

Factors Influencing the Choice of Plastic Surgery as a Specialty in Saudi Arabia

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Background: Graduates of medical school must choose a specific specialty as a life-long practice from a large pool of medical specialties. This decision stands out as one of the most memorable and critical in their lifetimes. To reach such a decision with satisfaction, medical school graduates consider a variety of factors. This is the first study to explore the influential factors on pursuing plastic surgery as a career in Saudi Arabia.

Methods: This is a cross-sectional, unicentral study based on an electronic questionnaire that has been constructed with an assistance of field experts to ensure a sufficient coverage of the influential factors. Only those with an established interest in plastic surgery were included. Institutional review board approval was obtained for this study.

Results: Of the 695 questionnaires fully completed by third-year medical students up to intern doctors, only 32 (4.6%) expressed an interest in the pursuit of plastic surgery as a future career, with a female predominance of 62.5% ($N=20$). The factors that influenced their decision of specialty choice were the geographic advantage (81.3%), predominance of nonurgent cases (71.9%), the reward associated with immediate outcome (71.9%), and prior significant events (71.9%).

Conclusions: Certain factors, as explored by this study, strongly influence the choice of plastic surgery as a future specialty, among Saudi medical graduates. Cultivating more knowledge about plastic surgery as a specialty may help consider scientific research as an impactful factor in the future for further development in the field.

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INTRODUCTION

The decision to choose a specific medical specialty after graduation stands out as a critical decision in the lifetime of medical students.¹ Many studies have indicated that

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financial prospects and prestige,²⁻⁵ personal interests,^{3,6} personality type,^{7,8} geographic advantage, and the lifestyle a specialty provides⁹⁻¹¹ are among the leading factors that predict the choice of medical specialties of medical students. Moreover, the lifestyle a medical specialty provides was noted to be the most imperative factor influencing the choice of medical specialty among Saudi medical students and medical interns, as reported by Alshahrani et al.¹² In fact, nonmodifiable characteristics, such as gender, could be implicated in this process too, as Alsubaie et al reported a predilection toward general surgery and dermatology among male and female students, respectively, in the Kingdom of Saudi Arabia (KSA).¹³ When it comes to the factors influencing the choice of plastic surgery as a future career, many studies have investigated these factors, on an international scale.¹⁴ However, a gap exists in the local literature about the determinants of pursuing plastic surgery as a future career; the aim of this study was to close this gap.

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Related Digital Media are available in the full-text version of the article on www.PRSGlobalOpen.com.

METHODOLOGY

In this cross-sectional, unicentral study, an electronic survey, hosted through a Google survey webpage, was sent to medical students and interns at King Saud bin Abdulaziz University for Health Sciences, Jeddah, Saudi Arabia. Only those from the third year to internship were included, excluding the more junior students or those who expressed interest in a specialty other than plastic surgery. In the light of available literature, the self-administered questionnaire was constructed with assistance from field-experts, targeting demographics, specialty preference, and influential factors. Data were collected for 13 days, starting from the 12th of September until the 25th, 2020. After data cleaning and transformation from Excel format (Microsoft, Redmond, Wash.) to SPSS (23rd edition for Microsoft; IBM, Armonk, N.Y.), Descriptive statistics were used to present categorical variables in frequencies and percentages, and continuous data were presented as mean \pm SD. Participation in this study was completely voluntary, with the purpose and goal of the study stated at the beginning of the survey. Participants were informed that no consequences were to be expected whether they filled the survey or ignored it, and that all data were kept safe from the reach of any third party. Finally, institutional review board approval was obtained from King Abdullah International Medical Research Center. (See questionnaire, Supplemental Digital Content 1, which displays questions aimed at discovering the factors influencing the choice of plastic surgery as a future career. <http://links.lww.com/PRSGO/B736>.)

RESULTS

A total of 695 undergraduate medical students (third year to interns) participated in this study, from which only 32 (4.6%) were included, as the others were interested in alternative specialties. With a mean age of 21.94 years, a female predominance of 62.5% ($N=20$) was noted among the cohort. Further demographic data are depicted in Table 1.

Upon exploring the most influential factors in choosing a subspecialty, the medical students voted for the geographic advantage, prior significant event, predominance of nonurgent cases, and the reward associated with immediate outcome as the most significant determinants of their choice of plastic surgery. Further details are shown in Figure 1.

DISCUSSION

Plastic surgery is one of the toughest medical specialties to get into following graduation—a plan that needs to be carefully devised ahead of this point.^{14,15} This article investigates the elements that medical students interested in plastic surgery think are important in deciding their career. Although this topic has not been discussed in the local literature, many studies were published about it internationally.^{14,16}

Geography and Mentorship

Because the Saudi plastic surgery training program is available at only two regions (Riyadh and Jeddah),¹⁵ 26 students (81.3%) considering geographic advantage the

Table 1. Demographic Data

Parameter	Value (%)	Measures of Dispersion
Gender	Men: $N=12$ (37.5%) Women: $N=20$ (62.5%)	—
Age	—	Mean: 21.94 years old SD: ± 1.34 years old Median: 22 years old Mode: 21 years old Minimum: 20 years old Maximum: 24 years old
Academic level*	3rd year: $N=9$ (28.1%) 4th year: $N=6$ (18.8%) 5th year: $N=4$ (12.5%) 6th year: $N=8$ (25%) Internship: $N=5$ (15.6%)	—
GPA (out of 5)	3–3.49: $N=1$ (3.1%) 3.5–4: $N=0$ (0%) 4–4.49: $N=3$ (9.4%) 4.5–4.74: $N=5$ (15.6%) 4.75–5: $N=23$ (71.9%)	—
Prior exposure to surgery?	No: $N=14$ (43.8%) Yes: $N=18$ (56.3%)	—

*The academic level here accounts for the preparatory year, counting it as the 1st year.

GPA, grade point average.

most important factor does not come as a surprise, especially since our cohort was located in Jeddah. The availability of a plastic surgery center in the proximity provides a potential for electives and rotations, mentorship, and research; this is expected to springboard the chances of acceptance into training as Saudi program directors preferred familiar candidates, according to Shah Mardan et al.¹⁵ This conclusion parallels that of a study on Canadian applicants to plastic surgery programs, where availability of close centers was ranked as the second most important factor in choosing a specific center.¹⁶ Contrary to our findings, presence of an inspiring mentor played the most imperative role when it came to choosing a program center according to the aforementioned study, while only half of our sample appreciated the role of a role model in the pursuit for plastic surgery residency. We believe that this is rooted in undervaluing the concept of mentor–mentee relationship during medical school, extending to specialty training.^{17,18} Although primitive mentorship systems that are recently established in Saudi medical colleges are present,¹⁷ no such programs are available during plastic surgery residency training.¹⁸ Besides many of the known advantages of mentorship, mentors could facilitate the transition of protégés into specialty training.¹⁹

Case Variety and Immediate Satisfaction

Plastic surgery is recognized for a variety of procedures as well as the different patients' characteristics encountered in the daily practice of a plastic surgeon.²⁰ This specific factor drives 53.1% of our population toward the pursuit of plastic surgery as a future specialty. Interestingly, it was ranked as the most attractive feature in the study by Pasha et al, as 25% of their participants stated.¹⁴ The same study ranked immediate outcome as the third most important factor,¹⁴ sharing common ground with the findings in our study, where 71.9% found this influential.

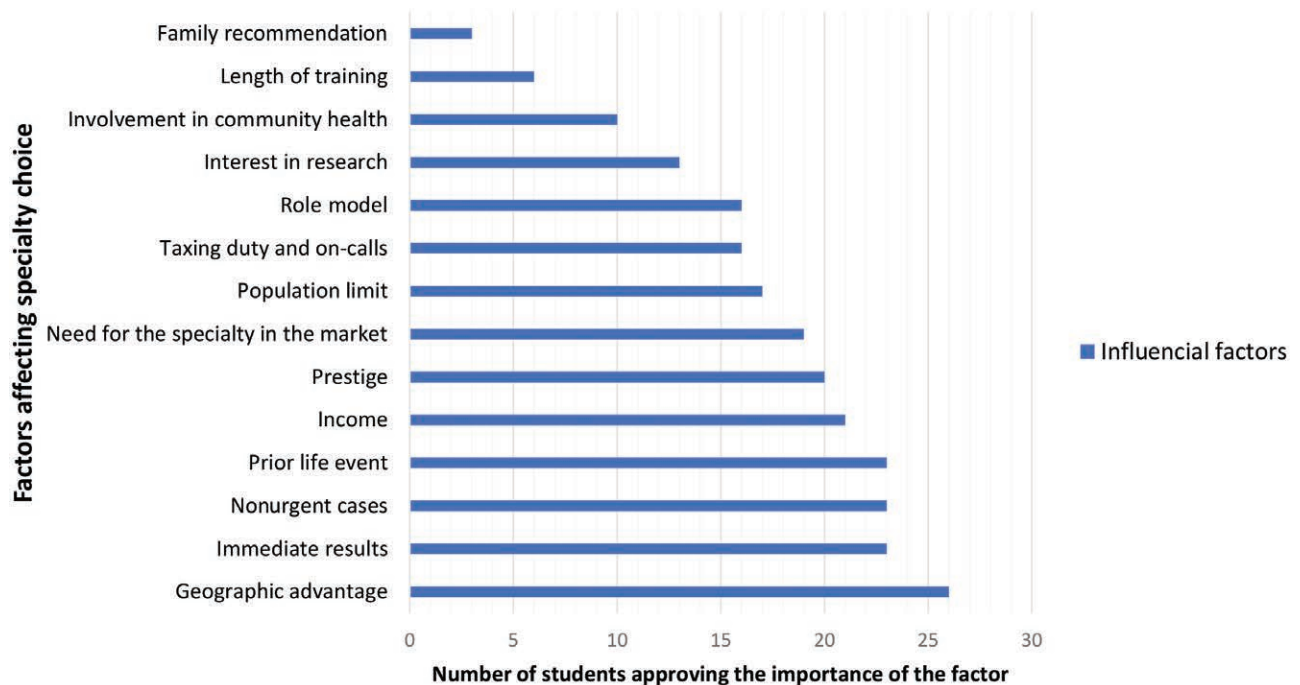


Fig. 1. Bar chart demonstrating the important factors in pursuing a certain specialty after completing medical school. Note: each student was able to choose more than one option as an important determinant factor.

Length of Training, Taxing Duty, and Work–Life Balance

The Saudi plastic surgery program is composed of 6 years of ongoing training—longer than many other specialties.²¹ Furthermore, it is recognized by long and demanding clinical duties, negatively impacting work–life balance.^{14,22} Interestingly, half of our cohort think that working hours and on-calls are important in choosing the specialty. We think that this misconception of a relaxed clinical responsibility arose from the limited clinical exposure to surgery, as more than 40% of the students did not undergo through surgical rotations. Although there is no data looking into the awareness of the medical students with established interest in plastic surgery locally, it is suggested that the students' superficial idea of plastic surgery is cursory.²³ Notably, only 18.8% of the participants valued the duration of training, reflecting their preparedness to endure the long duration. Streu et al surveyed a group of the American Society of Plastic Surgeons, who reported longer working hours (beyond 60 hours a week) as a significant cause of career dissatisfaction.²⁴

Research

Medical research was not one of the highly ranked factors, deemed important by only 40.6% of the students, albeit relatively higher than the 3.7% reported by Pasha et al.¹⁴ Moreover, research was the least encouraging factor for students aspiring to become plastic surgeons in the study by Farid et al.²⁵ It is possible that the superficial idea of the students about plastic surgery drives them to undervalue the impact of research in this field, highlighting the importance of undergraduate education about this specialty.^{14,23,26} Involvement of the juniors in research has its positive impact on their

personal and professional progression; it creates a door for networking, exploring beyond the borders of university curriculum, and ultimately brining innovative additions to the field.²⁷

Others

Encountering relatively more “cold cases” and less patients with life-threatening conditions (except when it is a burn rotation!) was found to be the third most important factor in choosing plastic surgery as a future career among 71.8% of our cohort. Dissatisfaction with career was more prominent among the plastic surgeons tasked with emergency room call duties, as reported by Streu et al.²⁴ In addition, having a decent income helped in attracting 65.6% of the students in our sample to plastic surgery; likewise, it was ranked as a significant factor in choosing the future specialty in the study by Greene and May²⁸ and was a significant predictor of job satisfaction among a cohort of Saudi-based physicians, as reported by Aldrees et al.²⁹ Finally, significant memories (71.8%) and prestige associated with the specialty (62.5%) were more important driving factors than family recommendations (9.3%) and involvement in community health (31.2%). It is noted that more than 60% of the interested students are women; this represents an observation of female-influx into plastic surgery in KSA. Currently, around 16.7% of the board-certified plastic surgeons in KSA are women, and approximately 40% of the plastic surgery residents are women too.^{15,30}

This study is limited by a few factors. Constructing a self-administered survey may not yield optimal reliability and lead to recall bias. Although 95% of the original sample was excluded, the number of the remaining students

with established interest in plastic surgery is consistent with the norm in the literature.^{12,13,31} Conducting a nationwide study would give a more generalizable and holistic conclusion rather than a unicentral study.

CONCLUSIONS

Medical school graduates undergo a phase where they must decide on a single specialty from a wide variety of options. Certain factors influence the specific decision on their career choices. This study investigates the determinants of pursuing plastic surgery as a career in the KSA. Cultivating deep knowledge in the field of plastic surgery may help those with established interest of pursuing the specialty to consider scientific medical research as an impactful factor in the future for further development in the field of plastic surgery.

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