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Full Length Research Paper

Factors influencing in the selection of specialty among the student of College of Medicine, Najran university, KSA

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This study is to measure the significant differences between socio and demographic factors in the selection of medical specialty among the medical students of college of Medicine of Najran University. The availability of an appropriately trained and motivated health workforce with a balanced specialty distribution is critical for the capacity of a health system to meet the needs of its population. Specialty selection by medical students determines the future composition of the physician workforce. Selection of career specialties begins in earnest during the clinical rotations with exposure to the clinical and intellectual environments of various specialties. Career specialty selection is followed by choosing a residency program. Accurate mapping of the factors determining specialty choice is important to develop interventions aimed at influencing career choices. Medical students are the source of a country's physicians. Determining how medical students select their areas of specialization is the key to achieve a balanced distribution of doctors among all specialties. In this cross sectional study data were analyzed by using SPSS ver. 20 descriptive and inferential statistics were obtained. In this study response rate is 98%. Total 582 responses were received, 71% of the respondents were male students while 29% of the respondents were female students. The selection of specialty and Personal interest, Selection of specialty and a chance to serve people, Selection of specialty and high income potential, Selection of specialty and prestige of specialty. In the current scenario medical students thinking about the charm, prestige and the wealth oriented specialty more rather than other specialties.

Keywords: Specialty, students

INTRODUCTION

Many students enter medical school with some idea of which medical specialty they wish to pursue. However, the selection process begins in earnest during their clinical rotations when they are exposed to the clinical and intellectual environments of the various specialties (Weissman et al., 2012).

The availability of an appropriately trained and motivated health workforce with a balanced specialty distribution is critical for the capacity of a health system

to meet the needs of its population (Eze et al., 2011).

Specialty selection by medical students determines the future composition of the physician workforce. Selection of career specialties begins in earnest during the clinical rotations with exposure to the clinical and intellectual environments of various specialties (Weissman et al., 2012). Career specialty selection is followed by choosing a residency program. Accurate mapping of the factors determining specialty choice is important to develop

interventions aimed at influencing career choices (Newton et al., 2005).

Medical students are the source of a country's physicians. Determining how medical students select their areas of specialization is the key to achieve a balanced distribution of doctors among all specialties (Mehmood et al., 2012).

The choice of a medical specialty by a medical student is a complex process in which several factors play a contributory role, making the decision process an evolving one as the medical student undergoes different experiences in his/her professional journey (Alshahrani et al., 2014).

This choice, however, can change during the course of medical school. Many factors influence the medical students' choice of future career. Generally, these factors are classified into two groups; intrinsic factors, for example those related to personal attributes and preferences, and extrinsic factors like those related to work environment (Awad et al., 2015). The impact of these factors varies from setting to setting. In United Kingdom, other peoples' perception of the job and fewer practice hours were considered the most important factors by students, whereas in Turkey, financials and prestige were more important (Al-Nuaimi et al., 2008). On the other hand, students in Jordan considered the intellectual content of the specialty and the individual's competencies most influential while a personal interest in the specialty was the deriving factor for students in Kingdom of Saudi Arabia, Taiwan, Pakistan and India (<http://www.qmul.ac.uk/international/internationalstudent/studentssay/42620.html>). Gender is another important factor that influences career choice. It affects not only the career chosen, but also the reasons that contribute to this choice. It is suggested that males and females usually prefer careers that are consistent with their gender "schemas"; females usually choose pediatrics and obstetrics and gynecology and men choose surgical specialties (Huda and Yousuf, 2006). This study aimed to determine the number of students that have chosen a career, their career preference and the factors influencing those choices in medical students attending the University of Medical Sciences and Technology.

The medical specialty chosen by the medical practitioner is important for both the practitioner and the society. It is an important determinant of the future supply of doctors in different specialties and the planning of the workforce for the health-care services. Many factors influence specialty choices of the medical student and medical practitioner. These range from individual characteristics to the features of the specialty itself, including specialty-related lifestyle (Al-Ansari and Khafagy, 2006).

These factors also include the type of curriculum used in the undergraduate medical education, exposure during

the internship year and the type of rotations and whether the exposure to the different subspecialties during internship (Hamza et al., 2013).

For example, students who choose general medicine are guided in their choice by the opportunity for a better contact with patients; patient type (e.g. chronic); to be in medicine is to be a general doctor; opportunity for broad and comprehensive caregiving; diagnostic challenge; intellectual content; satisfaction in deepening the study of the patient; ambulatory practice; opportunity to be involved in psychological and social aspects of medicine; desire to contribute to the community; need to keep options open; and by the little value they place on remuneration and lifestyle. On the other hand, students who choose surgical specialties justify their choice in terms of the opportunity for practical procedures and operations; the effective almost immediate results; their enjoyment of emergency care; the practical application of scientific knowledge; the research opportunities; the predominance of in-hospital practice; the prestige of surgery within the medical profession; the opportunity for leadership and to exercise authority; the greater remuneration; and the greater respect enjoyed by residents in this field (Hamza et al., 2013; McManus et al., 1996).

Objective

To measure the significant differences between socio and demographic factors in the selection of medical specialty among the medical students of college of Medicine of Najran University.

METHODS

The Study was a sectional study conducted at college of medicine Najran city, Saudi Arabia during the period of October 2015 to December 2015.

In the questionnaire we asked the students to select the most preferred specialty among other 15 most common specialties in the Kingdom of Saudi Arabia. In the questionnaire author used the 5 point likert scale to judge the influence of the factors towards specialty selections. The selection of these factors, of which the majority represents "perception" factors, were chosen based on a literature.¹⁴ All the students participated in this study voluntarily and the result of this study will not affect the marks of the students in any circumstances.

The data were analyzed using SPSS 20, statistical analyses were conducted descriptive (mean, S.D percentages and frequencies) were obtained. Chi square test, Pearson correlation, were applied to measure the significance difference and degree of associations among the variables. P-value less than 0.05 would be considered as a significant.

RESULTS

Table 1. Age (in year)

| C.I | Frequency | Percent |
|-------|-----------|---------|
| 18-21 | 190 | 32.6 |
| 22-25 | 276 | 47.4 |
| 26-30 | 116 | 19.9 |
| Total | 582 | 100 |

Mean =25.8, S.D=0.713

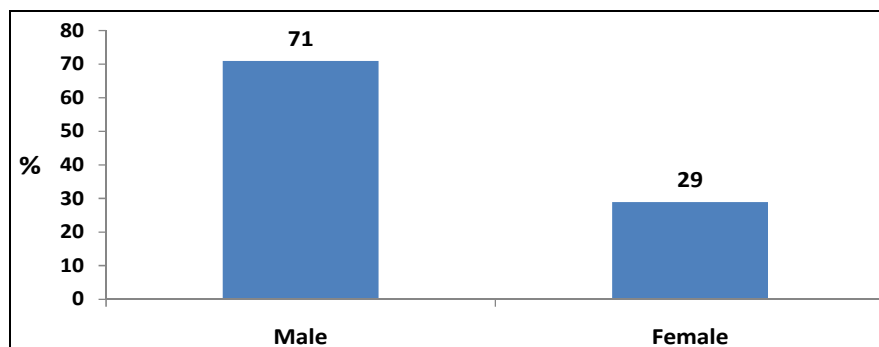


Figure 1. Gender Distribution

Table 2.

| Preferred specialty | When did you make this decision? | | | | | | | | | | Total |
|---------------------|----------------------------------|--------|-----------|--------|-----------|--------|-----------|--------|-----------|--------|-------|
| | 1st level | | 2nd level | | 3rd level | | 4th level | | 5th level | | |
| | freq. | % | freq. | % | freq. | % | freq. | % | freq. | % | |
| Internal Medicine | 36 | 53.73% | 6 | 8.96% | 0 | 0.00% | 14 | 20.90% | 11 | 16.42% | 67 |
| Surgery | 28 | 43.08% | 5 | 7.69% | 5 | 7.69% | 10 | 15.38% | 17 | 26.15% | 65 |
| Pediatrics | 30 | 37.50% | 15 | 18.75% | 11 | 13.75% | 13 | 16.25% | 11 | 13.75% | 80 |
| Obs&Gynae | 40 | 53.33% | 9 | 12.00% | 7 | 9.33% | 11 | 14.67% | 8 | 10.67% | 75 |
| Radiology | 3 | 20.00% | 5 | 33.33% | 0 | 0.00% | 3 | 20.00% | 4 | 26.67% | 15 |
| Orthopedic | 9 | 45.00% | 0 | 0.00% | 5 | 25.00% | 5 | 25.00% | 1 | 5.00% | 20 |
| Ophthalmology | 15 | 75.00% | 0 | 0.00% | 3 | 15.00% | 2 | 10.00% | 0 | 0.00% | 20 |
| ENT | 8 | 53.33% | 3 | 20.00% | 0 | 0.00% | 3 | 20.00% | 1 | 6.67% | 15 |
| Psychiatry | 2 | 20.00% | 2 | 20.00% | 1 | 10.00% | 1 | 10.00% | 4 | 40.00% | 10 |
| Emergency Medicine | 14 | 56.00% | 1 | 4.00% | 0 | 0.00% | 5 | 20.00% | 5 | 20.00% | 25 |
| Neurology | 7 | 28.00% | 4 | 16.00% | 0 | 0.00% | 6 | 24.00% | 8 | 32.00% | 25 |
| Dermatology | 6 | 30.00% | 0 | 0.00% | 1 | 5.00% | 6 | 30.00% | 7 | 35.00% | 20 |
| Family Medicine | 29 | 34.12% | 7 | 8.24% | 7 | 8.24% | 20 | 23.53% | 22 | 25.88% | 85 |
| Anesthesiology | 11 | 24.44% | 7 | 15.56% | 8 | 17.78% | 8 | 17.78% | 11 | 24.44% | 45 |
| Other specialty | 9 | 60.00% | 1 | 6.67% | 0 | 0.00% | 4 | 26.67% | 1 | 6.67% | 15 |
| Total | 247 | 42.44% | 65 | 11.17% | 48 | 8.25% | 111 | 19.07% | 111 | 19.07% | 582 |

In this study response rate is 98%. Total 582 responses were received, 71% of the respondents were male students while 29% of the respondents were female students. Table 1 depicts that the mean age of the respondents were 25.8 years with 0.713 S.D. Table 2

depicts that for the 1st level students, internal medicine is the most preferred specialty (53.73%), for the 2nd level students ENT and Psychiatry are the most preferred specialties (20% each), in third year 25% desire to opt the orthopedic specialty , for the 4th year dermatology is

Table 3.

| Preferred specialty | Gender | | | | Total | |
|---------------------|--------|---------|--------|---------|-------|---------|
| | Male | | Female | | freq. | % |
| | freq. | % | freq. | % | | |
| Family Medicine | 56 | 13.56% | 29 | 17.16% | 85 | 14.60% |
| Pediatrics | 62 | 15.01% | 18 | 10.65% | 80 | 13.75% |
| Obs&Gynae | 55 | 13.32% | 20 | 11.83% | 75 | 12.89% |
| Internal Medicine | 47 | 11.38% | 20 | 11.83% | 67 | 11.51% |
| Surgery | 48 | 11.62% | 17 | 10.06% | 65 | 11.17% |
| Anesthesiology | 35 | 8.47% | 10 | 5.92% | 45 | 7.73% |
| Emergency Medicine | 17 | 4.12% | 8 | 4.73% | 25 | 4.30% |
| Neurology | 17 | 4.12% | 8 | 4.73% | 25 | 4.30% |
| Orthopedic | 12 | 2.91% | 8 | 4.73% | 20 | 3.44% |
| Ophthalmology | 14 | 3.39% | 6 | 3.55% | 20 | 3.44% |
| Dermatology | 15 | 3.63% | 5 | 2.96% | 20 | 3.44% |
| Radiology | 10 | 2.42% | 5 | 2.96% | 15 | 2.58% |
| ENT | 9 | 2.18% | 6 | 3.55% | 15 | 2.58% |
| Other specialty | 8 | 1.94% | 7 | 4.14% | 15 | 2.58% |
| Psychiatry | 8 | 1.94% | 2 | 1.18% | 10 | 1.72% |
| Total | 413 | 100.00% | 169 | 100.00% | 582 | 100.00% |

Table 4. P-values between specialty selection and the factors

| factors | p-value |
|---|---------|
| Personal interest | 0.04 |
| Marital status | 0.54 |
| Number of children | 0.108 |
| Family's expectations | 0.183 |
| Teacher's advice | 0.968 |
| Friend's advice | 0.123 |
| Inclination | 0.985 |
| Effect of a role model | 0.175 |
| A chance to serve people | 0.007 |
| Location of practice | 0.147 |
| Work related risks (AIDS, Hepatitis, etc) | 0.968 |
| Work stress | 0.46 |
| Short period of training | 0.968 |
| Work independently | 0.118 |
| High income potential | 0.022 |
| Less competitive field | 0.183 |
| Future job opportunities | 0.975 |
| Prestige of specialty | 0.002 |
| Shortage of specialists | 0.95 |
| Diversity of patients | 0.183 |
| Option to practice abroad | 0.005 |
| Good clerkship experience | 0.287 |
| Research opportunities | 0.928 |
| Teaching opportunities in medical college | 0.776 |

Table 5. Correlations

| | | Age (in year) | Preferred specialty |
|---------------------|---------------------|---------------|---------------------|
| Age (in year) | Pearson Correlation | 1 | 0.064 |
| | Sig. (2-tailed) | | 0.121 |
| | N | 582 | 582 |
| Preferred specialty | Pearson Correlation | 0.064 | 1 |
| | Sig. (2-tailed) | 0.121 | |
| | N | 582 | 582 |

the most preferred specialty (30%) for the fifth year psychiatry is the most preferred study (40%). Table 3 depicts that the family medicine is the most opted specialty by all the respondents (14.6%) while pediatrics is 13.75%, Obs. and Gynae is 12.89, internal medicine is 11.51% and surgery is opted by 11.17%. male students opted pediatrics as a most preferred (15.07%) while female opted family medicine as a most preferred (17.16%) Table 4 shows that the selection of specialty and Personal interest, Selection of specialty and a chance to serve people, Selection of specialty and high income potential, Selection of specialty and prestige of specialty. There is no significant correlation between age and the specialty selection

DISCUSSION

The medical specialties chosen by medical practitioners as their careers is an important determinant of the future supply of doctors in different specialties, and it is important for the planning of the workforce of health-care services. In addition, selection and professional training for a resident in a specific medical specialty requires much investment of time, training effort and money. Consequently, efficacy in the selection procedure is vital (Hutt et al., 1981; Zeldow et al., 1992; Chrysanthus, 2014).

Medical specialty selection forms the basis of the professional career of a doctor. However, as medicine is a diverse field, it is very likely that distinctive specialties are associated with different doctors' characteristics, motivations and personality attributes (Mowbray and Davies 1971; McGrath and Zimet 1977; Schwartz et al., 1994). The study focuses on the selection of specialty and the significant relation of different factors with the selection of specialties. Any factors influence the specialty choices of medical students and medical practitioners. These factors range from individual characteristics such as age, gender and type of personality, the moment of choice, elements of influence and role models, to the characteristics of the specialty itself such as the types of problems and people encountered and served in the practice, the continuing development of new technologies, and the anticipation of

specialty-related income (Mowbray and Davies, 1971). These factors also include the type of curriculum used in the undergraduate medical education, exposure during the internship year and the type of rotations and whether the exposure to the different subspecialties during internship. Here in this study personal interest and passion to serve the mankind have significant impact on the selection of specialties. In contrast of many studies here our findings depicts that family medicine and pediatrics are the most opted specialties by the respondents. Male students are more inclined towards pediatrics while female towards family medicine (Newton et al., 2000; Oakland, 2006).

In the current scenario medical students thinking about the charm, prestige and the wealth oriented specialty more rather than other specialties.

REFERENCES

- Al-Ansari SS, Khafagy MA (2006). Factors affecting the choice of health specialty by medical graduates. *J. Family Community Med.* 13(3):119-123
- Al-Nuaimi Y, McGrouther G, Bayat A (2008). Modernising medical careers and factors influencing career choices of medical students. *Br. J. Hospital Med.* (London, England: 2005). 69(3):163-166.
- Alshahrani M, Dhafery B, Al Mulhim M, Alkhadra F, Al Bagshi D, Bukhamsin N (2014). Factors influencing Saudi medical students and interns' choice of future specialty: A self-administered questionnaire. *Adv. Med. Educ. Pract.* 5:397-402
- Awad Ali Mohamed Ahmed Alawad, Waleed Shabeer Khan, Yousif Mohammed Abdelrazig, Yamin Ibrahim Elzain, Hassan Osman Khalil, Omer Bakri Elsayed Ahmed, Omeralfaroug Ahmed Ibrahim Adam (2015). Factors considered by undergraduate medical students when selecting specialty of their future careers, *The Pan Afr. Med. J.* 20:102. doi:10.11604/pamj.2015.20.102.471.
- Chrysanthus Chukwuma (2014). Information-Base and Determinants of Medical Specialization and Primary Care: A View Point. *J. Biol. Agric. Healthcare.* www.iiste.org ISSN 2224-3208 (Paper) ISSN 2225-093X (Online) 4(8): 10 .
- Eze BI, Okoye OI, Maduka-okafor FC, Aguwa EN (2011). Factors influencing choice of medical specialty of pre-residency medical graduates in southeastern. *Niger. J. Grad. Med. Educ.* 3(3):367-371.
- Hamza Mohammad Abdulghaniac, Ghadeer Al-Shaikhad, Abdulaziz K Alhujayriah, Nawaf S Alohaidebah, Habeeb A Alsaedag, Ibrahim S Alshohayebah, Mossaad M Alyahyaai, Ali Ibrahim Alhaqwbj, Shaffi Ahmed Shaik (2013). What determines the selection of undergraduate medical students to the specialty of their future careers? , *Medical Teacher* Volume 35, Supplement 1. <http://www.qmul.ac.uk/international/internationalstudents/studentssay/42620.html>

- Huda N, Yousuf S (2006). Career preference of final year medical students of Ziauddin Medical University. *Education for health* (Abingdon, England). 19(3):345–345
- Hutt R, Parsons D, Pearson R (1981). The timing of and reasons for doctors' career decisions. *Health Trends*. 13:17–20. [PubMed]
- McManus IC, Lefford F, Furnham AF, Shahidi S, Pincus T (1996). Career preference and personality differences in medical school applicants. *Psychol. Health and Med*. 1:235–248.
- Mehmood SI, Kumar A, Al-Binali A, Borleffs JC (2012). Specialty preferences: Trends and perceptions among Saudi undergraduate medical students. *Med. Teach*. 34:S51–60
- Mowbray RM, Davies B (1971). Personality factors in choice of medical specialty. *Br. J. Med. Educ*. 5(2):110–117.
- Newton BW, Savidge M, Barber L, Cleveland E, Clardy J, Beeman G, Hart T (2000). Differences in medical students' empathy. *Acad. Med*. 75:1215.
- Newton DA, Grayson MS, Thompson LF (2005). The variable influence of lifestyle and income on medical students' career specialty choices: data from two US medical schools, 1998–2004. *Acad. Med*. 80(9):809–814
- Oakland J (2006). Are emergency medicine residents adrenaline junkies? A comparison of risk taking traits and behaviors between emergency medicine and family practice residents. Paper presented at Society of Academic Emergency Medicine-regional Conference – Midwestern, and Conference of the American College of Osteopathic Emergency Physicians
- Weissman C, Zisk-Rony RY, Schroeder JE, Weiss YG, Avidan A, Elchalal U, et al (2012). Medical specialty considerations by medical students early in their clinical experience. *Isr. J. Health Policy Res*. 1(1):13. doi: 10.1186/2045-4015-1-13
- Weissman C, Zisk-Rony RY, Schroeder JE, Weiss YG, Avidan A, Elchalal U, Tandeter H (2012). Medical specialty considerations by medical students early in their clinical experience. *Isr. J. Health Policy Res*. 1: 13-10.1186/2045-4015-1-13.
- Zeldow PB, Preston RC, Daugherty SR (1992). The decision to enter a medical specialty: timing and stability. *Med. Educ*. 26:327–332