

## Research Article

# Specialty selection satisfaction and regret among medical school postgraduates and faculty at King Abdulaziz University

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**Received:** 08 February 2015

**Accepted:** 08 March 2015

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## ABSTRACT

**Background:** In the field of medicine, specialty selection is a life-altering decision that plays a crucial role in career satisfaction, and in turn patient-care. This study explores the significant factors affecting specialty selection satisfaction and regret from the perspective of medical postgraduates and faculty in King Abdulaziz University (KAU).

**Methods:** A cross sectional study was carried out on a sample of 172 medical school postgraduates and faculty working at KAU using self-administered questionnaire.

**Results:** The majority of the participants were residents (51.7%), The analysis showed that 11% of the participants regret their choice of specialty. The results showed that the level of satisfaction increases as the academic degree of the participants increase. Among the significant factors affected specialty selection satisfaction and regret were; income ( $P = 0.003$ ), long length of training ( $P = 0.027$ ), vast options of sub-specialties ( $P = 0.001$ ) and interesting and exciting field.

**Conclusion:** These results identify the essential factors that have a potential impact on specialty satisfaction and regret among medical school postgraduates and faculty. This highlights the importance of career counseling for the proper specialty selection.

**Keywords:** Specialty, Selection, Satisfaction, Regret, Medical school, Postgraduates, King Abdulaziz University

## INTRODUCTION

The field of medicine has wide options of specialties, where specialty selection is a life altering decision that plays a crucial role in career satisfaction; if not carefully chosen it may lead to future regret and career dissatisfaction. Different specialties have a variety of aspects and factors potentially impact career satisfaction, including working environment, stress, income, conflicting with social life.<sup>1</sup> The perspective and point of view of these factors on postgraduates are affected by their experience in a specific specialty. Thus, they will be

more orientated on the factors that have a significant negative impact on their career. In addition, this may lead to the unfortunate regret of their specialty selection.

Several previous studies have concluded that physician satisfaction has a direct correlation with patient satisfaction.<sup>2,3</sup> Furthermore, dissatisfaction may increase rates of medical errors, thus jeopardizing patient safety.<sup>4</sup> Many studies suggest that burnout is associated with an increased risk of medical errors and suboptimal patient care.<sup>5-7</sup> This highlights the importance of physician satisfaction regarding their specialty.

Physician satisfaction is one element of quality in clinical education. Its relationship with different components of clinical, learning and work experiences is often explored. Understanding which factors contribute to physician satisfaction is critical to the design of education programs that will meet the needs of postgraduates across different specialties.<sup>8</sup>

This study aimed to explore the significant factors regarding specialty selection satisfaction and regret from the perspective of postgraduates in their medical field. Medical students could benefit from such a study regarding their choice of specialty. The data may help medical school faculty and residency directors to provide medical students with appropriate career counseling.

### METHODS

Ethical approval was obtained from the committee of ethics and research at King Abdulaziz University, faculty of medicine. Data was collected for a cross-sectional study from a representative sample of 172 medical school postgraduates working at King Abdulaziz University in 2012. A questionnaire was used to conduct this study. Inclusion criteria included those with the medical position of professors, associate professors, assistant professors, consultants, specialists and residents.

The independent factors included postgraduates demographic characteristics, including age, gender, marital status, nationality, graduation from Saudi or foreign medical school, year of graduation, duration of work at King Abdul-Aziz University, employment level and specialty. Satisfaction was assessed by answering the question: "Thinking very generally about your satisfaction with your overall career in medicine, would you say that you are currently... very satisfied, fairly satisfied, fairly dissatisfied or very dissatisfied".<sup>1</sup> Regret was assessed indirectly by answering the question: "If a time machine was invented, would you use it to go back and pick another specialty?"

The postgraduates were asked whether they were offered any counseling regarding their choice of specialty from their medical school or not. They also answered in their opinions the impact of several factors on their careers, including: conflicting with social life, satisfying income, high length of training, vast options of sub-specialties, interesting and exciting field, level of education depth, research opportunities, high demand on this specialty, mortality rate, reasonable working hours, patient encounter, stress, satisfying patient outcome, risk of malpractice lawsuits, on-calls, surgical involvement and employment opportunities. Furthermore, the impact of each factor on the various specialties of the sample was investigated. By doing so, we have categorized the postgraduate specialties into surgery, internal medicine, radiology, obstetrics and gynecology, pediatric, E.N.T, anesthesia and basic science.

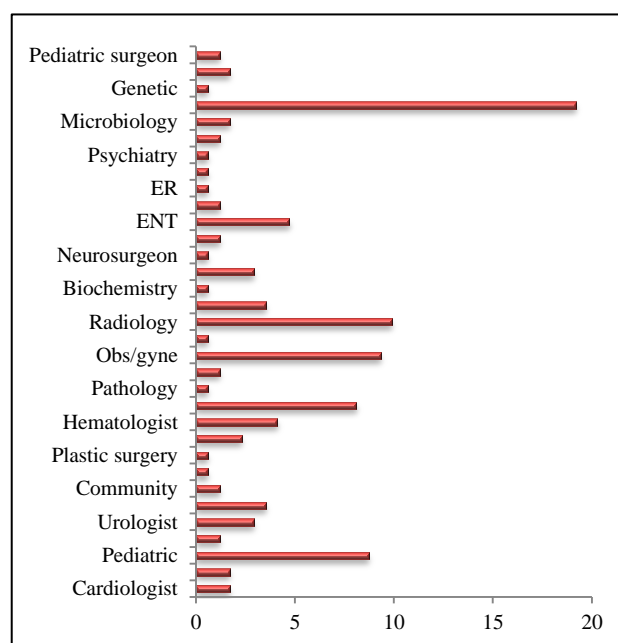
Statistical Package of Social Science (SPSS) version 18 was used for statistical analysis. The qualitative data were presented in the form of number and percentage. The Chi-squared test was used as a test of significance for qualitative data; Yates correction was used when the expected cell less than 5. Significance was considered as  $P < 0.05$ .

### RESULTS

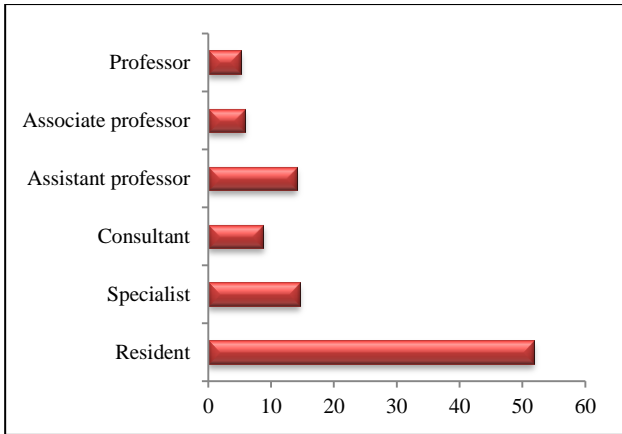
The demographics of the participants were studied; the mean age was  $34.66 \pm 11.499$  and about 67% of them were men. Saudis represent 56% and about 72 % were graduated from Saudi medical school (Table 1). The highest percentage of participants specialty was from the internal medicine (19.2%) followed by radiology (9.9%) then obstetrics and gynecology (9.3%) (Figure 1). The majority of the participants were residents (51.7%), specialists (14.5%) and assistant professors (14%) (Figure 2).

**Table 1: Demographic data of the participants.**

Variables	Mean ± SD	Values
Age (year)	Mean ± SD	34.66 ± 11.499
Gender	Men N (%)	116 (67.4%)
	Women N (%)	56 (32.6%)
Marital status	Single N (%)	59 (34.3%)
	Married N (%)	113 (65.7%)
Nationality	Saudi N (%)	130 (75.6%)
	Non-Saudi N (%)	42 (24.4%)
Graduation	Foreign medical school N (%)	49 (28.5%)
	Saudi medical school N (%)	123 (71.5%)

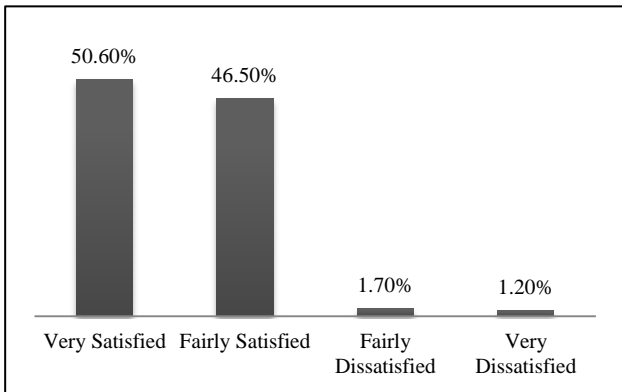


**Figure 1: Percentage of specialties of the studied group.**

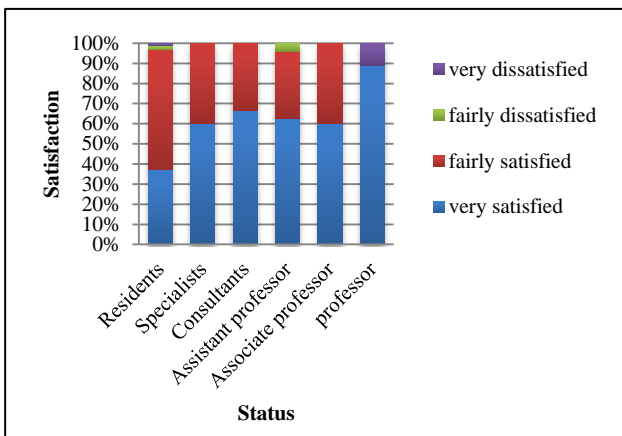


**Figure 2: Percentage of academic degree of the participants.**

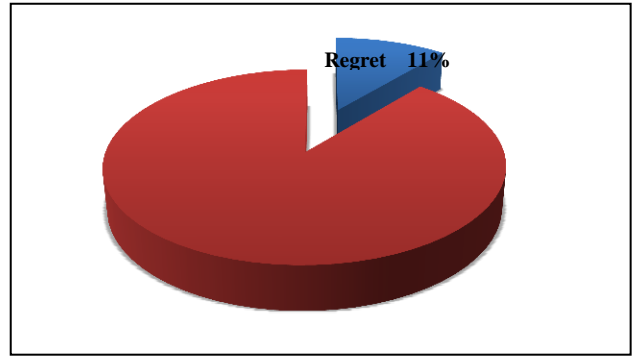
About 51% of the participants were very satisfied with their speciality while about 1% of them were very dissatisfied (Figure 3, 4). The percentage of regret among the participants was 11% (Figure 5). The highest percentage of regret was among residents (52%) followed by the specialist and assistant professors (14%) (Figure 6).



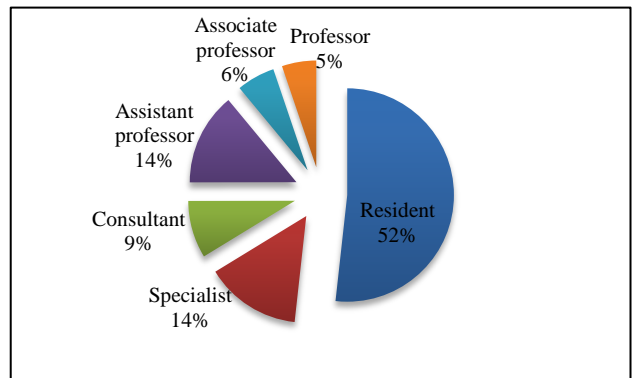
**Figure 3: Percentage of specialty satisfaction among the participants.**



**Figure 4: Level of satisfaction of the postgraduates in regard to their specialties.**



**Figure 5: Percentage of specialty regret among the participants.**



**Figure 6: Academic degrees of participants with specialty regret.**

The factors that showed statistical significance when comparing satisfaction between group who perceived and who are not perceived factors related to their specialties are: income ( $P = 0.003$ ), long length of training ( $P = 0.027$ ), vast options of sub-specialties ( $P = 0.001$ ), interesting and exciting field ( $P = 0.001$ ), high level of education depth ( $P = 0.012$ ), research opportunities ( $P = 0.041$ ), reasonable work hours ( $P = 0.034$ ), stress ( $P = 0.007$ ), employment opportunities ( $P = 0.014$ ) (Table 2). The association between postgraduate's specialty selection regret and their career satisfaction level as well as the factors affecting it were studied. The factors that showed statistical significance are: career satisfaction ( $P = 0.001$ ), income ( $P = 0.013$ ), interesting and exciting field ( $P = 0.001$ ) and employment opportunities ( $P = 0.008$ ) (Table 3).

The factors affecting specialty selection satisfactions in regard to various specialties were studied. Among the factors that were significant in internal medicine (Involves cardiology, neurology, endocrinology nephrology, hematology, oncology, dermatology and rheumatology) were interesting and exciting filed ( $P = 0.001$ ) and income ( $P = 0.043$ ), while that of surgery (Involves all surgical specialties including neurosurgery, urology, orthopedics, plastic surgery, general surgery, cardiac surgery and pediatric surgery) was the employment opportunity ( $P = 0.036$ ). The significant

factor in pediatrics was the length of training (P = 0.025) and that of obstetrics and gynecology was the length of training (P = 0.037) (Table 4).

Factors of specialty selection regret in regard to various specialties of the participants were studied. The

significant factor in internal medicine was interesting and exciting filed (P = 0.003) while those in Surgery were interesting and exciting filed (P = 0.003), knowledge depth (P = 0.017) and mortality rate (P = 0.007). Lastly, the significant factor with basic science was income (P = 0.003) (Table 5).

**Table 2: The impact of factors perceived regarding postgraduate’s specialties and on their satisfactions level.**

Factors	Answer	Satisfaction				Total	P
		Very satisfied N=87	Fairly satisfied N=80	Fairly dissatisfied N=3	Very dissatisfied N=2		
Satisfied income	Yes	76 (87.4%)	53 (66.2%)	1 (33.3%)	2 (100%)	132 (76.7%)	0.003*
Long training period	Yes	67 (77%)	45 (56.2)	2 (66.7%)	2 (100%)	116 (67.4%)	0.027*
Vast option of sub-specialty	Yes	77 (88.5%)	62 (77.5%)	1 (33.3%)	0 (0%)	140 (81.4%)	0.001*
Interesting field	Yes	87 (100%)	79 (98.8%)	1 (33.3%)	2 (100%)	169 (98.3%)	0.001*
Knowledge depth	Yes	84 (96.6%)	73 (91.2%)	2 (66.7%)	1 (50%)	160 (93%)	0.012*
Research opportunities	Yes	75 (86.2%)	56 (70%)	3 (100%)	1 (50%)	135 (78.5)	0.041*
Reasonable work hours	Yes	61 (70.1%)	42 (52.5%)	2 (66.7%)	0 (0%)	105 (61%)	0.034*
Stress	Yes	49 (56.3%)	63 (78.8%)	1 (33.3%)	2 (100%)	115 (66.9%)	0.007*
High employment opportunities	Yes	70 (80.5%)	48 (60%)	1 (33.3%)	1 (50%)	120 (69.8%)	0.014*

\*Statistically significant

**Table 3: The impact of postgraduate’s regret on their satisfaction and factors perceived regarding their specialties.**

Variables	Answer	Regret		Total N (%)	P
		Yes N (%) N=19	No N (%) N=153		
Satisfaction	Very satisfied	4 (21.1%)	83 (54.2%)	87 (50.6%)	0.001*
	Fairly satisfied	13 (68.4%)	76 (43.8%)	80 (46.5%)	
	Fairly dissatisfied	2 (10.5%)	1 (0.7%)	3 (1.7%)	
	Very dissatisfied	0 (0%)	2 (1.3%)	2 (1.2%)	
Satisfied income	Yes	10 (52.6%)	122 (79.7%)	132 (76.7%)	0.013*
Sub-specialty	Yes	13 (68.4%)	127 (83%)	140 (81.4%)	0.113
Interesting field	Yes	16 (84.2%)	153 (100%)	169 (98.3%)	0.001*
Employment opportunities	Yes	8 (42.1%)	112 (73.2%)	120 (69.8%)	0.008*

\*Statistically significant

Further analysis was conducted on residents alone to investigate significant factors affecting specialty selection satisfaction and regret. The factors that showed statistical significance with satisfaction are vast options of sub-specialties (P = 0.046) and interesting and exciting field (P = 0.000). However, the factors that exhibited statistical significance with regret are employment opportunities (P = 0.001) and interesting and exciting field (P = 0.003).

Analysis was also conducted on those who have a higher status than residents to investigate significant factors

affecting specialty selection satisfaction and regret. The factors that showed statistical significance with satisfaction are income (P = 0.004), vast options of sub-specialties (P = 0.015), interesting and exciting field (P = 0.001), high level of knowledge depth (P = 0.001) and patient encounter (P = 0.027). However, the factors that exhibited statistical significance with regret are income (P = 0.041), vast options of subspecialties (P = 0.009) and interesting and exciting field (P = 0.001).

**Table 4: The factors that showed statistical significance with specialty selection satisfaction in regard to various specialties of the sample.**

Specialty	Variables	Answers	Satisfaction				Total	P
			Very satisfied N=87	Fairly satisfied N=80	Fairly dissatisfied N=3	Very dissatisfied N=2		
Internal medicine	Income	Yes	22 (91.7%)	19 (59.4%)	1 (50.0%)	1 (100.0%)	43 (72.9%)	0.043*
	Interesting field	Yes	24 (100.0%)	32 (100.0%)	1 (50.0%)	1 (100.0%)	58 (98.3%)	0.000*
	Knowledge depth	Yes	24 (100.0%)	29 (90.6%)	2 (100.0%)	0 (0%)	55 (93.2%)	0.001*
	Research opportunities	Yes	22 (91.7%)	21 (65.6%)	2 (100.0%)	0 (0%)	45 (76.3%)	0.030*
	Patient outcome	Yes	21 (87.5%)	18 (56.2%)	1 (50.0%)	0 (0%)	40 (67.8%)	0.004*
Basic science	Income	Yes	8 (100.0%)	2 (50.0%)	0 (0%)	0 (0%)	10 (76.9%)	0.025*
	Interesting field	Yes	8 (100.0%)	4 (100.0%)	0 (0%)	0 (0%)	12 (92.3%)	0.002*
	Knowledge depth	Yes	8 (100.0%)	4 (100.0%)	0 (0%)	0 (0%)	12 (92.3%)	0.002*
	Lawsuit risk	Yes	0 (0%)	2 (50.0%)	1 (100.0%)	0 (0%)	3 (23.1%)	0.025*
Surgery	Employment opportunities	Yes	14 (87.5%)	5 (50.0%)	0 (0%)	0 (0%)	19 (73.1%)	0.036*
Pediatric	Long training	Yes	8 (88.9%)	2 (33.3%)	0 (0%)	0 (0%)	10 (66.7%)	0.025*
Ophthalmology	Social conflict	Yes	0 (0%)	3 (100.0%)	0 (0%)	0 (0%)	3 (60.0%)	0.025*
Obs/gyne	Long training	Yes	5 (100.0%)	5 (45.5%)	0 (0%)	0 (0%)	10 (62.5%)	0.037*

\*Statistically significant

**Table 5: Factors that showed statistical significance with specialty selection regret in regard to various specialties of the sample.**

Specialty	Variables	Answers	Regret		Total N (%)	P
			Yes N (%) N=19	No N (%) N=153		
Internal medicine	Interesting field	Yes	5 (83.3%)	53 (100.0%)	58 (98.3%)	0.003*
Surgery	Interesting field	Yes	3 (75.0%)	22 (100.0%)	25 (96.2%)	0.017*
	Knowledge depth	Yes	3 (75.0%)	22 (100.0%)	25 (96.2%)	0.017*
	Mortality rate	Yes	3 (75.0%)	3 (13.6%)	6 (23.1%)	0.007*
Basic science	Income	Yes	1 (25.0%)	9 (100.0%)	10 (76.9%)	0.003*

\*Statistically significant

## DISCUSSION

From the data collected, there is a statistically significant association between specialty selection satisfaction and specialty selection regret. The analysis showed that 11% of the participants regret their choice of specialty. The results also showed that the level of satisfaction increases as the status of the postgraduates and faculty increase. Although there are nine factors that were statistically significant with specialty selection satisfaction like income, long length of training, vast options of subspecialties, there were only three significant factors pointed of specialty selection regret included; income, interesting and exciting field, and employment opportunities.

The current study showed that income is a significant factor to consider when choosing a specialty. Income was significant with specialty selection satisfaction and regret. This finding was in line with that of Leigh et al.<sup>1</sup> who reported that satisfaction of physicians was significantly and positively related to income and employment in a medical school but negatively associated with more than 50 work-hours per-week, being a full-owner of the practice, greater reliance on managed care revenue, and uncontrollable lifestyle. Yet, an interesting finding in the present study that income was not significant to residents in regard to satisfaction and regret. However, income was significant to those who have a higher status than residents.

In this study, among the factors that were significantly affecting specialty selection satisfactions of surgery

(Involves all surgical specialties including neurosurgery, urology, orthopedics, plastic surgery, general surgery, cardiac surgery and pediatric surgery) was the employment opportunity. It seems that this selection was associated with high expectation from these physicians had when they entered these specialties. The low career satisfaction for neurological surgery and obstetrics and gynecology specialists was reported in many previous studies; was attributed to several causes: irregular hours, medical malpractice lawsuits; loss of autonomy; and secular decline in pay compared to other specialties.<sup>9-12</sup> Interestingly, these results might generalize to other countries. Lambert et al. find evidence that younger physicians in England reject surgical specialties and obstetrics and gynecology for reasons relating to “quality of life” and work hours.<sup>13</sup>

There is much scope for further work. This may involve similar studies investigating satisfaction and regret levels in other cities within Saudi Arabia, as well as abroad. Further studies may also investigate the perspective of medical students in the various medical specialties. Research investigating the different approaches to tackle this global problem in the leading medical countries might provide insight to new ways which Saudi Arabia can adopt and adapt.

In conclusion and recommendation, the results of the present study highlight the factors that have a potential impact on specialty selection satisfaction and regret among medical school postgraduates. Using data from the present study, to improve patient care, the governing health system and teaching bodies can take steps to increase satisfaction, and reduce regret. This might be through counseling and deeper career insights at early stages of the medical ladder, particularly as a medical student. It is important for residency directors, policy makers, physicians and medical students to understand the inter-specialty differences when they make personal, professional, and policy choices.

#### ACKNOWLEDGEMENTS

All our gratitude to Allah, to whom goes all our thanks and appreciation. We would like to express our endless gratitude to the faculty of medicine at King Abdulaziz University. It is a pleasure to express our deepest gratitude to Dr. Daa Hamed, Mohammed Asiri, Sarah Alqahtani, Shima Al-Ahmadi, Lujain Halawani, Mutaz Aboalsaud and Haadi Shalabi for all their help and encouragement throughout various stages of this work.

*Funding: No funding sources*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the ethics and research committee of King Abdulaziz University, faculty of medicine*

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DOI: 10.5455/2320-6012.ijrms20150415

**Cite this article as:** Mashat MA, Aboalfaraj NT, Daghistani H, Eldeek BS, Ayuob NN, Alshawa LA. Specialty selection satisfaction and regret among medical school post-graduates and faculty at King Abdulaziz University. *Int J Res Med Sci* 2015;3:899-904.