

# Factors influencing choice of paediatrics as a career among medical students at the University of Nairobi, Kenya

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**Objective.** We aimed to determine factors influencing choice of a career in paediatrics by medical students in Kenya.

**Methods.** A cross-sectional survey of 450 medical students from the University of Nairobi, Kenya, was undertaken using a questionnaire designed to assess their preferences with regard to future specialisation, and timing of and factors influencing this choice. The data were analysed using the Statistical Package for Social Sciences.

**Results.** The response rate was 385/450 (85.6%). Paediatrics was the second most preferred specialty after surgery, and was chosen by 50 students (13.0%). Female students were five times more likely than males to select paediatrics. Choice of paediatrics as a career was mainly determined by perceived intellectual challenge, presence of a role model, and ease of combining a career with raising a family. Those who had completed a clerkship in the specialty reported that they were encouraged by the teaching and clinical staff ( $p=0.006$ ), but found the specialty less prestigious than others ( $p=0.030$ ). None of the male students but 12 of the female students (30%) considered gender distribution to be a factor influencing their career choice ( $p=0.046$ ).

**Conclusion.** This study indicates that paediatrics is popular among female students and that several factors influence choice of this specialty. Understanding these factors may help medical school administrators and faculty plan future recruitment strategies.

Although substantial efforts have been made to achieve the fourth Millennium Development Goal of reduction in child mortality, the challenges facing developing countries in the achievement of this goal include insufficient skilled personnel together with lack of equipment and basic consumables such as oxygen for management of childhood illnesses.<sup>1-3</sup> These issues are particularly relevant in Kenya, where several studies have reported a severe shortage of staff in many paediatric units, with some centres having no paediatricians at all.<sup>4,5</sup> This shortage could be addressed by encouraging more medical students to pursue careers in paediatrics even before they graduate from medical school. It is therefore important to understand the factors that influence a medical student's choice of paediatrics as a career. This study aimed to determine these factors among medical students at the University of Nairobi, Kenya.

## Materials and methods

### Setting and participants

Medical students in all 5 years of study for the undergraduate degree in medicine at the University of Nairobi were included in the study. In the 2008/9 academic year these comprised 1 557 (874 male and 683 female) students, of whom we hoped to enrol 450, 90 per year of study. All participants were informed of the aim of the study and that their involvement was voluntary.

### Procedure and measures

Self-administered questionnaires were randomly distributed in the 1st- to 5th-year classrooms (90 in each). The survey took approximately 10 minutes to complete. Information collected

included gender, marital status, year of study, the specialty the student was interested in, factors that influenced this choice, and timing of the choice. The participants were told to choose only one from the following list of possible specialties: surgery, internal medicine, paediatrics, obstetrics and gynaecology, public health, psychiatry, radiology, anaesthesiology, pathology, microbiology, anatomy, physiology, biochemistry, ophthalmology, immunology, and 'other' (a write-in option); 'not yet decided' was given as a final option. The specialties were preselected because it was considered that they would be clear and distinct for most students.

With regard to factors influencing choice of specialty, the students responded to the question 'Did this factor influence your choice of the specialty?' with either 'yes' or 'no'. The list of factors included encouragement by teaching or clinical staff, role models in the specialty, job opportunities and financial rewards, prestige of the specialty, academic and research opportunities, intellectual challenge in the specialty, lifestyle associated with practice in the specialty, gender distribution in the specialty, ease of raising a family, ease of entry into residency, length of residency, lifestyle during residency, and further training required after residency. Selection of these factors was based on similar studies.<sup>6-9</sup>

### Analysis

Data were analysed using the Statistical Package for Social Sciences version 17.0. The chi-square test was used to evaluate gender differences as well as to compare those who chose

paediatrics with those who chose other careers. In cases where the expected value of any cell was less than 5, the two-tailed Fisher's exact test was performed. A  $p$ -value of  $\leq 0.05$  was considered statistically significant.

## Results

### Demographics

Of the 450 questionnaires handed out, 385 (85.6%) were completed and returned. Male respondents comprised 217 (56.4%) and females 168 (43.6%). Fifty-eight students (15.1%) were undecided on their future careers.

### Career choices

Surgery was the most popular career choice (105 students, 27.3%; 76 male), followed by paediatrics (50 students, 12.9%) (Fig. 1). More female students than males (40 of 168 v. 10 of 217, odds ratio 5.17) chose paediatrics.

Fig. 2 summarises the years of study in which paediatrics had been chosen as a specialty by male and female students. Twenty-five of the 50 students (50%) had decided on a career in paediatrics before their third year of study, while the remaining 25 had made their choice afterwards. Of the 19 students who were in their 4th and 5th years, 14 (73.6%) had chosen paediatrics after their clerkship rotation in 4th year; only 2 of these were male. Significantly, no male students in their 5th year of study chose paediatrics.

### Factors influencing choice of paediatrics

Table I summarises the student responses to a list of possible factors influencing their choice of specialty. Significantly, more students who chose careers other than paediatrics listed job opportunities and financial rewards as the reason for their choice (67.9% v. 48%,  $p=0.007$ ). Similarly, more students choosing other careers than students choosing paediatrics listed perceived prestige of the discipline as a reason (52.7% v. 32%;  $p=0.007$ ). On the other hand, 66% of those who chose paediatrics and only 45.5% of those who chose other specialties ( $p=0.008$ ) listed ease of combining their career with raising a family as an important determinant of their choice.

The frequency of responses to possible factors influencing the choice of paediatrics as a career is set out in Fig. 3. The commonest responses included perceived intellectual challenge in the specialty, presence of a role model, ease of combining a career with raising a family, lifestyle associated with practice in the specialty, and availability of academic and research opportunities in the specialty. None of the male students but 12 of the female students (30%) considered gender distribution to be a reason for their choice ( $p=0.046$ ). There were no significant gender differences in the other factors studied ( $p>0.05$ ).

On comparing the findings across the years of study, significant differences were evident in encouragement by teaching staff as well as prestige of the specialty. More students who had done their paediatrics clerkship than those who had not reported that they had been encouraged by the teaching and clinical staff ( $p=0.006$ ), but they also found the specialty less prestigious ( $p=0.030$ ) compared with those who had not done the clerkship.

## Discussion

This study aimed to determine the factors that influence the choice of paediatrics as a specialty among medical students at the University of Nairobi. We found that female students were five times more likely to select a career in paediatrics than their male counterparts. This concurs with the findings of previous studies.<sup>8-12</sup> These authors suggest that female students are

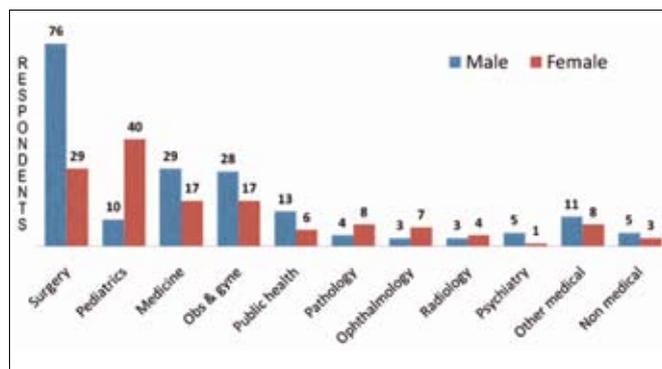


Fig. 1. Specialty choices among male and female medical students.

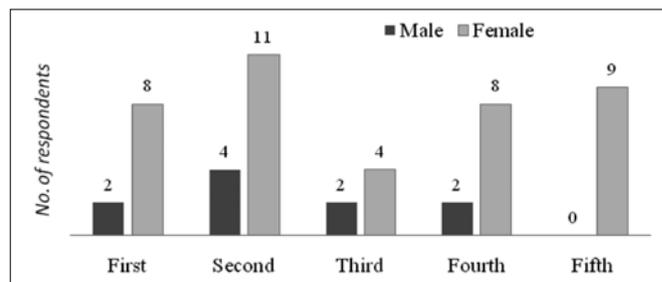


Fig. 2. Choice of paediatrics according to year of study.

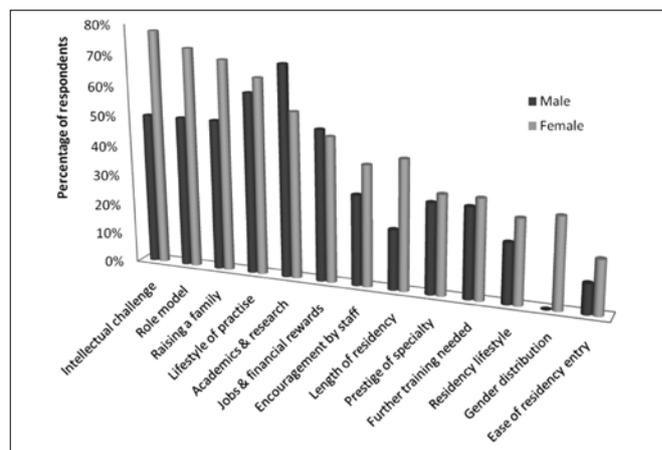


Fig. 3. Factors determining choice of a career in paediatrics.

discouraged from pursuing careers in other specialties because there are few female role models, and choose paediatrics because there are many female paediatricians. In support of this, the female students in the present study who chose paediatrics considered gender distribution as well as the presence of role models to be factors in their decision to pursue this specialty.

Other factors that we found influenced career choice among female students were lifestyle associated with practice in the specialty and the possibility of combining a career with marriage and raising a family. Studies have shown that women are more likely than men to integrate family responsibilities with a career.<sup>6,7,10-13</sup> These authors found that more women than men plan to play a major part in caring for their children, so they consider flexibility of work and opportunity for part-time work important factors in their choice of career. According to a study that compared gender and part-time employment among practising paediatricians and paediatric residents, women were considerably more likely than men to work part-time and to use their extra time for child care.<sup>14</sup> Paediatrics therefore seems to offer the opportunity of combining a career with raising a family.

TABLE I. COMPARISON OF FACTORS INFLUENCING CHOICE OF PAEDIATRICS AND CHOICE OF OTHER CAREERS

	Paediatrics (50 students) (N (%))	Others (277 students) (N (%))	p-value
Intellectual challenge	36 (72.0)	185 (66.8)	0.469
Role model in the specialty	34 (69.4)	186 (67.1)	0.758
Ease of raising a family	33 (66.0)	126 (45.5)	0.008*
Lifestyle of practice	32 (64.0)	175 (63.2)	0.912
Academic/research opportunities	29 (58.0)	183 (66.1)	0.272
Jobs and financial rewards	24 (48.0)	118 (67.9)	0.007*
Encouragement by staff	19 (38.0)	121 (43.7)	0.455
Length of residency training	19 (38.0)	95 (34.3)	0.613
Prestige of the specialty	16 (32.0)	146 (52.7)	0.007*
Further training after residency	16 (32.0)	116 (41.9)	0.190
Lifestyle during residency	13 (26.0)	84 (30.3)	0.538
Gender distribution in specialty	12 (24.0)	66 (23.8)	0.979
Ease of entry into residency	8 (16.0)	48 (17.3)	0.818

\*Statistically significant.

It appears that the clerkship rotation in paediatrics plays a very important role in choosing it as a specialty, particularly among female students. This is supported by the finding that 14 (73.6%) of 19 students who chose paediatrics in their 4th and 5th year did so after their clerkship rotation in the 4th year. These students also reported encouragement by teaching and clinical staff to be a significant determinant of their choice. Exposure to clinical settings has been reported to encourage students to opt for a career in the corresponding specialty.<sup>15</sup> It has been reported that interplay with faculty members and student experiences during clerkships have the greatest influence on specialty choice.<sup>15,16</sup>

We acknowledge that this study may have been limited by sample size and geographical distribution. The good response rate (85.6%) in our survey probably indicates that this topic was important to the medical school class. Our future efforts will be directed at repeating this study on a larger scale at a variety of geographical locations. Like all questionnaire surveys, the limitations of the study include the possibility of non-responder bias, although the relatively high response rate is likely to negate this. Structured questionnaires may not capture some of the subtleties of views about career choices, and a more open-ended interview format might be more suitable for capturing the essence of what the respondents thought about the various specialties.

## Conclusion

Paediatrics is the second most popular career choice among Kenyan medical students. Most of the students interested in paediatrics are female. Insufficient numbers of male students are attracted to paediatrics. In order to encourage more students to pursue a career in paediatrics, it may be necessary for the medical schools to raise more awareness about this specialty through organising career talks and mentoring.

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