

# An Insight of Factors of Concern in Choosing Surgery as A Profession

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## ABSTRACT

**Background:** Surgery is a competitive specialty and requires a lengthy and rigorous residency training which necessitates one's passion and commitment. A number of medical students experience their surgical rotation as demanding with extended period of work hours as compared to other medical specialties.

**Methods:** This cross sectional study was conducted at four medical colleges located in Karachi, Pakistan during September 2013 to January 2014. A self administered questionnaire was made to gain insight regarding students' views of advantages and disadvantages associated with surgical profession. Medical students who have completed at least one rotation of surgery were included in the study.

**Results:** Overall 810 respondents participated in the study, with a response rate of 90 %.

Amongst the participants 72.8 % were females and 27.2% were males. 62.7% of the students thought that surgery is a stressful profession, while 80.8% believed that a surgeon's family life is adversely compromised at some time during their carrier (86.7% females, 65% males). Majority of the students (55.3%) asserted that surgery is more respectful than other medical field, however 52.7% of the respondents believed that a surgeon's income is higher than any other medical specialty. Overall 17.9% students strongly considered to become surgeon in future (Male/Female OR: 2.0).

**Conclusion:** Workload, family life, length of residency, income, respect and stress level associated with surgery are some important factors influencing student's choice for profession. **Key words:** surgery, profession, family life, stress, workload.

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## INTRODUCTION

Surgery has its 'own charm' according to some, while others may prove reluctant to make it as 'the profession of choice'. Surgeons have made a significant contribution towards overall well being of human in the fields of education, health care and research. In addition to its valuable contribution to the society, surgery remains a fulfilling carrier choice and surgeons earn great respect and honor in return throughout the globe.<sup>1</sup> Surgery has its 'own charm' according to some, while others may prove reluctant to make it as 'the profession of choice'.

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of education, health care and research. In addition to its valuable contribution to the society, surgery remains a fulfilling carrier choice and surgeons earn great respect and honor in return throughout the globe.<sup>1</sup>

Surgery is well reputed for early prognosis and monetary stability; however this trend is not universal. There seen a huge contrast in the incomes of surgeons around the world and even among the surgeons there are differences in wages and livelihood conditions depending on the different expertise and subtypes of surgeries.<sup>2,3,4,5</sup>

Medical students are faced with a number of dilemmas in offering preference to one specialty to another. The level of responsibility and the 'decision making window period' starts with the clinical years of the medical college. Students carefully make their choices and sometimes tend to change many prepossessions till the graduate. They thoroughly evaluate advantages and

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disadvantages of the specialty while assessing their own interests.<sup>6,7,8,9</sup>

Many medical students find their surgical rotation as one of the most hectic and tiring with extended period of work hours including assisting surgeons in the operation theatres. Enduring work hours have negatively affected surgeons family life in some cases hence a student carefully examines all aspects to get into a field where there are compromises and rewards at the same time. Residency training in surgery usually requires more years to complete in comparison to medicine and allied fields, however on average surgeon earn more than physician in majority of the cases. Surgery is considered as a stressful occupation and it has long been known to be reserved for a person with nerves, patients and constant temperament.<sup>10,11</sup>

The objective of the study was to evaluate how students perceive surgery, its advantages and disadvantages. An additional objective of the study was to assess the percentage of male and females final year medical students who intend to become surgeons in future.

## MATERIAL & METHODS

This study was conducted during September 2013 to January 2014 at four medical colleges located in the city of Karachi, Pakistan (two in public while two in private setup). Ethical approval was taken from the ethical boards of the respective medical colleges. Final year medical students were approached to fill in the questionnaires, considering that they had already completed at least one surgical rotation by the time they will participate in the study. The questionnaires were self administered with questions based on inquiring respondents' perceptions regarding making surgery as their carrier choice. The questionnaire included questions which were targeted to gather information on the students' perspective towards anticipated advantages and disadvantages of surgery in context of adopting it as future profession. Some additional questions were utilized from 'Medical school graduation questionnaire' (MSGQ) and were made according to the specialties and curriculum locally applicable. Students were specified that 'Surgery' included major types of surgical specialties such

as General surgery (and allied), Neurosurgery, Plastic and cosmetic surgery, Urology, ophthalmology and otolaryngology. However, pediatrics surgery, gynecology and obstetrics, dental and maxillofacial surgery was excluded from the list. Inclusion criteria included all final year medical college students who have completed at least one rotation of surgery, both genders without any age restrictions. Participants were instructed that the confidentiality of their identity will be maintained as they were not required to disclose their personal information. Oral and written consent was obtained from the students before the start of the study. The data was analyzed through statistical package for social sciences (SPSS) version 17.

## RESULTS

This study initially recruited 900 participants; however 810 intended to stay in the study, with a response rate of 90 %. Amongst the participants 72.8 % (n=590) were females and 27.2% (n=220) were males.

Majority (62.7%) of the students believed that surgery is a stressful profession, 66.3% of the males and 61.3% of the female respondents asserted that they consider surgery as stressful with an odds male to female of 1.08 (C.I: 0.79-2.34). Longer working hour for surgeons was another concerns for 72.3% of the students (70% males and 73.2% females, OR M/F 0.9, C.I: 2.41-8.67).

More than 80% of the students reflected that a surgeon's family life is adversely compromised, with significant percentage (86.7%) of female respondents in comparison to male respondents (65%). On evaluating the effect of a longer residency period of surgery than other medical specialties, 44% thought that it would be frustrating and undesirable.

**Table 1: Respondent's demographics**

	Male	Female	Total
Final year Medical students	220	590	810

**Table 2: Disadvantages of Surgical Profession**

QUESTIONS	MALE (%)	FEMALE (%)	TOTAL(%)	(M/F OR) 95% C.I
Surgery is a stressful carrier	146( 66.3)	362(61.3)	508(62.7)	(1.08) 0.79-2.34
Longer work hour of surgeons	154( 70.0)	432(73.2)	586(72.3)	(0.9) 2.41-8.67
Family life compromised	143(65.0)	512(86.7)	655(80.8)	(0.7) 0.42-7.61
Longer residency length is frustrating	89(40.4)	268(45.4)	357(44.0)	(0.8) 1.4-33.2

On assessing the advantages of surgery, 55.3% of the students acknowledged that it is more respectful than other medical fields, with male to female Odds 1.1(0.29-0.44). However majority (52.7%) of the participants postulated that a surgeon's income is higher than any other medical field, while only 35.8% (Odds M/F: 1.1, C.I: 2.1-9.02) considers that there are more academic opportunities associated with surgery and its subspecialties.

**Table 3: Advantages of Surgery**

QUESTIONS	MALE	FEMALE	TOTAL	(M/F OR ) 95% C.I
More respectful than other specialties	136 (61.8)	312(52.8)	448(55.3)	(1.1) 0.29-0.44
More income than other medical fields	125( 56.8)	302(51.1)	427(52.7)	(1.1) 2.1-9.02
More Academic opportunities	74(33.6)	216(36.6)	290(35.8)	(0.9) 0.79-5.11

On the students' views regarding embracing surgery as their future profession, 17.9%, with males twice as much as females strongly considered to become surgeon in future. (M/F OR: 2.0, C.I: 0.28-0.48). While 7.5 % admitted that they may consider selecting surgery in post graduation ( M/F OR: 1.6, C.I: 1.74-3.12).

Maximum number of the participants (39.7%) did not consider surgery as an option for their carrier with more females (41.5%) than males (35%). A large proportion of the female students (37.9%) were uncertain regarding surgery as their future choice, while 26.3% of the male participants were found undecided of their choices. Over all 34.8 % were ambivalent of their preference (M/F OR: 0.7, C.I: 0.13-0.42).

**Table 4: Would you consider surgery as your future carrier**

QUESTIONS	MALE	FEMALE	TOTAL	(M/F OR) 95% C.I
Strongly consider	62 ( 28.1)	83(14.0)	145(17.9)	(2.0) 0.28-0.48
May consider	23( 10.4)	38(6.4)	61(7.5)	(1.6) 1.74-3.12
Not at all	77(35)	245(41.5)	322(39.7)	(0.8) 0.2-4.32
Don't know	58(26.3)	224(37.9)	282(34.8)	(0.7) 0.13-0.42

## DISCUSSION

A lifetime decision is sometime difficult to make, it may be frustrating and time consuming. Students face this situation seldom but the right choice at the right time is critical. The final decision in majority of the times based on a number of factors influencing the thought process of the decision maker. Nothing is easy neither has a short cut especially if one talks about medicine in particular. Difficult choices between work and family, money and leisure, passion or profession are the major concerns of many while embracing a definite field.

Perceived longer and hectic duty hours of surgeons is one of the major concerns of the students choosing a specialty. Our study indicated that more than 70 percent of the students believed that surgeons have longer work hours and even more conceived that the family life of a surgeon gets compromised due to limited time spent with them. Brundage et al found out that the medical students in the United States consider surgery as a profession that can have major impact on family life and leads to scant personal time.<sup>12</sup> Campbell et al demonstrated that a proportion of surgeons

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suffer through burnout, where thirty two percent go through emotional exhaustion, thirteen percent experience high levels of depersonalization while four percent had feelings of low personal accomplishment. It was also found out that one of the etiological factors of this high emotional exhausting condition was a misbalance between carrier, family and professional success.<sup>13</sup>

Another study by Shanafelt disclosed that more than forty percent of the surgeons suffer from emotional exhaustion, while only just over one third believe that their personal and family life had been severely compromised as a result of their surgical carrier.<sup>14</sup>

In this study 52.7 percent of the students believed that carrier with surgery involved more income than other medical fields, while lesser percentage viewed academic opportunities in surgical profession. Gilfand et al found out that students believed that the income is not adequate for the work load and commitment offered. Women tend to make their choices after consideration of their marital status, family systems and social dynamics. Considering Pakistan as a country with strong religious and social influence, females prefer occupation that would not clash with family or personal live. In Pakistan females are considered as the symbolic and practical center stone, hence they tend to balance all aspects of social life. This study's results showed that females were less than half of the males in strongly considering surgery as their future carrier. Although almost 18% of all students were strongly considering, makes surgery not a popular field for students after their rotation. It was also seen that the more females were uncertain of their choices. A study found out that the female medical students were not much interested in adopting surgery and would prefer some field with greater flexibility to be pregnant and to spend quality time with their families.<sup>12</sup>

Sanfy et al found out that both male and female both had family priorities over work but the decision to have family was more significant in women than men.<sup>15</sup>

## CONCLUSION

Surgery is well known for exhausting long duty hours and increased length of the residency period and medical students were found to be more

concerned regarding workload, family life and stress associated with surgery. Thus it would be better for students not to follow materials on the web and the information provided to them by non surgeons but to gain insight of the life by observing surgeons themselves and get their actual inputs.

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