



RESEARCH ARTICLE

IMPACT OF DEMOGRAPHIC PROFILE OF MEDICAL STUDENTS ON CHOOSING
SURGERY AS A CAREER

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ABSTRACT

Building right career at right time is one of the major issues for the youths today. Career choice has become complex with the advancements of the new technologies. The study Impact of demographic profile of medical students on choosing surgery as a career was undertaken successfully in ten north Indian medical colleges, on a sample of 677 students, with the following objectives: To study specialty preference of medical students and to find out individual influence (demographic characteristics) on specific specialty choices of medical students. Data was analysed on frequency and percentage; χ^2 value to find association, if any with reference to demographic profile. Major findings revealed that, χ^2 values are found to be significant for surgery on Gender, Marital Status, Residence and Type of family.

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INTRODUCTION

Career choice has become so complex with the advancements of the new technologies. Finding the career in early times was not a big issue as it was preplanned as: a son of tailor will be a tailor; a sculptor will be a sculpture and so on. But building right career at right time is one of the major issues for the youths today. The course curriculum and the various experiences during the course of studies help a person to select his/ her career. Today, one has not only to make due career planning but also exhaustive career research before making a career choice so as to adjust with the evolving socio-economic conditions (Wattles, 2009). Proper guidance to students, specifically in relation to the specialties that are most needed in a community, can play a significant role in helping one to decide what to choose and how to choose. For instance, surgery being the most competitive specialty and Family Medicine, which needs more physicians, is the least competitive.

Choosing a profession, one of the most important decisions made by a physician, is often one fraught with uncertainty (West *et al.*, 2006). Paediatrics was the second most preferred specialty after surgery Mwachaka, and Mbugua, (2010). Parsa *et al.* (2010) stated that the preferred specialties among freshmen were surgery and internal medicine, whereas graduating students were more interested in "other specialties". Kumar and Dhaliwal (2011) also reported that the most preferred career choices were medicine and surgery, followed by orthopaedics, and least chosen was community medicine. Tennakoon *et al.* (1999) identified General Medicine, Obstetrics and Gynecology, General Practice/Family Medicine, General Surgery and Neurology were areas/disciplines with the highest levels of preference among students. Community Medicine, Biochemistry, Geriatrics, Medical Administration and Microbiology had the lowest preference scores. The factors that lead medical students to choose a particular career specialty are complex and poorly understood In the past fifteen years, the percentage of medical students choosing primary care careers (e.g. family practice, general internal medicine) has declined sharply, while the percentage of students entering careers such as plastic surgery and emergency medicine has increased dramatically (Newton

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et al., 2005). Among factors which influenced the career preferences, personal factors scored the highest percentage score followed by factors within the hospital and clinical appointment, occupational factors, factors within the medical school and factors associated with family and relatives. Azizzadeh et al. (2003) conducted survey on factors influencing career choice among fourth-year medical students interested in surgery. Factors predicting surgery as a career choice were career opportunities and prestige. Lifestyle during residency, work hours during residency, and quality of patient/physician relationships were all significantly negatively correlated with the choice of a surgical career.

produces thousands of medical graduates per year. The challenge for medical educationists is to understand how these choices are made and design curricula to influence these choices. Therefore it is very important to find the impact of demographic profile on career choice of medical students. Therefore keeping all points in mind the problem has been stated as – “Impact of demographic profile of medical students on choosing surgery as a career.” With the following

Objective: To study specialty preference of medical students and to find out individual influence (demographic characteristics) on specific specialty choices of medical students.

Table. Frequency distribution of medical students with surgery as a career choice N=677

Demographic characteristics	Frequency	Utmost Preferred	Most Preferred	Preferred	Not Preferred
GENDER	Male (457)	277 (60.61)	113 (24.73)	39 (8.53)	28 (6.13)
	Female (210)	95 (45.24)	69 (32.86)	37 (17.62)	19 (9.05)
AGE GROUP	20- 29yrs (668)	366 (54.79)	181 (27.10)	76 (11.38)	45 6.74
	30-39yrs (9)	6 (66.67)	1 (11.11)	0 (0)	2 (22.22)
	MARITAL STATUS	Married (631)	347 (54.99)	171 (27.10)	71 (11.25)
RELIGION	Unmarried (46)	25 (54.35)	11 (23.91)	5 (10.87)	5 (10.87)
	Hindu (586)	309 (52.73)	165 (28.16)	72 (12.29)	40 (6.83)
	Muslim (66)	45 (68.18)	13 (19.70)	2 (3.03)	6 (9.09)
	Sikh (10)	9 (90)	0 (0)	1 (10)	0 (0)
	Christian (15)	9 (60)	4 (26.67)	1 (6.6)	1 (6.67)
RESIDENTIAL AREA	Urban (490)	275 (56.12)	118 (24.08)	55 (11.22)	42 (8.57)
	Rural (187)	97 (51.87)	64 (34.22)	21 (11.22)	5 2.67
TYPE OF FAMILY	Nuclear (260)	148 (56.92)	59 (22.69)	41 (15.77)	12 (4.62)
	Joint (417)	224 (53.71)	123 (29.50)	35 (8.39)	35 (8.39)
INCOME GROUP	LIG (118)	67 (56.78)	29 (24.58)	14 (11.86)	8 (6.78)
	MIG (178)	98 (55.06)	41 (23.03)	21 (11.80)	18 (10.11)
	HIG (381)	207 (54.33)	112 (29.39)	41 (10.76)	21 (5.51)

Table. Association of demographic profile with surgery as a career choice

Demographic factors	SURGERY	
	Degree of freedom	χ ² values
Gender	3	21.07**
Age group	3	5.16 ^{NS}
Marital status	3	7983.29**
Religion	9	15.22 ^{NS}
Residence	3	12.41**
Type of family	3	14.11**
Income group	6	6.08 ^{NS}

** = significant at 0.01 level; * = significant at 0.05 level; NS= Non-significant at 0.05 level

Statement of problem

As evident from the review of literature, although medical career specialization has been subjected to a moderate amount of research internationally, however, surprisingly there is limited data available for Indian medical students, which

METHODOLOGY

This study was conducted on MBBS final year students of medical colleges of north Indian states with surgery as a career choice.

Table. Surgery-Sub Speciality preference of medical students in descending order

Surgery-Sub Speciality	Weighted score
Cardiac surgery	1124
Cardiothoracic surgery	769
Neurosurgery	735
General surgery	722
Orthopedic surgery	549
Ophthalmology	296
Colorectal surgery	263
Plastic surgery	180
Otolaryngology (ENT) Pediatric surgery	169
Transplant surgery	154
Hand surgery	151
Surgical oncology	137
Oral and maxillofacial surgery	87
Trauma surgery	81
Thoracic surgery	64
Urology	56
Vascular surgery	25

To study impact of demographic profile on choosing surgery as a career, the investigator has purposively selected 10 north Indian medical colleges. The Descriptive research method was used to collect the information. A tool was prepared which was compromised demographic profile, speciality and sub speciality of surgery. A Pilot study was conducted on 20 students of Rohillkhand medical college. Results were analyzed using Frequency, percentage, mean weighted score and chi test were used.

RESULTS AND DISCUSSION

Results revealed that out of 1000 distributed questionnaires, 884 questionnaires (response rate 88.40%) were returned and only 677 reported to pursue for further his/ her studies, which were considered as a sample for study. Perusal of table revealed that males were more interested in choosing surgery as compared to females this may be due to the inner strength and strong emotions. Further, maximum of urban people were showing interest in surgery this may be due to increased opportunities. Results further revealed that, χ^2 values are found to be significant for surgery on Gender, Marital Status, Residence and Type of family this implies that Gender, Marital Status, Residence and Type of family significantly influences career choices of medical students choosing surgery as a career choice. On the other hand it was found to be non-significant on Age, Religion and Income group hence; it can be concluded as null hypothesis is accepted therefore; there exist no significant association between Age group, Religion and Income group and choosing surgery as a career choice.

Results further revealed that out of various sub specialities cardiac surgery, followed by cardio thoracic surgery and neurosurgery scored the highest were as Thoracic surgery; Urology and Vascular study was the least preference of most of the medical students. this may be due to increased stress level and also because of the sedentary life style as it increases the chance of heart diseases.

Conclusion

This study evaluated preferences in career choice of medical students with reference to demographic profile of the students. For the study students from 10 north Indian medical institutions were approached. We found that Gender, Marital Status, Residence and Type of family significantly influence career choices of medical students choosing surgery as a career choice. Male students were more likely to express an interest in surgical specialties than female students; this may be observed as males are stronger physically as well as emotionally. To attract more students to surgery those factors have to be addressed and to be made more explicit to medical students at an early stage in medical school. This study will help the policy makers and curriculum planners to built good surgeons for our society.

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