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# Career Preferences of Male and Female Medical Students in Malaysia

A Zulkifli, MPH*, J Rogayah, MHPEd**, *Department of Community Medicine, **Department of Medical Education, School of Medical Sciences, Universiti Sains Malaysia, 16150 Kota Bharu, Kelantan

## Summary

A survey of career choices were conducted for three batches of final year medical students at Universiti Sains Malaysia. A total of 241 students responded, giving a response rate of 76%, with 107 males (44.4%) and 134 females (55.6%). Surgery ranked highest among the male students while obstetrics and gynaecology ranked highest among female students. Internal medicine was the second choice for both males and females. Among the other specialties, the male students shows preferred Hospital Administration and Radiology while female students preferred Community Medicine, Psychiatry and Pathology. Both male and female students 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, Medical students

## 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 involve primary health care and preventive medicine. The medical schools face difficulties recruiting medical graduates to non-clinical departments.

Gender is one of the multitude of factors influencing choice of career[2,3]. In Malaysia, the number of female medical students have increased over recent years and will contribute to the health manpower needs of the country. Their preferences for career choices may differ from their male counterparts. Thus this study was undertaken to determine the career preferences of medical students in Universiti Sains Malaysia and to identify differences between male and female medical students. The results may be helpful in designing policies to attract manpower into the high priority specialties and also into the rural areas of the country. While decisions of these students are by no means irrevocable, they do provide useful information about the impressions of both male and female students regarding their future directions in the practice of medicine.

## Materials and Methods

A structured questionnaire was prepared and given to the final year medical students during their study break just before their final professional examinations. The questionaire carried questions related to career preferences relevant to Malaysia. The students were asked to number career choices in order of preference. A Likert scale of 1 to 5 (1 = unimportant, 2 = minor important, 3 = important, 4 = moderately important and 5 = very important) was used to score the importance of factors influencing their choices of specialty. Other questions focussed on their preference of the nature of employment and permanent station of work. The study involved three batches of final year medical students from 1992 to 1994. A total of 241 students responded, giving a response rate of 76%. Coding, computation and statistical methods using the 'z' test and 't' test with a significance level p value $<0.05$ was used.

## Results

A total of 241 students responded, of which 107 students were males (44.4%) and 134 were females (55.6%). Fifteen of the male students and thirty one of the female students were married. On their choice of specialisation, 20 male students compared to only 9 female students have definitely decided on their career choice at this stage.

The four established specialities, namely internal medicine, surgery, obstetrics and gynaecology and paediatrics attracted the most number of response for both male and female students. The number of male and female students opting for each speciality either as the first, second or third preference is shown in Table I. Surgery ranked the highest choice among the male students while obstetrics and gynaecology ranked highest among the female students. Internal medicine was the second favourite choice for both male and female students. Among the male students, this was followed by O&G and Paediatrics while for female students it was Paediatrics and Surgery. Among the other specialties, the male students showed a preponderance for Hospital Administration and Radiology while the female students showed a preponderance for Community Medicine, Psychiatry and Pathology. There were about equal number of responses for Family Medicine/General Practice and Anaesthesiology for both male and female students.

Students 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 speciality (Table II) Among the factors listed, 'offering better financial rewards' and 'opportunities for research' were significantly more important for female than male students.

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, where 27.6% of both male and female students deciding on this option in their top three

**Table I**
**Speciality choice of final year male and female medical students 1992-94**

| Specialty | Decided on career choice | | Undecided/ Preferred choice | | Total | |
|---|---|---|---|---|---|---|
| | Male | Female | Male | Female | Male | Female |
| 1. Internal Medicine | 12 | 8 | 33 | 48 | 45 | 56 |
| 2. Surgery | 11 | 5 | 38 | 18 | 49 | 23* |
| 3. Paediatrics | 8 | 7 | 22 | 42 | 30 | 49 |
| 4. O&G | 11 | 15 | 21 | 43 | 32 | 58* |
| 5. Anaesthesiology | 2 | 4 | 5 | 5 | 7 | 9 |
| 6. Psychiatry | 2 | 2 | 1 | 5 | 3 | 7 |
| 7. Pathology | 0 | 2 | 0 | 1 | 0 | 3 |
| 8. Radiology | 3 | 0 | 5 | 2 | 8 | 2* |
| 9. Public Health | 0 | 2 | 8 | 16 | 8 | 18 |
| 10. GP / Fam Med | 1 | 1 | 18 | 17 | 19 | 18 |
| 11. Hospital Admin | 0 | 0 | 11 | 5 | 11 | 5* |
| 12. Others | 9 | 9 | 3 | 2 | 10 | 11 |

* *z- test, $p < 0.05$*

**Table II**
**Factors determining career of final year male and female medical students, 1992-94**

| 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 | 10 | 8 | 13 | 19 | 18 | 38 | 32 | 35 | 34 | 34 | 3.6 | 3.5 |
| 2. Offering better financial rewards | 14 | 5 | 14 | 14 | 34 | 50 | 16 | 43 | 29 | 22 | 3.3 | 3.5* |
| 3. Fixed hours of work | 14 | 9 | 17 | 25 | 40 | 48 | 21 | 33 | 15 | 19 | 3.1 | 3.2 |
| 4. Higher social status | 11 | 10 | 19 | 14 | 42 | 56 | 19 | 40 | 16 | 14 | 3.1 | 3.3 |
| 5. Opportunities for research | 20 | 8 | 19 | 25 | 32 | 55 | 19 | 35 | 17 | 11 | 2.9 | 3.1* |
| 6. Opportunities for teaching | 21 | 12 | 32 | 37 | 25 | 49 | 20 | 29 | 9 | 7 | 2.7 | 2.9 |

** t test p < 0.05*

**Table III**
**Choice of location of practice of final year male and female medical students, 1993-94**

| Location | 1st | | 2nd | | 3rd | | Total (%) | |
|---|---|---|---|---|---|---|---|---|
| | M | F | M | F | M | F | M | F |
| Clinical consultant in GH | 56 | 65 | 15 | 16 | 7 | 12 | 78 (27.6) | 93 (27.6) |
| Clinical lecturer in UH | 3 | 5 | 12 | 7 | 5 | 5 | 20 ( 7.1) | 17 ( 5.0) |
| Private medical centre/hospital | 18 | 21 | 36 | 36 | 13 | 12 | 67 (23.7) | 69 (20.5) |
| Private clinic | 3 | 7 | 3 | 9 | 8 | 10 | 14 ( 4.9) | 26 ( 7.7) |
| Non clinical lecturer in UH | 1 | 1 | 5 | 5 | 6 | 9 | 12 ( 4.2) | 15 ( 4.5) |
| Service consultant in GH | 0 | 6 | 3 | 8 | 5 | 5 | 8 ( 2.8) | 19 ( 5.6) |
| Health Office | 2 | 0 | 2 | 1 | 4 | 3 | 8 ( 2.8) | 4 ( 1.2) |
| Administrator in a hospital | 10 | 8 | 12 | 21 | 26 | 22 | 48 (17.0) | 51 (15.1) |
| Armed Forces | 4 | 5 | 7 | 11 | 17 | 27 | 28 ( 9.9) | 43 (12.7) |

** z test p < 0.05*

choices (Table III). There was significant difference in the choice of a clinical lecturer in a university hospital, where more male students opted for this choice and the choice working as a health officer, where more female students opted for this choice. The choice of working in the Armed Forces proved the least attractive to both the male and female students.

The student's choice of the permanent station of practice is shown in Table IV. There were no

significant differences between the choices for male and female students. The majority of students preferred working in a state capital, where the general hospital is situated. Four male students opted for working overseas compared to only 2 female students in the first two choices of location of practice. The majority of male (61.7%) and female students (68.7%) prefer to work in their home towns compared to only 12 (11.2%) male students and 14 (10.4%) female students prefer to work away from their hometown. There were 29 male and 28 female students who did not have any specific preference for location of practice.

## Discussion

This study shows that there were significantly more male students having made a career choice decision compared to the female students. It has been pointed out that women are less certain of their career direction than are their male colleagues[5,6]. This may reflect the prospect of marriage after completing their studies, commitment to their partner's careers and uncertainty about child care. Combining a full time medical career and bearing the responsibility for domestic tasks and taking care of a partner and children is a challenge far more common for female than for male doctors. Female doctors in other countries have also been shown to work fewer hours than their male counterparts[7,8]. Female doctors take responsibility for the majority of household work and child care[9,10]. Most male doctors, but few female doctors, can expect their spouses to take responsibility for child care. Since professional medicine imposes exhaustive work schedules on practitioners in most specialties, this combination of domestic responsibilities and professional career demands is a problem that looms large[9,10,11].

The majority of the students, both males and females, still chose hospital and clinical based specialities, namely Internal Medicine, Surgery, Obstetrics and Gynaecology and Paediatrics. Non clinical specialities were unpopular choices. These findings are similar to a previous study done in Malaysia, except for General Practice which was the second popular choice of ultimate career after Internal Medicine[12]. Similar findings are also found in other countries[13,14]. In line with their clinically oriented career choices, clinical and academic careers in general and teaching hospitals were prime choices for vocational setting. Female students showed a preference for Obstetrics and Gynaecology and Paediatrics while male students tend to opt for Surgery. Among the minor specialties, significantly more male students opted for Radiology and hospital administration. Numerous studies have shown that females have generally chosen less prestigious specialties such as Paediatrics, Psychiatry, Anaesthesia, Dermatology, Ophthalmology and more recently, Family Medicine[15,16,17,18,19]. However, males preferred the surgical specialties because of their attraction to working with instruments and managing dramatic situations[20]. However, female specialty

**Table IV**
**Choice of permanent place of work of final year male and female medical students, 1992-94**

| | 1st | | 2nd | | Total (%) | |
|---|---|---|---|---|---|---|
| **Location** | **M** | **F** | **M** | **F** | **M** | **F** |
| A. Kuala Lumpur | 17 | 25 | 20 | 6 | 37 (17.4) | 31 (13.7) |
| State Capital | 72 | 76 | 42 | 42 | 114 (53.5) | 118 (52.0) |
| 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) | 91 (68.7) |
| Non-hometown | | | | | 12 (11.2) | 14 (10.4) |
| No preference | | | | | 29 (27.1) | 28 (20.9) |

interests may have changed in the last few years and may still be in the process of transition. The preference for Obstetrics and Gynaecology among the female students is an interesting finding even though it is considered as a hectic and challenging field. A reason for this may be the social and religious ideal that female patients should be managed by female doctors. Female students, being more idealistic, and before the responsibilities of being married and having a family, would feel obliged to try and fulfill this social and religious ideal. However, whether this choice is realised among the female students, will require a follow up study of the final career choices of these students.

Among the factors determining career choice, 'better financial rewards' and 'opportunities for research' were more important to the female students. According to some authors, women seem to have a more idealistic approach than men and are less often influenced by the prospect of a good income or of prestige[21,22]. 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[22,24]. Most of the studies were conducted on women physicians, while this study was on medical students, where the implications of professional life and family responsibilities are not fully realised. The financial background of these students may be a factor for this interesting finding as it was not investigated in this study. There is also evidence that personality changes have occured among the female medical students where they have become more action oriented, autonomous and aggressive compared to previous studies[25]. This may also be a factor for the present day female medical students who may be just as ambitious as their male colleagues. This point will need further investigations.

These results also lead us to the firm recommendations that medical schools need to inform their students about circumstances on the labour market in general. In places where religious and cultural beliefs are still strong, such as Malaysia, the lack of a female specialist in the field of Obstetrics and Gynaecology poses a problem in getting high risk mothers to deliver in hospitals. Planners in the field of medical education should utilise these findings and be more sensitive to gender related problems so that effective strategies for eliminating obstacles for women pursuing the various medical specialties can be developed. Greater efforts should be made to counsel students about specialty choices even though there is no reason to doubt that the majority of students make thoughtful choices, even if they are not always aware of all the personal and social determinants of those choices.

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## References

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

2. Dobson B. Choosing a career: the undergraduate dilemma. Medical Teacher 1986;8 : 1 : 75-80.

3. Shapiro MC, Western JS, Anderson DS. Career preferences and career outcomes of Australian medical students. Med Educ 1988;22 : 214-21.

4. Kruijthof CJ, Van Leeuwen CD, Ventevogel HE, *et al.* Career perspective of women and men medical students. Med Educ 1992;26 : 21-6.

5. Rhodes PJ. The career aspirations of women doctors who qualified in 1974 and 1977 from a United Kingdom medical school. Med Educ 1989;23 : 125-35.

6. Procter S, Robert S. Hard times – Hard choices: Positive decision making for part time women doctors. Med Educ 1987;21 : 260-4.

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

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

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

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

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

12. Deva MP. Career Choices of Malaysian Medical Students. Med J Mal 1981;36(3) : 188-92.

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

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

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

16. Pizurki H, Meija A, Butter I, Ewart L. Women as providers of health care. World Health Organisation, Geneva, 1987.

17. 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.

18. 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.

19. Parkhouse J, Ellin DJ. Postgraduate qualifications of British doctors. Med Educ 1989;23 : 348-63.

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

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

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

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

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

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