ORIGINAL ARTICLE

Specialty Choices of Male and Female Doctors in Malaysia

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Summary

A survey of specialisation choices was conducted for two batches of medical officers applying to the local medical schools for specialisation in Malaysia. A total of 359 doctors responded, giving a response rate of 71%, with 169 male (44.4%) and 187 female (55.6%) respondents. Surgery ranked highest among the male doctors followed by orthopaedic surgery and internal medicine. Family medicine ranked highest among female doctors followed by public health and anaesthesiology. Among the other specialties, the male doctors preferred otorhinolaryngology while female doctors preferred Pathology. Both male and female doctors chose to be a clinical consultant in a general hospital as the first choice. They prefer to work in or near their hometowns.

Key Words: Career choice, Medical speciality, Doctors, Malaysia

Introduction

The choice of a career in the medical field is a complex personal decision influenced by a multitude of factors. In the developing world, factors may differ from those operating in the developed countries. There are shortages in 'service' specialities like anaesthesia, radiology and pathology [1]. Deficiencies are also felt in rural areas which emphasised primary health care and preventive medicine. In addition, medical schools face difficulties recruiting medical graduates to non-clinical academic departments.

Gender is one of the multitude of factors influencing choice of career. In Malaysia, the number of female medical graduates have increased over recent years and will significantly contribute to the health manpower needs and pattern of the country. Studies have shown that female graduate's preferences for career choices will differ from their male counterparts [2,3]. Thus the objectives of this study was to determine the differences between specialty choices between male and female doctors in Malaysia and the factors associated with them. The results may be helpful to the Ministry of Health in designing policies to attract manpower into the high priority specialties and also into the rural areas of the country. The choices do provide useful information about the impressions of both male and female doctors regarding their future directions in the practice of medicine. The findings may also help determine the selection policies into medical schools to cater for gender differences in choices of specialty training.

Materials and Methods

A list of doctors applying to pursue a specialty course at any one of the local medical schools in 1995 and 1996 was obtained from the Central Processing Unit for Universities, Ministry of Education Malaysia. The list contains particulars of the applicants including their postal addresses.

A random sample of 250 doctors were selected for each year, giving a total of 500 doctors over the two-year

study period. A structured questionnaire was sent to the selected doctors and a stamped reply envelope was included. The questionnaire carried questions related to career preferences relevant to Malaysia. A Likert scale of 1 to 5 was utilised to score the importance of factors influencing their choices of specialty. Other questions focussed on the nature of employment and permanent station of work. A total of 359 doctors responded giving a response rate of 76%. Statistical methods using the z-test and t-test with a significance level of p=0.05 was used.

Results

There were a total of 952 applications to pursue a specialty course, with 403 in 1995 and 549 applications in 1996. The age range of applicants was 24 to 44 years while range of working experience as a physician was 1 to 7 years. There were 477 male doctors and 475 female doctors. Most of the doctors (Male 58.2%, Female 60.9%) were married at the time of application. A total of 384 doctors (40.3 %) were attracted to the four established specialties of internal medicine, surgery,

Table I
Speciality choice of male and female doctors in Malaysia 1995-1996.

	Specialty	1995		1996		Total	
		Male	Female	Male	Female	Male (%)	Female (%)
1.	Internal Medicine	29	18	24	17	53 (11.1)	35 (7.4)*
2.	Surgery	54	16	40	7	94 (19.7)	23 (4.8)**
3.	Paediatrics	15	23	14	19	29 (6.1)	42 (8.8)
4.	O&G	21	16	37	34	58 (12.2)	50 (10.5)
5.	Anaesthesiology	13	21	13	32	26 (5.5)	53 (11.2)**
6.	Psychiatry	8	7	9	11	17 (3.6)	19 (4.0)
7.	Pathology	3	20	1	22	4 (0.8)	42 (8.8)**
8.	Radiology	11	14	12	19	23 (4.8)	33 (6.9)
9.	Public Health	9	19	16	41	25 (5.2)	60 (12.6)**
10.	Family Medicine	5	12	20	58	25 (5.2)	70 (14.7)**
11.	Orthopaedics	27	4	55	6	82 (17.2)	10 (2.1)
12.	Opthalmology	7	18	14	16	21 (4.4)	34 (7.2)
13.	Otolaryngorhinology	8	1	12	3	20 (4.2)	4 (0.8)**
	Total	**210**	**190**	**267**	**285**	**477 (100.0)**	**475 (100.0)**

*Z test, * $p < 0.05$ ** $p < 0.01$*

paediatrics and obstetrics and gynaecology in their choice of specialisation. The number of male and female doctors opting for each specialty is shown in Table I. Surgery ranked the highest choice among the male doctors, followed by orthopaedic surgery and internal medicine. Family medicine ranked highest among the female doctors followed by public health and anaesthesiology. Among the other specialties, the male doctors showed a preponderance for otorhinolaryngology while the female physicians showed a preponderance for pathology. There were no significant gender difference in choices for paediatrics, O&G, radiology and ophthalmology.

The doctors were also asked to select factors which they considered as important in determining their career choices. The mean score for each factor was determined to rate the importance of the factor in influencing the choice of specialty (Table II). Among the factors listed, 'fixed hours of work' was more important for female doctors while 'opportunities for teaching' were significantly more important for the male doctors. There were no significant difference in the score for the other factors in the male and female doctors.

When asked to select their desired nature of employment, a distinct bias towards working in the government health service as a clinical consultant in the general hospital was noted for both males and females, with 25.4% of male and 18.7% of female doctors deciding on this option in their top three choices (Table III). More male doctors opted to work as a clinical consultant in a general hospital, as compared to a consultant in a private medical centre or hospital. However, more female doctors opted to work in a private clinic, as a non-clinical lecturer in a university, as a service consultant in the hospital and in the armed forces. The choice of working in the Health Office proved the least attractive to both the male and female doctors.

Table II
Factors determining career of male and female doctors in Malaysia, 1995-1996

Factor	Likert scale score 1		2		3		4		5		Mean	
	M	F	M	F	M	F	M	F	M	F	M	F
1. Ability to have direct contact with patients	5	9	9	13	23	31	50	41	82	93	4.2	3.9
2. Offering better financial rewards	10	18	15	23	62	52	57	65	25	29	3.4	3.3
3. Fixed hours of work	33	20	29	27	51	42	36	56	20	42	2.9	3.4
4. Higher social status	30	28	27	19	61	83	40	44	11	13	2.9	3.0
5. Opportunities for research	11	18	20	16	45	54	51	66	42	33	3.6	3.4
6. Opportunities for teaching	10	11	14	23	29	49	68	63	48	41	3.8	3.5*

** t test, $p < 0.05$*

Table III
Choice of location of practice of male and female doctors in Malaysia, 1995-1996

Location	1st		2nd		3rd		Total (%)	
	M	F	M	F	M	F	M	F
Clinical consultant in GH	100	73	22	26	7	6	129 (25.4)	105 (18.7) **
Clinical lecturer in UH	15	33	22	19	11	7	48 (9.5)	59 (10.5)
Private medical centre/hospital	28	27	54	32	25	17	107 (21.1)	76 (13.5) **
Private clinic	3	7	9	19	6	14	18 (3.6)	40 (7.1) **
Non clinical lecturer in UH	1	5	8	17	7	19	16 (3.2)	41 (7.3) **
Service consultant in GH	7	27	4	11	3	3	14 (2.8)	41 (7.3) **
Health Office	4	1	3	4	7	5	14 (2.8)	10 (1.8)
Administrator in a hospital	5	7	41	39	58	55	104 (20.5)	101 (18.0)
Armed Forces	6	7	6	20	45	61	57 (11.2)	88 (15.7) *

*Z test, * $p < 0.05$ ** $p < 0.01$*

Table IV
Choice of permanent place of work of male and female doctors in Malaysia, 1995-1996

Location	1st		2nd		Total (%)	
	M	F	M	F	M	F
A. Kuala Lumpur (country capital)	17	25	20	6	37 (17.4)	31 (13.7)
State Capital	72	76	42	42	114 (53.5)	118 (13.7)
District	2	12	23	26	25 (11.7)	38 (16.7)
Anywhere in Malaysia	21	15	12	23	33 (15.5)	38 (16.7)
Overseas	0	1	4	1	4 (1.9)	2 (0.9)
B. Hometown					66 (61.7)	31 (13.7)
Non-hometown					12 (11.2)	14 (10.4)
No preference					29 (27.1)	28 (20.9)

The doctor's choices of the permanent place of practice is shown in Table IV. There were no significant differences between the choices for male and female doctors. The majority of doctors preferred working in a state capital, where the general hospital is situated. Only four male doctors and one female doctor opted to work overseas in their top two choices of place of practice. The majority of male (61.7%) and female doctors (68.7%) prefer to work in their hometowns compared to only 12 (11.2%) male doctors and 14 (10.4%) female doctors who prefer to work away from their hometown. There were 29 male and 28 female doctors who did not have any specific preferences for location of practice.

Discussion

Although this study looked at all the applications from Malaysian doctors for postgraduate training, it does not include doctors who pursue postgraduate training overseas and those who opt for training in the pre-clinical departments through research work. However, it is felt that the number of doctors falling into this group is small, so that the findings noted in this study will probably reflect the choices for most of the doctors in Malaysia.

Fixed hours of work is an important factor for female doctors. This may reflect the consideration of marriage after completing their studies, commitment to their partner's careers and uncertainty about childcare. Perhaps combining a full time medical career with domestic responsibilities on the home front and taking care of a partner and children pose greater and more serious considerations for female than for male doctors. Female doctors in developed countries have been shown to work fewer hours than their male counterparts [4,5]. Conventionally, female doctors take responsibility for the majority of household work and child care [6,7]. Most male doctors, but few female doctors, can expect their spouses to take responsibility for childcare. Since professional medicine imposes exhaustive work schedules on practitioners in most medical specialties, this combination of domestic responsibilities and professional career demands, is a major challenge, especially for female doctors [9,10,11].

Male doctors generally chose clinical based specialties rather than the more administrative and preventive specialties like family medicine and public health. In line with their clinically oriented career choices, clinical and academic careers in general and teaching hospitals were prime choices for vocational setting. This is similar to findings found in studies done in other countries [8,9]. Female doctors however showed a preference for family medicine and public health. Anesthesiology was also a popular choice for the female doctors. Among the minor specialties, significantly more male doctors opted for otorhinolaryngology while female doctors opted for pathology. This is in line with numerous other studies which have shown that female doctors generally chose less prestigious specialties such as paediatrics, psychiatry, anaesthesia, dermatology, opthalmology and more recently, family medicine [10,11,12,13]. Male doctors have a preference for the surgical specialties because of their attraction to working with instruments and managing dramatic situations [14]. However, female specialty interests may have changed in the last few years and may still be in the process of transition. Among the surgical specialties of choice amongst female doctors, obstetrics and gynaecology was the favourite with 10.5% of the female doctors opting for this specialty. A reason for this may be the social and religious ideal that female patients should be managed by female doctors. Female doctors, being more idealistic, would feel obliged to try and fulfill this social and religious ideal if the responsibilities of marriage and family can be dealt with.

Among the factors determining career choice, 'opportunities to teach' was more important for the male doctors while 'fixed hours of work' was more important to the female doctors. Traditionally teaching is more in line with the female trait. No reason can be offered for this finding. The choice of 'fixed hours of work' is expected because women seem to have a more idealistic approach and value time for family commitments than men and are less often influenced by the prospect of a good income or of prestige [15, 16]. The literature shows that women's professional and personal concerns and attitudes lead them to a more humanistic approach to medicine than their male colleagues [17, 18]. However, there is also evidence that personality changes have occurred among the female doctors where they have become more action oriented, autonomous and

aggressive compared to previous studies[19]. This observation is reflected in the present day female doctors who are becoming just as ambitious as their male colleagues. This point will need further investigations.

The present student intake policies into public medical schools in Malaysia is based mainly on academic standards. Gender does not play a role in student selection decisions. There are more female students entering Malaysian medical schools currently, perhaps due to their high academic achievement in schools and their interest in medicine. Even in the rural areas, female doctors posted to health centres are able to provide medical care well. Furthermore in the choice of specialty, more female doctors are now taking up male dominated specialties such as surgery. There are also evidence that generally females make better doctors than males as they are more caring and understanding to patients and are better at interpersonal communication, in line with their natural role as mothers. Thus, gender should not be a criteria for student selection into medical schools, both for undergraduate and postgraduate programs.

These preliminary results on specialty choices of our male and female doctors also lead us to the firm recommendations that the Ministry of Health need to provide information to aspiring young doctors about circumstances on the labour market in general. For example, in Malaysia where religious and cultural beliefs are still strong in many areas, the lack of female specialists in the field of obstetrics and gynaecology poses a problem in getting high risk mothers to deliver in hospitals[20]. Providing role models of female obstetricians and gynaecologists in medical schools may attract more interest and determination among female medical students to pursue the specialty. Planners in the field of medical education should also provide sensitivity to gender related issues so that effective strategies for eliminating obstacles for female doctors pursuing the various medical specialties such as flexibility in working hours, and less restrictive in the age limits for pursuing postgraduate training, can be developed. Greater efforts should be made to counsel doctors about specialty choices even though there is no reason to doubt that the majority of doctors make thoughtful choices, even if they are not always aware of all the personal and social determinants of those choices.

Acknowledgements

We gratefully acknowledge the Central Unit for Universities, Ministry of Education Malaysia for their assistance, the staff of the Medical Education Department and to Encik Ismail Kamaruzaman of Department of Community Medicine, School of Medical Sciences, Universiti Sains Malaysia for their help in the study and preparation of this manuscript.

References

1. Annual Report 1991, Ministry of Health, Malaysia 1991.

2. Uhlenberg P, Cooney TM. Male and female doctors: Family and career patterns. Soc Sc Med 1990; 30: 373-8.

3 Stephen PJ. Career patterns of women medical graduates 1974-84. Med Educ 1987; 21: 255-9.

4. Kletke PR, Marder WD, Silberger AB. The growing proportion of female doctors: Implications for US physician supply. Am J Pub Hlth 1990; 80: 300-4.

5. Shyte D. Gender Differences in Israel Doctors Career Patterns, Productivity and Family Structure. Soc Sc Med 1991; 32(10): 1169-81.

6. Dennerstein L, Lehert P., Orams R. Practice patterns and family life - a survey of Melbourne medical graduates. Med J Aust 1989; 151: 386-90.

7. Fett I. The future of women in Australian medicine. Med J Aust 1976; 2: 33-9.

8. Egerton E. Choice of career of doctors who graduated from Queen's University, Belfast, in 1977. Med Educ 1985; 19: 131-7.

9. Karalliedde LD, Senanyake N, Aluwihare APR. Career preference of the 1984 medical graduates of Sri Lanka. Med Educ 1986; 20: 64-8.

10. Williams AP, Domnick-Pierre K, Vayda E. Women in medicine: practice patterns and attitudes. Can Med Assoc J 1990; 143: 194-201.

11. Pizurki H, Meija A, Butter I, et al. Women as providers of health care. World Health Organisation, Geneva, 1987.

12. Wakeford RE, Warren VJ. Women doctor's career choice and commitment to medicine: Implications for general practice. J Roy Coll GP 1989; 39: 91-5.

13. Mira SA, Fatani HH, Abduljabbar HS. Current practice patterns and training status of selected graduates at the King Abdulaziz University College of Medicine, Saudi Arabia. Med Educ 1991; 25: 3-12.

14. Meir EI, Engel K. Interests and specialty choice in medicine. Soc Sc Med 1986; 23: 529-30.

15. Frey H. Representation of women in medical specialties with particular reference to Sweden. Med Educ 1980; 14: 428-33.

16. Maheux B, Dufort F, Beland F, Jacques A, Levesque A. Female Medical Practitioners - More Preventive and Patient Oriented? Med Care 1990; 28: 87-92.

17. Notzer N, Brown S. The feminisation of the medical profession in Israel. Med Educ 1995; 29: 377-81.

18. Ulstad VK. How women are changing medicine. J Am Women Assoc 1993; 48: 75-8.

19. McGrath E, Zimet CN, Female and Male Medical Students: Differences in Specialty Choice Selection and Personality. J Med Educ 1977; 52: 293-9.

20. Zulkifli A, Rogayah J, Hashim MH et al, Risk Profile of Pregnant Mothers in Kelantan. Med J Mal 1995; 50(4): 359-364.