

CAREER ISSUES FOR LEARNERS

Career Intentions of UNITRA Medical Students and their Perceptions about the Future

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ABSTRACT **Context:** *The University of Transkei (UNITRA) medical programme follows a problem-based learning and community-based education curriculum.*

Objective: *To gauge the views of UNITRA medical students about their future, and their career intentions.*

Design: *A semi-structured questionnaire on intentions to specialize or not, preferred place of work, overall view of the future, and careers guidance.*

Findings: *The questionnaire was completed by 364 students (87.7% response rate). The sector preferences are 82.3% public, 6.8% university and 10.9% private. Place of work preferences are urban (37%), rural (27%), city (12%) and abroad (8%), while 16% have no preference. Rural preference varies from 48.5% among 1st year students to 5.9% among 6th year students, while urban preference are 26.2% for Year I and 64.7% for Year VI students. 89.8% of respondents intended to specialize, mainly in clinical fields, with the most influential factors in the choice of specialty being interest and challenge. Most students (78%) view the future positively, 13% say it is uncertain, 8% have no idea about the future; and 1% think the future is negative. Frequent reasons cited for a bright future are job-related, personal attitude, sense of achievement, and the type of training. Most students have received little or no career guidance and would like such topics in the curriculum.*

Conclusion: *UNITRA medical students are optimistic about the future. The majority intend to stay in South Africa and work in the public sector, and most of them wish to pursue clinical specialties.*

KEYWORDS *Career plans, specialty choices, careers guidance, problem-based learning, community-based education.*

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Introduction

Career choices of medical students and young doctors are a topic that continues to attract the interest of medical educators and health service providers (Rogers *et al.*, 1989; Campos-Outcalt *et al.*, 1995; Ferrier & Woodward, 1982). The choices made affect the availability and distribution of medical personnel and the quality of service the health system is able to deliver (Lambert *et al.*, 1996; Matorin *et al.*, 2000). However, career issues receive little attention in medical school curricula, with most students graduating without any career advice (Bynoe, 1995; Wilson & Reece, 1995).

There is great inequality between private and public health sectors in South Africa, with the private sector attracting more health professionals and resources than the public one (Ncayiyana, 2000; Sarkin, 1999). This has been compounded by many South African health workers leaving for greener pastures (Weiner *et al.*, 1998; Spurgeon, 2001; Pang *et al.*, 2002). The University of Transkei (UNITRA) medical school was inaugurated in 1985 partly to offset the lack of black doctors in South Africa and to produce doctors who were appropriately trained to serve in both urban and rural areas of South Africa (Nazareth & Mfenyana, 1999). To that end, the innovative problem-based learning, community-based education (PBL/CBE) curriculum was started in 1992 (Iputo & Nganwa-Bagumah, 1996; Kwizera *et al.*, 2001). Ten years later, a survey was conducted to gauge medical students' views on various aspects of their future and the reasons for such views. A preliminary account of this work was presented at the 4th Eastern Cape Health Research Conference (Dambisya, 2002).

Methods

The students voluntarily and anonymously completed a semi-structured questionnaire. The study was conducted during the first term over 2 weeks in April 2002. The students were questioned on: (a) intention to work in the public or private sector; (b) intention to specialize, in what field and why, when the choice was made, how much time they would be prepared to spend specializing, and when they intend to start specialist training; (c) preferred place of work and why; (d) views on the future after medical school, and why; and (e) how much career guidance they had received at the medical school, and the need for career development activities in the curriculum. For each class, the questionnaire was handed out, completed at one sitting and collected immediately thereafter.

Options for preferred place of work were city, urban area other than big city, rural area, abroad and no preference. The sector options made a distinction between public hospitals and university. The questions on specialty choice, factors that influenced the choice, reasons for preferred place of work

and views on the future were open ended. Specialty choices were then grouped into mainstream specialties according to Lambert *et al.* (1996).

Statistical Analysis

Summary statistics were generated using MS Excel, and most responses are presented as frequencies and percentages. The associations between year at medical school, age or gender and the various choices were tested using cross-tabulation and the Chi-square test, with $p < 0.05$ as the limit of significance.

Results

Of the 424 medical students at UNITRA in 2002, nine were away at the time of the study, so the study population was 415 students. A total of 364 students (189 female, 168 male, seven unstated) completed the questionnaire (response rate 87.7%). The respondents were 101 (91%), 70 (88.6%), 64 (94.1%), 54 (94.7%), 42 (85.7%) and 33 (64.7%) in years 1, 2, 3, 4, 5, and 6 respectively. Proportionately more males than females completed the questionnaire (91.8% vs. 81.5%, $p = 0.004$).

Career Preferences

Working Place Preferences. Out of 364 respondents 347 (95.3%) stated their preferred sector of work: 286 (82.4%) for public hospitals, 22 (6.4%) for University, and 39 (11.2%) for the private sector. There are no class or gender differences in sector choice.

There are 376 place of work preferences, of which 44 (11.7%) are for city, 144 (38.3%) for urban areas other than big city, 102 (27.2%) for rural areas, 28 (7.4%) for abroad, and 58 (15.4%) no preference. There are inter-class differences, as shown in Figure 1. Fewer female than male respondents opt for rural areas (22.2% of female choices vs. 32.9% of male choices, $p < 0.05$).

The reasons for place of work preference are shown in Figure 2. Personal reasons (48.9% overall) include proximity to family, better life, personal security, children's schools, job opportunities for spouses and opportunities for further studies. The need to serve (30.2% overall) encompass reasons such as "serving areas of greatest need", "possibility to make a change" and "paying back for support received". Miscellaneous reasons (8.3% overall) include returning to home country, inability to do internship in South Africa, adventure, broadening one's horizons, greater opportunities, protest against corruption and better pay.

Specialty Preferences. Most respondents ($n = 327$, 89.8%) intend to specialize, 27 (7.4%) do not, and 10 (2.8%) give no answer. There are no class-, gender- or age-differences on intention to specialize. Of those who intend to specialize, six

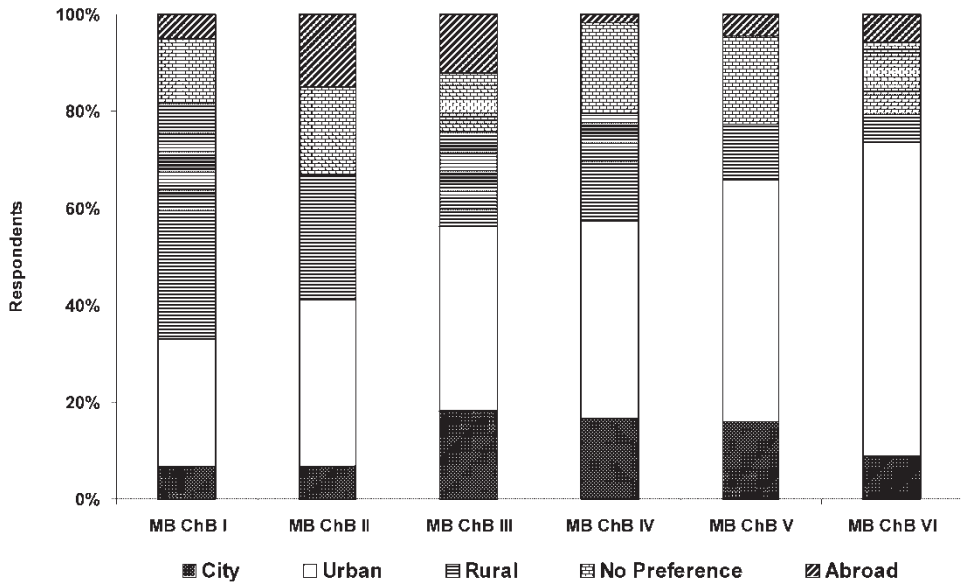


Figure 1. Relationship between class and work place preference. The “city”—“urban area other than big city” dichotomy was made to give the respondents a choice between the big cities such as Johannesburg and Durban, and smaller towns such as Umtata. First year students choose the rural areas more readily (48.5%) than the senior students, e.g. 11.4% for the 6th year students ($p < 0.0001$).

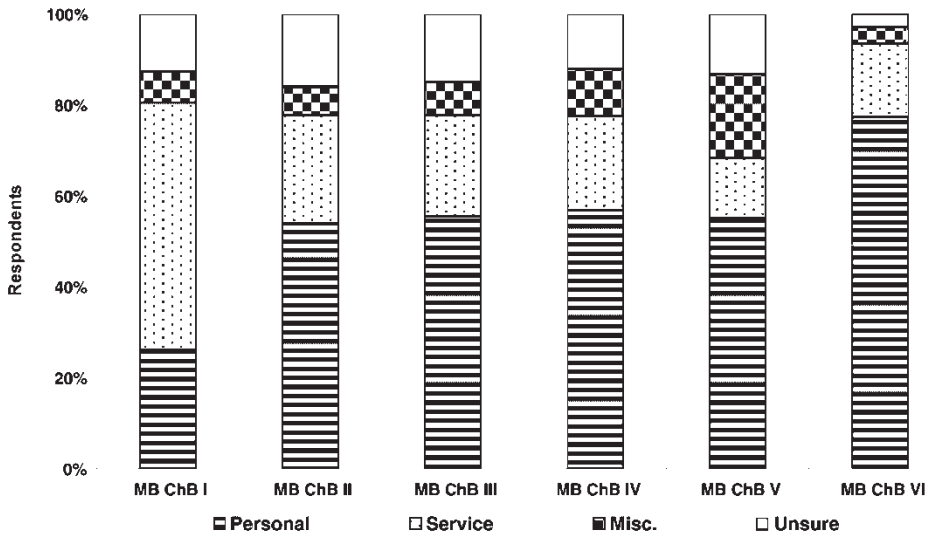


Figure 2. Relationship between year of study and reasons for work place choices. There is a marked difference in “the need to serve” from 54.4% among 1st year students to 15.6% among the 6th year students.

(1.7%) intend to pursue basic sciences, 167 (48.1%) clinical medicine, 32 (9.2%) community medicine/public health, while 142 (40.9%) are undecided. Community medicine is most popular among first year students (22%) and least popular among 6th year students (3.2%, Figure 3). The specialty choice was made prior to joining the medical school (28.7%), during the preclinical years (20.0%) and during the clinical years (16.7%). Table 1 shows the stated specialty preferences.

Among those who intend to specialize, 8.5% give no answer, 50% want to start immediately, 17.6% will wait 2 years, 12.4% intend to start after 3–4 years, while 11.5% will take at least 4 years after community service to start specialist training. Regarding the time for specialist training, 8.4% give no answer, 2.1% wish to train for 1 year or less, 18.4% for 2 years, 26.8% for 3–4 years, 3.5% for 5 years or longer, while 40.5% are prepared to train indefinitely. Age and class, but not gender, have an influence on the time the respondents are prepared to spend on further training. Those who are prepared to study indefinitely are: 59.2% of the under 20s, 44.5% of the 20–24 year age group, 35.1% of the 25–29 year olds, and 31.2% of the 30+ year respondents ($p = 0.016$). Similarly, year of study influenced the time the students are prepared to spend on specialist training (Figure 4).

Most commonly stated factors influencing the choice of specialty are interest in the field (44.1%), the challenge offered by the field (31.1%), role

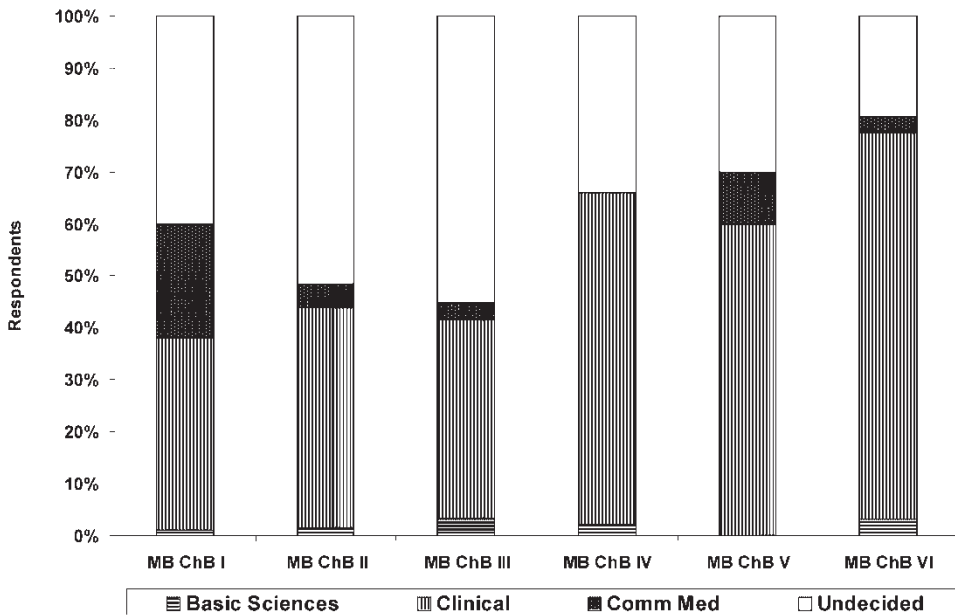


Figure 3. Relationship between year of study and choice of specialty areas. Students closer to completion of their studies (years 5 & 6) are more decided about their specialty areas than those in the earlier years.

Table 1. Specialty preferences expressed

| | <i>n</i> | All choices (%) |
|-----------------------------------|----------|-----------------|
| Surgical specialties ^a | 45 | 27.6 |
| Medical specialties ^b | 42 | 25.8 |
| Obstetric & gynaecology | 32 | 19.6 |
| Paediatrics | 23 | 14.1 |
| Psychiatry | 9 | 5.5 |
| Physiology | 3 | 1.8 |
| Family medicine | 2 | 1.2 |
| Anaesthesia | 2 | 1.2 |
| Others ^c | 5 | 3.1 |

^aThe surgical specialties include general surgery and sub-specialties like ENT, ophthalmology, neurosurgery, cardiothoracic surgery.

^bThe medical specialties include internal medicine and sub-specialties like cardiology, neurology, gastroenterology.

^cIncluding 1 each for telemedicine, pathology, forensic medicine, genetic engineering and chemical pathology.

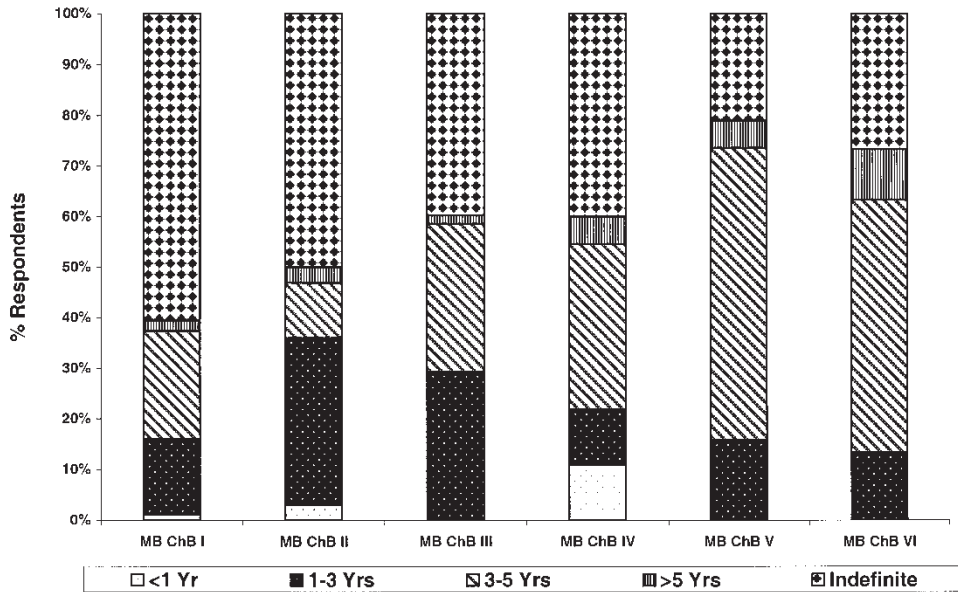


Figure 4. Association between year of study and specialization time. The closer the students got to completion of their studies, the more definite they are about how much time they would be prepared to spend on specialist training.

models (7.7%), money (4.0%), working hours (2.9%), status/prestige (2.2%), others 8.0%. The “others” include love of children, personal experience with (problems in) the specialty, desire to uplift health conditions in the community,

lack of female gynaecologists, and the (deterrent) effect of some heads of department.

The Future

The students' views on their future after medical school are shown in Table 2a. The future is seen as bright by 78%, uncertain by 13%, negative by 1%; while 8% of respondents have no idea about the future. Class, gender and age group have no apparent influence on the views on the future.

The reasons for a bright future are job-related factors (51.7%), personal attitude (27.8%), sense of achievement upon completing the course (11.6%), and the type of training (8.9%), Table 2b. The job-related reasons are along the lines of "doctors are always in demand", "sure to have a job", "will have a satisfying career", "well-paying job", "many opportunities will open up", "will do important work". The personal attitude category include statements like "I always look at the bright side of things", "just know so", "things can only get better", "the sky is the limit", "how hard can it be afterwards". The sense of achievement is captured by statements such as "will have achieved the best", "dream come true", "will finally be independent and able to take care of myself". Views on the type of training include "PBL approach prepares us for all conditions", "UNITRA training is best for South African conditions", "those who've been through this medical school are successful".

The uncertain view is evenly attributed to economic instability, crime, corruption, perceived limited recognition of the UNITRA degree outside South Africa, declining importance of the medical profession and poor conditions of service. The negative views of four respondents are based on lack of confidence in a UNITRA medical degree and limited recognition of the degree outside South Africa, lack of confidence in the PBL approach, anxiety

Table 2. Student views on the future and the reasons therefore

| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 | Over- all |
|--|-----------|-----------|-----------|-----------|-----------|-----------|--------------|
| (a) View of the future^a | | | | | | | |
| Bright | 75.6 | 80.9 | 81.3 | 75.5 | 73.8 | 83.9 | 78.0 |
| Uncertain | 13.9 | 13.2 | 10.9 | 15.1 | 14.3 | 9.7 | 13.1 |
| Negative | 0 | 0 | 4.7 | 1.9 | 0 | 0 | 1.1 |
| No idea | 10.9 | 5.9 | 3.1 | 7.5 | 11.9 | 6.4 | 7.8 |
| (b) Reasons for a bright future^b | | | | | | | |
| Job related factors | 59.1 | 52.7 | 33.3 | 52.9 | 51.6 | 43.0 | 51.7 |
| Personal attitude | 23.9 | 30.9 | 23.3 | 32.4 | 38.7 | 19.0 | 27.8 |
| Sense of achievement | 10.2 | 9.1 | 20.0 | 8.8 | 9.7 | 19.0 | 11.6 |
| Type of training | 6.8 | 7.8 | 23.3 | 5.9 | 0 | 19.0 | 8.9 |

^aPer cent of respondents in the year, per cent of respondents overall.

^bPer cent of reasons given by those who think the future is bright.

about the 5 year curriculum, poor government conditions for doctors and too much work.

Career Guidance

Most students report little (28.0%) or no career guidance (43.4%) from their medical school teachers, 19.8% had received informal guidance, 7.4% substantial guidance, and 1.4% gave no answer. The trends are the same across the 6 years, with no age or gender related differences. On the place of career development activities in the curriculum, 58.6% are for "definite need", 26.6% for "yes, but optional", (1.1%) for "no need"; 10.7% for "could be some", 1.4% had "no idea", whilst 1.6% give no answer.

Discussion

The majority of the next generation of UNITRA medical graduates intend to work in the public sector, and present trends indicate that the public sector preference endures after graduation (Reid, 2002). It has been shown that community service and exposure at undergraduate level encourage subsequent career preference for community-based careers (Howe & Ives, 2001). The community-based approach of the UNITRA programme may have a bearing on the willingness of our students and graduates to work in the public sector. Furthermore, only 7% of UNITRA students intend to work abroad, in contrast to estimates of up to one half of graduates from other medical schools who emigrate (Weiner *et al.*, 1998). The UNITRA medical students are predominantly black (Iputo, 1999), so these data support the view that black graduates of South African medical schools are more likely to stay in South Africa than their white counterparts (London, 2001).

That rural preference is strongest among first year students and least among sixth year students may be interpreted variously. Applicants to UNITRA know of the rural bias of the curriculum, and many state a preference for rural service in the pre-admission interviews. The first year students, having gone through that exercise only recently (2 months prior), may be tempted to give "the right answer". Over the years, the student is exposed to various communities, teaching hospitals, district hospitals, primary health care centres, and family practice (Nazareth & Mfenyana, 1999). Senior students are, then, better suited to make informed choices with the benefit of that exposure, including the problems in rural under-served areas. The observed trend may as well be a reflection of what has been reported that the altruism students have on entering medical school wanes as they progress through the course (Crandall *et al.*, 1993). Since the questionnaire was used only once, it is also possible that this observation reflects differences among the classes at admission, rather than declining interest in rural service with time at medical school.

Similarly, specialty preferences showed a shift from community medicine among first year students to clinical specialties among those in the higher years, a pattern that has been observed by others (Brooks, 1991). In the present study, interest in and the challenge offered by the specialty were the most commonly cited reasons for specialty choice. Both of these factors are influenced by the students' experience in a particular discipline (McLaughlin *et al.*, 1993; Erzurum *et al.*, 2000). Money is not a big factor for choice of specialty, perhaps because the students are aware that specialists in the public sector earn the same regardless of specialty.

Further interpretation of the working place preferences is limited by the fact that the respondents were not identified according to their rural or urban origins. In addition because the questionnaire was completed anonymously, it is not possible to compare the choices of student admitted directly after secondary school results alone (> 90%) and those with some other training (maintained at 5–10% of admissions each year).

Basic sciences are not attractive to medical students as areas of specialization (Oyebola & Adewoye, 1998). In the present study, this is as true for the pre-clinical students as it is for the clinical ones. UNITRA's integrated programme blurs the distinction between clinical and preclinical phases of the curriculum by introducing the students to clinical problems early in the course. Given the favourable influence of clinical exposure on students' desire to practise a specialty (McLaughlin *et al.*, 1993; Elnicki *et al.*, 1999; Solomon & Di Pette, 1994), the early clinical exposure may serve to undermine the preference for basic sciences. However, this is also true for students following the traditional system (Oyebola & Adewoye, 1998).

Older medical students and students closer to graduation are more decisive than are their younger or junior colleagues (Figure 3). It is known that older students have concerns different from those of their younger colleagues (Kick *et al.*, 2000). The senior students also indicate more realistic training times. For instance, no students in years 5 and 6 opt to train for 1 year or less, perhaps because they know that specialist training takes longer than that.

The PBL approach builds students' confidence in themselves and their ability to solve academic and non-academic problems (Hill *et al.*, 1998; Iputo, 1999). This is apparently borne out by the many respondents (28%) who attributed their bright view of the future to confidence in their ability to do the job ahead after their training.

Most doctors leave medical school with no formal career advice, and yet many career decisions are taken at medical school (Bynoe, 1995; Wilson & Reece, 1995; Lambert *et al.*, 1996; Hunt *et al.*, 1996). The same seems to apply to UNITRA graduates. The challenge for the innovative PBL/CBE curriculum is how to incorporate career guidance activities into a programme that already is seen as overcrowded.

Conclusion

From the present study, most of the UNITRA medical students intend to work in the public sector, intend to specialize in clinical fields and think the future after medical school is a bright one. About a quarter of them opt to work in the rural areas. The high response rate (87.7%) gives weight to the main findings of the survey. The relative unpopularity of rural service need not be seen as a failing of the UNITRA curriculum, since student career decisions are a complex, dynamic and individualized process with many determinants (Mutha *et al.*, 1997). What paths these students ultimately follow will be influenced by the realities of the world outside the medical school (Brink *et al.*, 1991). In any case, UNITRA's mission is not limited to rural communities, so public sector commitment of the students is commendable and needs to be nurtured through career development activities. Attempts will be made to monitor the career paths of this cohort of UNITRA students in the years ahead.

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