

# Specialty preferences and factors affecting future career choice among medical graduates in Saudi

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## ABSTRACT

**Aims:** Our study was conducted to study the future specialty choices and the influencing factors among Saudi medical students. **Settings and Design:** Convenience study. **Methods and Materials:** An online questionnaire was sent to medical students during the period from February to April 2019 with the aim of analyzing the most desired specialty, the reasons behind choosing, and the different factors playing a role in choosing those specialties. **Statistical Analysis Used:** The results were analyzed by the Statistical Package for Social Sciences software version 21. Differences in means were analyzed using *t*-test. The Chi-square test was used to identify significant differences among groups with a significance level set a  $P \geq 0.05$ . **Results:** A convenience sample of 579 students has completed the survey. Most of the students did not receive any advice for choosing their specialty preferred. The three most desired specialties by both genders (males/females) are surgery, internal medicine, and cardiac surgery, respectively. The data revealed that nearly 42% of students did not receive any advice regarding their preferred career. Interesting cases, challenging, good lifestyle, and impact on patient quality of life were important reasons in selecting all specialties. **Conclusion:** A variety of factors appear to inspire medical students to choose a future career intention in Saudi Arabia. Some career measures and guidance are needed by university mentors and health policymakers to encourage those specialties that are scarce in Saudi Arabia.

**Keywords:** Medical students, questionnaire, specialty

## Introduction

Every medical student will begin his\her medical career, unaware of the difficulties he or she might go through to make it into further specialization. These difficulties are related to completing medical school in the first place, internship, then at the end, comprehensive board exams. Moreover, to be able to choose a medical specialty, either surgery or medicine and its branches,<sup>[1]</sup> a student should consider some factors that certainly will affect his\her decision and lead the student to the destined

medical specialty. Some of the factors include student's grade point average (GPA), which are the primary factors helping to deciding specialty and subspecialty, reputation and income of the specialty which became a major factor in selecting specialty later on, interests in some basic science subjects may give a hint and lead the student pathway.<sup>[2]</sup>

In Saudi Arabia, it's quite easy to decide where to head after the internship. Simply, because Saudi students are well collaborated and harmonized, benefiting from experiences within the medical community and finally chances to get a residency program are available all over the place, though this does not mean that these chances are only in the Kingdom. After graduation, medical students may face many pathways,

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all of them serve the same purpose, to choose from. A student can set for the Saudi License Examination to go for a residency here in Saudi, get a USMLE degree or Canadian Board Examination and begin residency journey abroad, or the student could continue as a GP for a year, two, or even three; by factors become suitable along with his insistence to work here in Saudi.

There are many factors that may influence a student to choose a particular specialty. Some may choose a particular specialty because of high income, an easy lifestyle, the wide variety of cases encountered in daily practice. Some studies have shown that some students choose to specialize in medicine because of the physician–patient relationship and the intellectual content of that field, while others chose to specialize in surgery because of the high prestige of the surgeon and the ability to practically apply knowledge.<sup>[3]</sup> In some studies, most medical students opted for a career in pediatrics, general surgery, and cardiology.<sup>[2]</sup> Other studies had similar results, with surgery, internal medicine, and pediatrics chosen by the majority of medical students.<sup>[1]</sup> Some studies found an association between certain subjects and specialties. For instance, one study found that students who preferred anatomy wanted to become surgeons, whereas students who liked biochemistry were more interested in general practice while students who enjoyed studying physiology were interested in pursuing internal medicine. There is also gender variant when it comes to choosing specialties. One study shows that males prefer surgery while females prefer obstetrics and gynecology.<sup>[1]</sup> According to one study, one of the strongest factors that influenced medical students when choosing a specialty was a lifestyle, as 36% of women and 45% of men chose specialties that had a controllable lifestyle.<sup>[4]</sup>

The impact upon choosing a medical specialty is greatly reflected on how good a doctor can be. A study showed the importance of a medical student to choose his/her specialty based on a controllable lifestyle for instant and that is for many reasons, one of which is to have a variety of specialties and thus, have a clear majority of doctors distributed.<sup>[4]</sup> In another study, knowing what students really want can help medical program directors in opening/improving training centers for students to cope with the advancements in hospital settings.<sup>[5]</sup> Having all these points in mind, this study serves to provide students and program directors with the proper knowledge about the factors that influence choosing a medical specialty.

The aim of the present study was to identify the factors influencing students to choose a particular field so this will help them determine the medical specialty that suits them most so they can excel in that particular field.

## Subjects and Methods

A cross-sectional study was conducted among medical students during the period from February to April 2019. The studied variables presented have been chosen based on an extensive literature review

on specialty preferences and discussions with academic, educational leaders, residents, and medical students.<sup>[1-3,6]</sup> An initial pilot study was conducted on 12 students to validate the survey. The questionnaire was validated by an experienced professional and their comments have been integrated into the questionnaire.

The study was structured self-administered survey distributed electronically to all medical students. The first section of the survey includes questions on sociodemographic factors including age, gender, marital status, monthly family income, the environment they are living in, year of study, grade point average (GPA) and whether their parents are from a medical background or not. The second section of the survey includes questions on the intended future medical specialty of the student filling out the survey. The student chooses his/her intended specialty and cited the source of advice for choosing the specialty (if there was any advice) and the reason for choosing the specialty. Inclusion criteria included all students enrolled in the MBBS program (2<sup>nd</sup>–6<sup>th</sup> Year) medical students. The present study excluded the preparatory year as they are not medical students yet.

## Data analysis

The results were analyzed by the Statistical Package for Social Sciences software version 21. Differences in means were analyzed using *t*-test. The Chi-square test was used to identify significant differences among groups with a significance level set a  $P \geq 0.05$ .

## Results

A total of 579 medical students responded to the online survey on specialty preferences and influencing factors. Most of the studied students were unmarried (92.9%). The mean age of participants was  $21 \pm 1.6$  years and GPA was  $4.3 \pm 0.8$  out of 5. Most participants (57.6%) were male [Table 1].

Self-administrative addresses about 90% of the participants were from urban regions. More than half of the participants (51.2%) have monthly family income between 10,000 and 25,000 SR (1 SR = 0.27 US dollar) and the majority (66.6%) with non-physician's parents [Table 1].

According to the education's level, 27.2% of participants were in their third year, 23.7% in their second year, 22.5% in their fourth year, 14% in their sixth year, and 12.6% were in their fifth year [Figure 1].

Most of the students (41.7%) did not receive any advice for choosing their specialty preferred while 28.9% have received advice from their families and 17% of practising doctors. Near an equal percentage (14%) of advice came from other medical students and friends. Interns, residents, and staff were appearing at the lowest percentage in providing advice for future careers [Figure 2].

When students asked about the reason for choosing specialty preference, interesting cases was accounting for 36.5%.

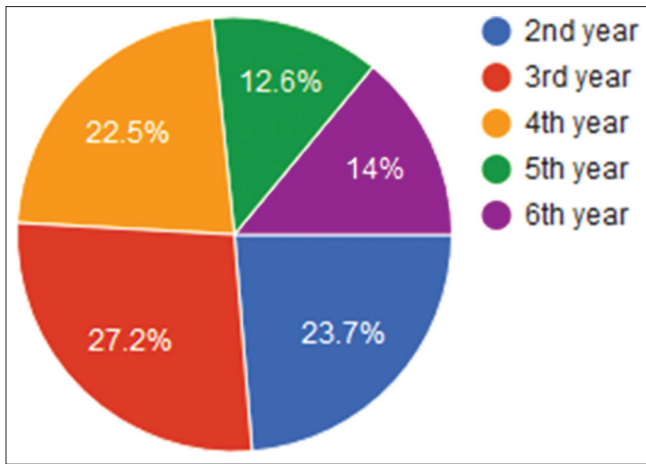


Figure 1: Educational level of participants

Challenging and difficult (33%) was coming next behind the choice of specialization followed by good lifestyle (32.5%) and impact on patient quality of life (28.2%). The reason least chosen as a factor for the specialty preference choice was influenced by the mentor (7.6%). Other reasons behind choosing a future specialty preference of our sample of medical students [Figure 3].

Figure 4 demonstrates the specialty preference of the participants. The three most desired specialties by both genders (males/females) are surgery, internal medicine, and cardiac surgery, respectively (12.9%/11.4%, 10.5%/9.8%, and 9.9%/8.2%). The last three chosen specialties by males are preclinical (0.6%), physical medicine and rehabilitation (1.2%) and radiology (1.2%) while for females are urology (0.0%), preclinical (0.4%), and radiology (0.8%) in a descending order. Interestingly, 96% of the participants have determined their future career [Figure 4].

## Discussion

Our results revealed that the studied medical students had chosen their future specialty preference and the majority tended to sway toward general surgery, internal medicine, and cardiac surgery, respectively. Focusing on surgery and internal medicine is congruent with other research studies conducted in Saudi Arabia<sup>[7]</sup> and in Europe.<sup>[8]</sup> These branches seem to yield a good financial reward.

Moreover, the present study could not find a significant influential factor in choosing a specialty preference. Similar study has been reported by Abdulrahman *et al.* from UAE.<sup>[6]</sup> However, the most commonly reported reasons for choosing their career as a specialty in the studied sample were interesting cases, challenging, good lifestyle, and impact on patient quality of life.

From the students' responses, 41.7% did not receive any advice regarding their future career preference and the family factor was 28.9%. It appears that a network of factors operating in any decision with respect to an individual's professional career.

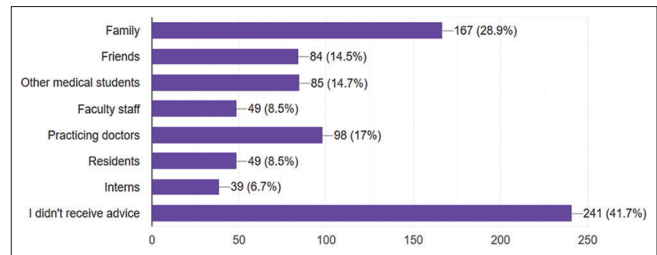


Figure 2: Source of advice for choosing the specialty

Table 1: Demographic features

Mean	
Age	21 ± 1.6
GPA	4.3 ± 0.8
Gender	
Female	42.4%
Male	57.6%
Monthly family income (SR)	
Less than 10,000	14.5%
Between 10,000-25,000	51.2%
Between 25,000-40,000	18.7%
Between 40,000-60,000	9.5%
60,000 or above	6.1%
Urban/Rural residence	
Urban residence	90%
Rural residence	10%
Parent from medical background	
Father only	13.5%
Mother only	7.3%
Both	12.6%
Non	66.6%*

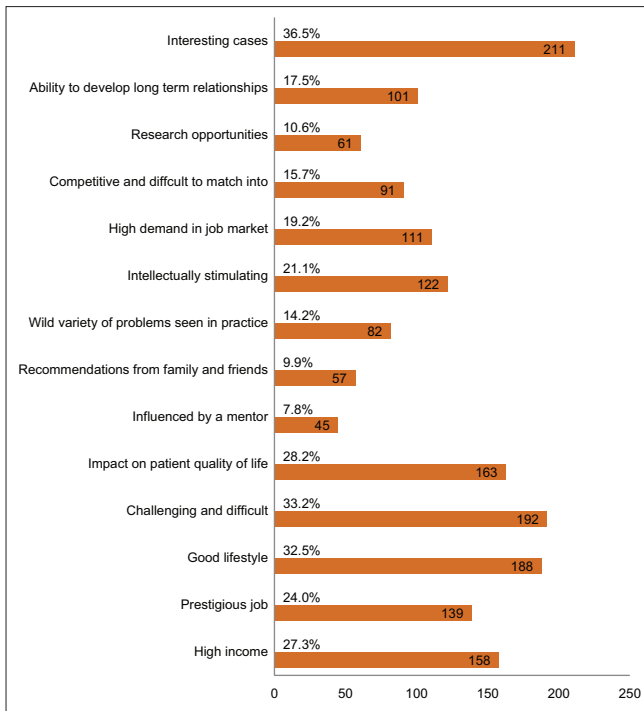
\*P value=0.041

In both genders, general surgery was the most popular specialty preference followed by internal medicine and cardiac surgery. The other higher ranked choices for female students were pediatric and family and community medicine, but for male students these were emergency medicine and family and community medicine in descending order. We found that our results were not so different from those in other parts of the globe.<sup>[7,9-11]</sup>

Many factors such as parents' educational background, gender, ethnicity, and age have been mentioned as factors which might have influenced to varying degrees on career selection.<sup>[12]</sup> The factors behind choosing specialty preference are complex.<sup>[13]</sup> However, there is little understanding of how medical specialties are perceived by graduate students and the impact of this perception on their future selection.

Saudi Arabia is rapidly growing population and the policies toward encouraging Saudi nationals to pursue a career in the medical field to ensure that the whole healthcare system in the future will be managed and run by Saudi national physicians.

Medical specialties preferred and the influential reasons involved in decision making for choosing future career are of



**Figure 3:** Reason for choosing speciality

great importance for medical workforce planners to granting a balanced distribution of physicians in all medical specialties.

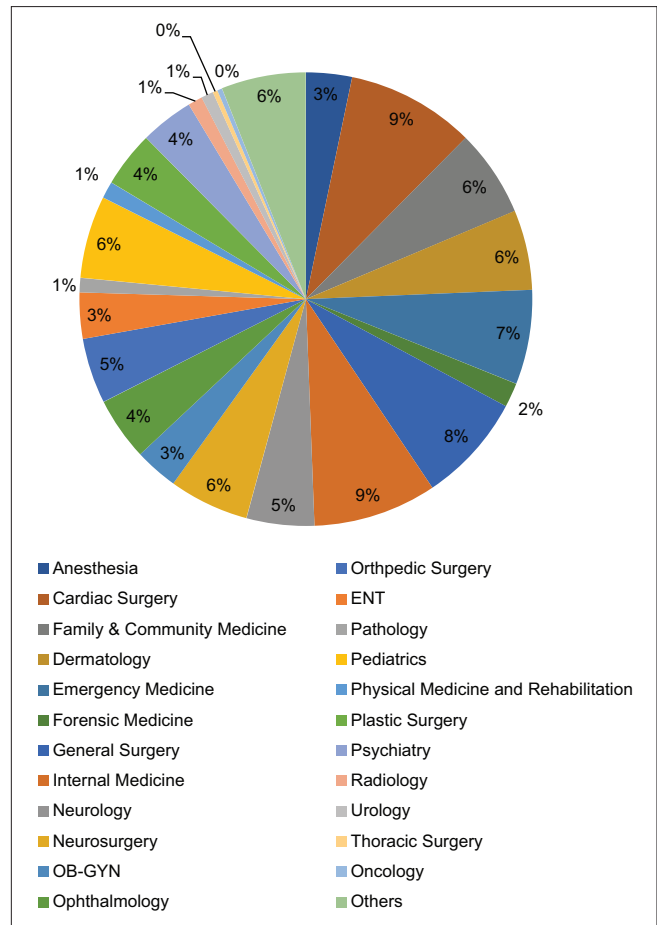
Accordingly, studying the mechanisms and associated factors of specialty preference can provide important information to help in the administration for planning and provision of proper health service.

The shortage of Saudi doctors in different specialties especially in family medicine<sup>[14]</sup> indicates a need to produce more primary care specialists and to establishment of primary care training programs for organizing and improving the coordination of different specialty and the quality of services in the long run in every medical college.<sup>[15]</sup>

There is a need for “Career counselling” for Saudi physicians and medical students during their training programs.<sup>[16]</sup> A more interesting model to provide a career counsellor for medical students and immediately after graduation is the application of social network which has become an important part of their lives to encourage them to join in the most demanding specialties.<sup>[17]</sup>

### Conclusion

The present study reveals that the most preferred specialties among medical students were surgery followed by internal medicine. A variety of factors appear to inspire medical students to choose a future career intention in Saudi Arabia. Some measures and career guidance are needed by university mentors and health policymakers to provide a structured service for career



**Figure 4:** Specialty preference of both genders

counselling to encourage those specialties that are scarce in Saudi Arabia and therefore better serve the community healthy.

### Limitation

This study was conducted only in one medical college, thus, it may not represent the whole country. Further studies are highly recommended which should include a longitudinal design with a greater number of institutions and open-ended questionnaire which might help in recognizing the influential factors affecting future career choice among medical graduates in Saudi.

### Ethical approval

Approval for this study was obtained from the Local Ethics Committee (IRB-UGS-2019-01-274).

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Nil.

## Conflicts of interest

There are no conflicts of interest.

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