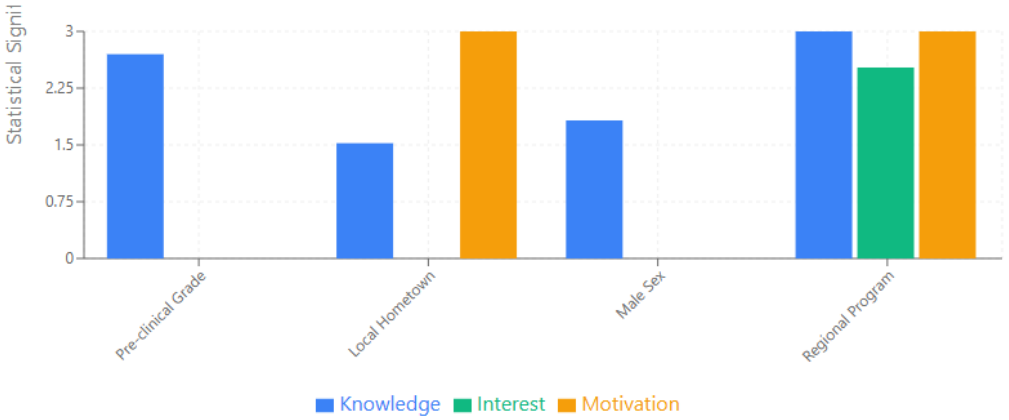
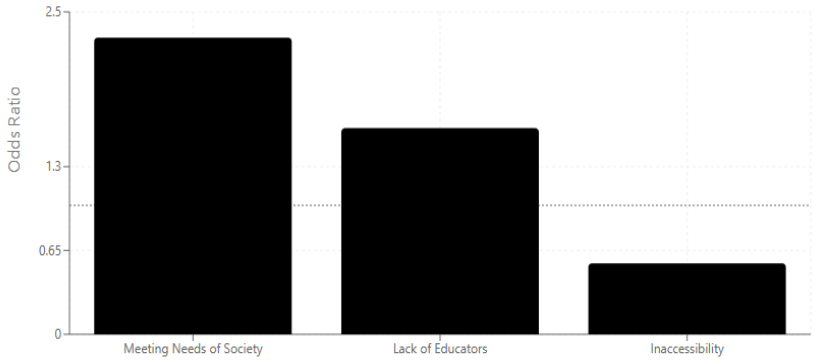


Figure 2: Significant Factors in Interest-Motivation Gap Only 3 out of 26 factors showed statistical significance ($p < 0.05$)



DISCUSSION

The study showed what medical students like and dislike in general medicine based on their experiences and perception of the field. The study showed that less interest in general medicine is parallel to more interest in being general practitioners. This gap was sometimes related to perceptions of "How we meet the needs of society," "A shortage of educators," "Difficulties in accessing schools," and "A narrow focus on what is taught in school." The findings are intended to shape general medical education considerably. Things such as current year in the clinical program, where they come from, their gender and local admission status affected their knowledge of general medicine. Among the issues related to education for students, these students mentioned community-based medicine, preventive care and public health, home care, a wide range of practice, balancing practice, a mix of education and research, serving specific communities, diversity and progress, reactions from other specialists, a need for more teachers and differences in different parts of the country (8,9). Best of our understanding, there are no previous studies that investigate factors affecting medical students' knowledge of general medicine in a rural environment. Pre-clinical students found it harder to learn general medicine which may indicate that practicum in community hospitals is beneficial for gaining such knowledge. Also, those with more knowledge were more likely to enroll in regional admission which might be because they had extra opportunities for community practice in their training. Students joining through this program could have already been interested in community medicine. Out of the factors tested, interest was mainly related to whether or not a student applied through the regional admission program. Beliefs about interest mentioned community-based medicine, preventive care, a wide area, the combination of roles, what society requires, cultural diversity, problems with the coursework, low numbers of teachers and differences in care at different regions. The share of interested students was bigger than in previous research which may suggest improved department activity in general medicine. Even with a lot of interest, fewer students chose to become general practitioners (10). Five things were found to contribute to the motivation gap. Being limited in what they learned beyond the formal curriculum affected how motivated students

were, so there is a need for closer cooperation between schools and community hospitals for hands-on experiences. Thinking a service was exclusive made patients want to workout less; this needs careful study and has important implications for interventions. Being aware of the greater need for general physicians encouraged students to be more motivated. Remarkably, displayed educator deficiencies were positively linked to motivation which may indicate that being aware of school difficulties can encourage some students. Even though it was not significant, students who felt their jobs were broadly scoped generally had a better sense of motivation. Pursuing general medicine as a career was even less popular, because of unclear choices in the field, not enough hospital-based training and comments from medical specialists. Lack of clear directions about their careers stresses students, so early placement in clinical settings can relieve some of their anxieties. It is not clear which way the causal link between regional admission and motivation goes; it could be that involvement in the programs inspires motivation, though it may also be that motivated students are more interested in the programs. Many studies have found students who intend to work in rural or community service are more likely to practice primary care after they graduate; however, their motivation may fade with time. Further studies over a long period may help explain how these associations work. It is important for future studies to check whether under-exposure leads to less motivation or motivates students who think the exposure is sufficiently different. Learning in your own community often raises motivation worldwide by making students keep seeing its benefits during their whole education. Determining how these systems work in remote places should be a main focus. Looking into why general medicine seems inaccessible and tough for some is necessary to understand how people find motivation in medicine. If learners have experiences with peers, clinics and support from generalists, it may help improve how accessible medical education appears to them. There should also be more study into the effect of general medicine's wide scope on motivation among health staff. Despite the fact that clinical reasoning and problem-based learning (PBL) improve skills and attitudes, their effects on students' choice of specialty are not clearly proven. Even so, blending PBL and apprenticeship programs in the general medicine educational process may increase motivation and skill of students. Involving nurses and community members is important for community-based medical education in rural areas to raise the quality of education. If students become teachers for their peers, it can help lessen the need for instructors, encourage self-study, make teaching less stressful for staff and raise the standards in rural areas. There were some drawbacks to this investigation. It's possible those who responded most likely wanted to study general medicine, but with 70% of invitations answered, the results have good validity. A decrease in responses toward the conclusion of a study might happen because of interrupted clinical cycles and less direct recruitment. The findings cannot be widely applied since they apply mainly to rural areas; cities have different contexts. Key points may be missed and how certain behaviors affect the health outcome is still unclear, due to the structure of the study. More research could be done using long-term studies in different places to check and add to these findings.

CONCLUSION

A main finding is that how enthusiastic medical students are about general medicine depends both on their backgrounds and their opinion of the discipline. Matters such as the needs of the community, the number of teachers, how easy it is to attend and what students are taught are important for students' career drive. Although getting practical experience and being admitted to a regional program raises knowledge and interest, obstacles like unclear paths and few clinical opportunities make students less likely to pursue general medicine. Dealing with these problems by providing better ways to learn, more practical clinical involvement, clearer career tips and stronger support from faculty members is necessary to stimulate a team ready to help with rising community care needs. Further research should be conducted in order to understand more about the links between interest, motivation and general medical practice.

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