CHOOSING A MEDICAL CAREER: WHAT INFLUENCES SECONDARY SCHOOL FEMALE GRADUATES?

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Objective: To assess attitudes and reasons of secondary school female students for choosing medicine as a career.

Design: A cross-sectional study with a sample of 191 female students, who responded to an administered questionnaire.

Results: The mean age of the students was 18.3 ± 0.94. The mean general average test scores for female students who applied to medicine, MLT and Nursing was 94.02%, 91.26% and 86.78% respectively. Personal interest was the main reason in 85.7% of the applicants. Only 109 students (57.1%) of the study group have any knowledge about the profession of Medicine. One hundred sixty one of the students (84.3%) expected difficulties in their studies.

Conclusion: The study showed that personal interest was the main reason behind the students’ choice. A sizable proportion had no knowledge of the specialty they opted for, while more than 80% of the applicants anticipated some difficulties upon entering the Medical College. The majority of MLT applicants were not interested in

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nursing as a specialty. The current strategy for educating secondary school female students about Medical College programmes should be strengthened.

**Key Words:** Attitudes, female students, career.

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**INTRODUCTION**

The Kingdom of Saudi Arabia is a fast developing country, that has achieved great advances in all aspects of life. Education is one of the fields where marked progress and expansion are evident. More girls are now enrolled in educational institutions than before and universities are now offering Secondary School female graduates programmes suitable for the Saudi society. Medicine and Medical Sciences are amongst the choices which attract Secondary School females particularly those who had high scores at the end of their Secondary School education.

The annual intake of the four Medical Colleges in Saudi Arabia one of which is the College of Medicine in King Faisal University is approximately 600 students. The admission policies in the four colleges are similar. A certain minimum percentage of the overall (general) average score and the special (scientific) average of the secondary school leaving certificate exam, constitute the first requirement for registration for the College Admission Test and interview. All applicants to the College of Medicine and Medical Sciences (CMMS) at King Faisal University (KFU) who satisfy these criteria are required to take the admission test. This test includes a written examination in Physics, Mathematics, Biology, Chemistry, English and Islamic Culture. In addition, there is the personal interview for each applicant. The admission test and interview scores are used as a second step screening for selecting candidates.

In this study, an attempt is made to identify the attitudes and reasons underlying Secondary School female students’ decision to enter Medical College. It is known that some of them join the Medical School without any prior awareness of or interest in the programme of study. The later group of students usually either withdraw or are dismissed from the college before completing the programme. This obviously leads to waste of the students and faculty’s time, and a misuse of limited resources, which could have been more beneficial to more interested and highly motivated students. It is hoped that the findings will assist in the selection of students who will pursue the medical curriculum to a successful completion and graduate as doctors needed in the Kingdom of Saudi Arabia.

**MATERIAL AND METHODS**

This cross-sectional study included all female students who applied to join the CMMS in Dammam, in 1996. The college offers three programs leading to a Bachelor’s Degree in Medicine and Surgery, in Medical Laboratory Technology (MLT), and in Nursing.

The applicants were interviewed and each of them completed a questionnaire designed to obtain the demographic and personal data as well as other variables. The latter included: the general and special subject averages, reasons for choosing one of the three programs, expectation of possible difficulties in the course of studies, and ideas about the chosen programme. Data were analyzed on a personal computer using SPSS package. The statistical tests were X²-test and ANOVA.

**RESULTS**

The total number of students interviewed was 191. Of these, 132 (69.1%) had applied for medicine, 45 (23.6%) for medical laboratory
technology (MLT) and the rest for nursing. The mean age was 18.3 ± 0.94.
26% of the students’ fathers, and 39.8% of their mothers, respectively, were either illiterate or just able to read and write. On the other hand, 41% of students’ fathers and 21.5% of their mothers, respectively, had secondary and university education. Of the fathers 8.4% had gone on to higher education. Almost the same pattern was observed with regard to primary and intermediate education. Fifty percent of the fathers of the applicants for medicine and nursing and 62.2% of the fathers of the applicants for MLT, were professionals, the overall overage being 52.9%. Unskilled labourers constituted 40.3% of all the fathers: 43.9%, 42.9%, 28.9% for Medicine, Nursing and MLT respectively. The majority of the mothers were housewives (91.1%): 90.9% of the mothers of the applicants for medicine, 95.6% of MLT and 78.5% of nursing but these differences were not statistically significant (X² = 3.82, P > 0.05).

The mean general average score for female students who had applied to do medicine was the highest 94.02%, followed by 91.26% for MLT and 86.78% for nursing (F=33.061), P < 0.01. The corresponding mean special averages, were 92.22, 89.50 and 82.24% (F=36.376, P < 0.01).

Eighty (41.9%) of the students had relatives working in the medical field (43.2% in medicine, 48.9% in MLT and 7.1% in nursing). A statistical significant difference was observed as regards the presence of relatives in the medical field and specialty chosen (P < 0.01). Approximately 29% of the relatives were either sisters or brothers: Of those, 21.1% and 45.5% were applicants for Medicine and MLT respectively. The rest of the relatives were either uncles, aunts or sisters-in-law.

Table 1 depicts the reasons for choosing the specialty. Personal interest was the main reason in 85.7% of the applicants (86.4%, 86.7% and 78.6%) being for medicine, MLT and nursing respectively. The next reason with an overall rating of 69.6% was that it was a humane profession. Specialty-wise the percentages for this attribute were 78.0, 44.4 and 71.4 in the three specialties, respectively (X²=7.93, P<0.01). While more than 60.0% of the applicants for medicine and nursing claimed that their choice was influenced by national need, only 44.4% of the MLT applicants were of this opinion (X² = 6.56, P<0.05).

The study showed that 109 students (57.1%) had some ideas about the specialty while 82 students (42.9%) had no ideas at all. When asked about the sources of information regarding the specialty, friends and relatives ranked first for MLT and medicine applicants (60.9% and 38.0%, respectively). However, for nursing applicants, their own reading ranked first (57.1%). The proportion of applicants whose choice of specialty was motivated by university visits was only 6.4% (Table 2).

Table 3 shows the anticipated difficulties as stated by the applicants. One hundred sixty one students (84.3%) expected to have problems. The majority were nursing applicants (92.9%), followed by medicine (86.4%). Long hours of study was the most frequent single difficulty anticipated by medicine and MLT students, while mixing with males was the most important problem for nursing students. This latter difficulty was second in rank for medical and MLT students. None of the nursing applicants had considered disruption of their family life by their work, 12% of medicine and MLT applicants acknowledged would. About 10% of all applicants thought that using English as the medium of instruction was one of the difficulties they envisaged. Unexpectedly, only 6.3% of the
Table 1: Reasons for choosing the specialty

| Reasons for choosing the specialty | Medicine No (%) | MLT No (%) | Nursing No (%) | Total No (%) |
|-----------------------------------|-----------------|------------|---------------|-------------|
| Personal interest                 | 114 (86.4)      | 39 (86.7)  | 11 (78.6)     | 164 (85.7)  |
| Humane profession                 | 103 (78.0)      | 20 (44.4)  | 10 (71.4)     | 133 (69.6)* |
| Family pressure                   | 22 (16.7)       | 5 (11.1)   | 0             | 27 (14.1)   |
| Prestigious & respectful career   | 13 (9.8)        | 2 (4.4)    | -             | 15 (7.9)    |
| The only specialty present in the area | 3 (2.3)     | 9 (20.0)   | 1 (7.1)       | 13 (6.8)    |
| Nation needs                      | 87 (65.9)       | 20 (44.4)  | 9 (64.3)      | 116 (60.7)† |

*Χ²=7.93, p < 0.01, †Χ²=6.56, p < 0.05

Table 2: Sources of knowledge about the specialty

| Source of knowledge              | Medicine No (%) | MLT No (%) | Nursing No (%) | Total No (%) |
|----------------------------------|-----------------|------------|---------------|-------------|
| Friends and relatives            | 30 (38.0)       | 14 (60.9)  | 2 (28.6)      | 46 (42.2)   |
| Reading                          | 24 (30.4)       | 7 (30.4)   | 4 (57.1)      | 35 (32.1)   |
| University visits                | 5 (6.3)         | 1 (4.3)    | 1 (14.3)      | 7 (6.42)    |
| Others                           | 20 (25.3)       | 1 (4.3)    | -             | 21 (19.3)   |
| Total                            | 79 (100)        | 23 (100)   | 7 (100)       | 100 (100)   |

Table 3: Difficulties anticipated by the female students

| Expected difficulties            | Medicine No (%) | MLT No (%) | Nursing No (%) | Total No (%) |
|----------------------------------|-----------------|------------|---------------|-------------|
| Hard work                        | 9 (6.8)         | 2 (4.4)    | 1 (7.1)       | 12 (6.3)    |
| Using English language in teaching | 14 (10.6)      | 5 (11.1)   | 1 (7.1)       | 20 (10.5)   |
| Mixing with males                | 22 (16.7)       | 6 (13.3)   | 5 (35.7)      | 33 (17.3)   |
| Spending long time in studying   | 26 (19.7)       | 8 (17.8)   | 1 (7.1)       | 35 (18.3)   |
| Interference with family life    | 17 (12.9)       | 6 (13.3)   | -             | 23 (12.0)   |
| More than one reason             | 26 (19.7)       | 7 (15.6)   | 5 (35.7)      | 38 (20.0)   |
| No difficulty                    | 18 (13.6)       | 11 (24.4)  | 1 (7.1)       | 30 (15.7)   |
| Total                            | 132 (100)       | 45 (100)   | 14 (100)      | 191 (100)   |

applicants believed that the specialties require hard work.

On asking MLT applicants the reasons for not choosing nursing as a specialty, 73.3% said that they were not interested in the specialty, 8.9% stated that the specialty was looked down on by the society, and 11.2% gave more than one reason.

DISCUSSION
Enrollment in the College of Medicine and Medical Sciences is considered one of the most suitable fields for Saudi girls. Students who are interested in enrolling in Colleges are required to have high scores in the Secondary School certificate examination as a prerequi-

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site for admission. It is expected that the involvement of relatives in the medical field can influence an applicant’s choice. The study confirmed this, since more than one third of the applicants had a relative in the medical field.

In the study, 85.7% of the applicants indicated that their choice of specialty was mainly influenced by personal interest. This obviously is a very important motivating factor for the candidate to complete the programme of study, despite any difficulties. Furthermore, such an interest would also help the graduate to pursue her career with dedication.

The study also showed that about one fifth of the students wanted to enter the medical college because of family pressure, interest and because it was a respectable profession. This was more so for applicants for medicine. None of the students applying for nursing stated this as a reason. This result supports the motion that enrollment in a medical faculty is fast becoming prestigious for female students and their families. This social attitude may result in forcing some students to enter medical college who have neither the aptitude nor the inclination necessary for the successful completion of the programme. More than two thirds of the students chose a career in Medicine, MLT and nursing because they considered them humane professions, and this was more so for those who chose the medical specialty. This can be explained by students’ awareness of the nature of this profession.

It is very important for a student to know something about the specialty she wishes to pursue as a future career in order to determine its suitability for her knowing the possible difficulties that the student might face in a particular specialty will help her to weigh her capabilities viz a viz the demands of that specialty. In this study it was found that more than one third of the students had chosen a specialty without any prior knowledge of it. This may explain why some students transfer to other, possibly less demanding, programmes of study, sometimes to a completely different area, such as architecture or computer science. The main sources of knowledge for those who know something of their chosen specialty were friends and relatives. This study also showed that university visits played a minimal role (6.9%) in elucidating the requirements of a programme of study for a certain specialty to the students. Yearly visits for female students in secondary schools to learn about the specialty offered at King Faisal University are arranged. Perhaps the objectives of the visits and the way they are conducted should be revised to make them more meaningful to prospective students.

Prospective applicants to the medical college need to have a certain attitude and be highly motivated. A previous study indicated that most of the students found the programme more demanding than they had anticipated. More than two thirds of the students in this study expected that there would be difficulties in the course of their study in the medical college. About one fifth of the students thought that one of the main difficulties would be the long hours of study. Integration of males and females at the work place also presented a problem since Saudi female students and their families prefer on religious and cultural grounds to study and work in a segregated environment. This finding is supported by another study which considered that segregation of sexes in the work environment is a major incentive that would attract more Saudi nationals into nursing. Kassimi considered that segregation of sexes was unique to Saudi Arabia, and that it could be more effectively achieved by establishing medical schools for females only.

Twenty-three (12%) of the students envisaged that entering medical college would interfere with family life in the future. In her
study of the reasons for Saudi female medical students dropping out of King Abdulaziz University, Islam1 found that marriage was the main reason for withdrawal in later years. It accounted for 16% of all female students drop-out in the fourth year.1 In her study of the effect of medical practice in social and psychological status of female Saudi physicians, Mgrbal6 found that about half of the female physicians in Dammam area found it hard to strike a balance between their medical career and their family responsibilities. Several others also found that female physicians suffered from a conflict between their career demands and social obligations.7,11

Using English language in teaching was considered by 10% of the students as one of the anticipated difficulties. This result supports other findings that the use of English as a medium of instruction in medical education, is one of the problems that medical students faced.12,13 Albar12 found that over 70% of both medical students and residents at King Faisal University would prefer Arabic as the language of their medical education.

Students applying for MLT were asked why they did not choose nursing as a career. About three-fourths of them indicated that they were not interested in nursing, while nearly 9% of them argued that the specialty was frowned on by the society. This indicated that nursing as a career was perceived as relatively low in status in comparison to other occupational choices. In her study of the attitudes towards nursing, Jackson4 found that reluctance to choose nursing as a career in Saudi Arabia is based on the perception of low image, along with current traditional social values of the society.

In conclusion, this study shows that personal interest was the main reason for the choice of medicine for a future career. A sizeable proportion had no knowledge of the specialty they had opted for, while more than 80% of the applicants anticipated some difficulties upon entering the medical college. University visits played a minimal role in educating students about career alternatives available at the College of Medicine and Medical Sciences. The majority of MLT applicants were not interested in the nursing specialty.

It is recommended that the current strategy for enlightening the secondary school female students about the medical college programmes should be strengthened. Every student should have enough knowledge about the college, methods of teaching and their chosen future profession, before applying to the college. The public should be educated on the importance of the different specialties and their role in the development of this country. Parents should refrain from pressurizing their daughters in their career selection. The current negative image of the nursing profession could be reversed with the help of the media in public education.

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