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Career Goals of Trainee Physicians in Internal Medicine

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ABSTRACT

Objective: To survey Internal Medicine trainees' future career choices and factors influencing their decision-making.

Design: Cross-sectional study.

Place and Duration of Study: The Aga Khan University Hospital, Karachi, from November 2006 to January 2007.

Subjects and Methods: A standard questionnaire was administered to the residents and Interns working in the Department of Internal Medicine of The Aga Khan University Hospital. The questionnaire covered demographic details, specialty choice, work-time distribution and factors influencing career choice. Descriptive statistics were applied.

Results: A total of 49 doctors participated with 57% females; and 43% males, having 33% interns and 67% residents. A minority (22%) opted for internal medicine, while 78% selected sub-specialties with cardiology (20%) being the most sought-after sub-specialty. Majority (69%) wanted to spend more time in clinical activities compared to administration (18%) or research (13%). Majority (92%) wanted to work in an academic setting. Availability of a structured training program (61%), ability to practice broad area of medicine (41%) and prestige of the specialty (41%) highly influenced their career choices. Forty one (82%) wanted to proceed abroad for further training and 80% wanted to eventually practice in Pakistan.

Conclusion: Most of the interviewed under-training physicians wanted to pursue sub-specialty. Clinical work was more attractive compared to research. A structured training program was detrimental in affecting their choices. Majority wanted further training abroad but eventual settlement in Pakistan. The study results can help us create the basis for reforming the current training programs.

Key words: Career goals. Trainee physicians. Internal medicine.

INTRODUCTION

The medical specialties chosen by doctors for advanced careers play an important role in the development of health-care services of the country.¹ In the past decades, attention has been focused on how to address the need for more physicians, both to provide health care for the nation's rural population and to meet the need for physicians who function as the entry point to the healthcare system.² Knowledge of the thought processes that residents and interns use to decide about their career paths is still in its infancy. Recently, there have been some studies on how medical specialties are perceived and how choices are made.³⁻⁵

Life style and personal motivation play an important role in career decision-making. Highly motivated and

technically skilled doctors gravitate towards the fields with a higher income potential⁵⁻⁸, particularly high-paying procedure-based practices. There seems to be migration towards a professional life that facilitates a greater balance between career, family and non-professional pursuits.¹ The time demand of a certain specialty is detrimental and an encroachment on personal and family time plus a high administrative burden and decrease in practice autonomy are perceived to have a negative impact.^{6,7} The impact of role models in the selection of a certain specialty can be pivotal. Sleep deprivation and a long training duration are also significant contributors.^{9,10}

Most studies on career selection address medical students, not residents^{1,7,8,11,12} and have not used a conceptual framework within which the process can be viewed. Only a few emphasized personality traits, career motivation and personal life goals as the influencing factors on choice of specialty.^{1,12} The determinants of internal medicine residents' specialty choices have received little attention.²

The objectives of this study were to investigate Internal Medicine Residents' career choices, to evaluate the factors that influence young doctors' decision-making, and to characterize the time distribution as a factor in determining the future goals.

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SUBJECTS AND METHODS

This was a cross-sectional study conducted using a standardized questionnaire at the Department of Internal Medicine of the Aga Khan University Hospital, Karachi, during three months from November 2006 to January 2007. The Department of Internal Medicine had 62 Residents and Interns at the time of study, who came from all over the country.

The contents, wording and format of the survey were developed after discussions within the focus group of Internal Medicine Consultants and Residents. After going through past publications, a 3-page questionnaire consisting of 4 different sections was formulated. The first part of the questionnaire consisted of demographic details like age, gender, marital status, year and place of graduation, and level of training. The second portion consisted of questions on the field of interest they wish to pursue and the setting (academic, private practice, etc.) they would like to work in. The third component of the questionnaire sought information about the distribution of working time in academic, clinical, research, administrative and other areas. The fourth part mainly consisted of factors affecting their decision-making such as availability of a structured training program, impact of a role model, income potential etc. A four-point response scale was used in most of the questions; in addition, some of them had single best response and a few sought open ended answers. Questionnaire was pre-tested on 10 residents. It took 5-7 minutes to complete the whole questionnaire. Participation was on voluntary basis.

The inclusion criteria for the sample were either an intern or a resident in internal medicine at any level and working in the Department of Internal Medicine during study period from November, 2006 to January, 2007.

Any residents from other departments like surgery, family practice, pathology etc. rotating in internal medicine, and trainees on leave during the study period were excluded.

All data was entered and analyzed using SPSS version-14. Means and standard deviations were calculated for continuous variables and frequencies for categorical variables. Cross-tabulation was done between different variables and a two-tailed *p*-value calculated as test of significance using the Pearson chi-square test. The *p*-value of less than 0.05 was considered statistically significant.

RESULTS

A total of 62 residents and interns were approached and 49 (79%) responded (57%-females; 43%-males). Rest opted not to complete the questionnaire or left it incomplete. Mean age of respondents was 26.96 years (95% CI: 26.26-27.66). Sixteen (33%) of the subjects were Interns and the rest (67%) were postgraduate

students at different levels of training (Table I). Thirty eight (78%) trainees graduated from various universities in Karachi whereas, 22% graduated from rest of Pakistan (Table I). Most (78%) were unmarried. Regarding choice of specialty, 22% opted for internal medicine, while 78% selected sub-specialties with

Table I: General characteristics of respondents.

Characteristics	n (%)
Mean age (Yr ± SD)	26.96 ± 2.45
Gender	
Male	21 (43)
Female	28 (57)
Level of training	
Intern	16 (33)
Year I Resident	13 (27)
Year II Resident	5 (10)
Year III Resident	7 (14)
Year IV Resident	8 (16)
Place of graduation	
Karachi	38 (78)
Aga Khan University	10 (20)
Dow Medical College	10 (20)
Baqai Medical University	4 (8)
Sind Medical College	4 (8)
Karachi Medical and Dental College	2 (6)
Others	8 (16)
Rest of Pakistan	11 (22)

n = Number of participants.

Cardiology (20%) being the most sought-after sub-specialty, followed by Endocrinology (14%), Nephrology (10%), Pulmonology (6%), Gastroenterology (6%) and Hematology/Oncology (4%). In terms of work-time distribution, they wanted to spend 69% (95% CI: 65.3-72.8) of their working time doing various clinical activities (Table II), but less time doing research (13%) (95% CI: 10.3-15.2) and administrative work (18%, 95% CI: 15.0-21.0). Forty five (92%) wanted to work in an academic setting either as full-time faculty (55%) or part-time faculty (37%). Amongst the various factors, availability of a structured training program (61%), ability to practice broad area of medicine (41%) and prestige of the specialty (41%) highly influenced career choices (Figure 1). Majority (82%) wanted to go abroad for

Table II: Work-time distribution.

Variable	Percentage of working time Mean % (± SD)
Procedures	16.5 (10.4)
Out-patient	18.2 (11.9)
In-patient	21.2 (15.2)
Critical care	13.1 (8.9)
(All clinical activities)	69.0 (13.0)
Research	12.8 (8.5)
(Research)	
Administrative work	8.0 (8.4)
Health care policy making	10.2 (8.0)
(Administration)	18.2 (12.1)
Total	100.0

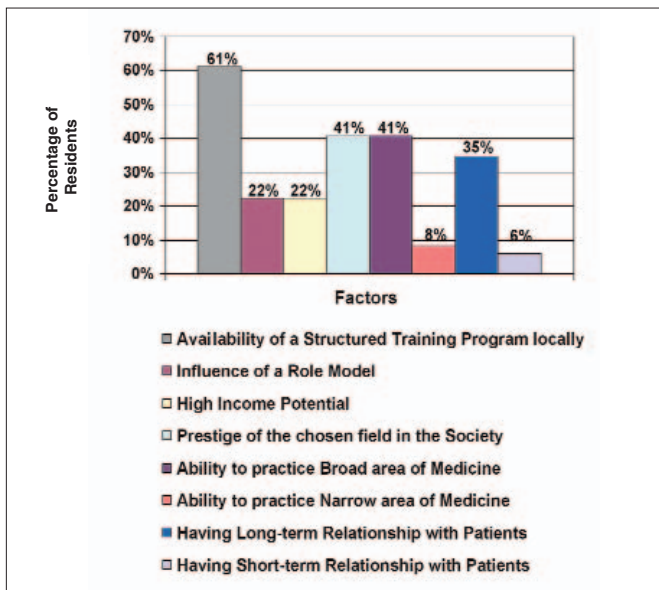


Figure 1: Factors influencing career choice.

further training and around 80% wanted to eventually practice in Pakistan. Sub-group analysis, based on gender, did not show significant differences regarding career choice (internal medicine versus sub-specialties; $p=0.236$) and influences of various factors on their career decision, except for male, residents seemed more influenced by 'having long-term relationship with patients' (62% vs. 14%; $p=0.001$, Table III). Moreover, based on specialty choice, the comparison revealed that factors driving the residents towards internal medicine career choice do not remarkably differ from those leading towards sub-specialty choices (Table III).

DISCUSSION

Since the 1990s, more than half of the medical graduates in Western countries have been women.¹³⁻¹⁴ Although female physicians tend to specialize almost to the same degree, they enter other specialties than their male colleagues.^{1,15} In this study, there was greater number of female participants. Some studies showed gender-based difference in career choices^{5,8,16-18},

however, there was no such clear distinction amongst the participants in this study.

Studies from the West have shown that there exists a recent trend in career selection away from general medical fields and into sub-specialties.^{18,19} This is also evident in this sample, which shows that only 22% of the Residents and Interns have intentions to pursue a career in internal medicine. Furthermore, contrary to some studies^{2,20,22}, these results do not identify any specific determinants of this preference of sub-specialties over internal medicine (Table III). There is need to conduct research at national level to determine the number of doctors needed as well as to find the ideal balance between generalists and sub-specialists to match the requirements of the country.

The application and selection procedures for residency programs, the length, quality and structure of the programs, work schedules, mentorship, and annual vacations are factors which are considered when choosing a specialty.^{1,22-24} Prestige within the medical profession, social status and income also play significant roles in decision-making.^{24,25} More structured training programs are needed locally for our young doctors as we identified this as the most important factor influencing their career choice followed by prestige of the specialty. In the local society, sub-specialists are given more respect than generalists. The attitude regarding the importance of generalists needs to be changed as they are the backbone of any health care system. On the part of trainee physicians, appropriate mentoring and exposure to the full range of medical disciplines during medical school may help them clarify career plans earlier in their training.^{20,26} Although, this study shows that residents were less likely to be influenced by role models, yet some studies rate them as positive influence on students to impact their decision-making.²⁰

The present sample rated 'having long-term relationship with patients' as an important influence on career selection. Although this factor was not found to be associated with any specific career choice, it did have a

Table III: Comparison of factors influencing career choice based on gender and specialty choice

Reasons behind career choice	Comparison based on gender			Comparison based on specialty choice		
	Male (n=21) n (%)	Female (n=28) n (%)	p-value	Internal medicine n (%)	Sub-specialties n (%)	p-value
Availability of a structured training program locally	14 (67)	16 (57)	0.498	8 (73)	22 (58)	0.374
Influence of a role model	6 (29)	5 (18)	0.374	3 (27)	8 (21)	0.663
High income potential	7 (33)	4 (14)	0.114	2 (18)	9 (24)	0.700
Prestige of the chosen field in the society	11 (52)	9 (32)	0.154	4 (36)	16 (42)	0.733
Ability to practice broad area of medicine	10 (48)	10 (36)	0.401	2 (18)	18 (47)	0.083
Ability to practice narrow area of medicine	3 (14)	1 (4)	0.175	1 (9)	3 (8)	0.898
Having long-term relationship with patients	13 (62)	4 (14)	0.001	2 (18)	15 (40)	0.191
Having short-term relationship with patients	3 (14)	1 (4)	0.175	1 (9)	4 (11)	0.338

n = Number of participants

significant impact on male residents, in particular (Table III). In contrast, 'having short-term relationship with patients' was regarded as a trivial influence. Despite showing only a modest inclination towards general internal medicine, practising 'broad area of medicine' was preferred over 'narrow area of medicine', which contradicts their career choice. While it appears that medical students' specialty choice may be driven at least partially by better-paying job opportunities^{7,9,21,27}, it is unclear whether financial concerns steer internal medicine residents towards training positions in higher-paying sub-specialties.²¹ The study also confirmed that financial aspect may not be the major influence on career choices.

The study sample did not show much of an interest in research activities. This is an alarming situation and calls for emphasis on research at all levels. Although Higher Education Commission of Pakistan (HEC) has been playing an important role in creating research environment in the country, there is still more room for improvement in this neglected area.

The data revealed a good number of the participants want to proceed abroad for further training. This complies with a recent study from Pakistan²⁸, which cited a rigorous system of graduate medical education, a merit-based structure of professional rewards and material rewards as the reasons for expatriation of Pakistani doctors. The study also showed that most of the expatriating doctors want to come back and eventually practice in Pakistan. However, information from Pakistani medical institutions indicates that only about 300 out of the 10,000 U.S.-trained Pakistani physicians have resettled back home.²⁸ Motives for expatriation and repatriation need further evaluation.

The career decisions that internal medicine residents make are very important to the health-care system and to the society. The low concern of Pakistani residents for internal medicine reveals today's drastic deficiency in country's primary health care. Efforts to reform residency training could affect career plans for many residents and could have unanticipated effects on the balance between generalists and sub-specialists and on the ability of specific disciplines to recruit across all demographics.¹⁸ The results of this study can help create the basis for reforming the current medical residency programs.

This study had several limitations. First, there was no follow-up data to confirm that the self-reported resident and intern career plans in this study accurately reflected their actual career plans. Following the sample to determine their actual career choice is necessary. Secondly, this study was performed on a limited number of doctors in a private sector hospital with one of the most developed and competitive infrastructure in the country, therefore, it may not represent the young

doctors' population in general. We need to confirm these results by conducting similar studies among other departments like Family Medicine, General Surgery, Pediatrics, etc. as well as in public and private institutions nationwide.

CONCLUSION

In conclusion, most of the training physicians wanted to pursue sub-specialty. Clinical work was more attractive compared to research and administration. Majority wanted further training abroad but eventually settling in Pakistan. The study results can help to create the basis for reforming the current training programs.

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