

Motivation and Career Prospects of Pharmacy Students at Nelson Mandela Metropolitan University: A Preliminary Study

Ilse Truter¹✉

¹ Department of Pharmacy, Nelson Mandela Metropolitan University.

ABSTRACT

The primary aim of the study was to determine the motivation for studying pharmacy, as well as the career prospects, of undergraduate pharmacy students at Nelson Mandela Metropolitan University (NMMU), South Africa. A questionnaire was distributed during July 2005 to 214 undergraduate pharmacy students at NMMU. Most of the respondents (65.9%) were female, and 29.4% were not South African citizens. Only 52.3% of respondents indicated that pharmacy was their first choice when making a career decision. Regarding their future, 80.1% of South African students indicated that they plan to practice pharmacy in South Africa. Most students plan to work in hospital pharmacy (31.7%), followed by retail pharmacy (23.4%) and manufacturing pharmacy (21.6%). Three-quarters of respondents (75.9%) indicated that they were interested in postgraduate studies after completing their BPharm degree, with only 39.2% of these students considering postgraduate studies at NMMU. Three-quarters of South African respondents plan to work overseas after completion of their studies (most respondents plan to work overseas for a period of one to five years). More than half of the South African respondents (54.7%) were considering emigrating after completion of their studies. These results have important implications for the future of the pharmacy profession in South Africa.

Keywords: Pharmacy profession, Undergraduate students, Career, South Africa, Pharmacy degree, Working overseas, Pharmacy students.

INTRODUCTION

There were approximately 11,500 pharmacists registered with the South African Pharmacy Council in South Africa in 2007.⁽¹⁾ Not all of them were, however, practicing. In 2003, approximately 2,500 of the 10,000 registered pharmacists were non-practicing.⁽²⁾ According to the South African Pharmacy Council, pharmacists work *inter alia* in 2,523 community pharmacies, 588 public and 174 private hospital (institutional) pharmacies, 371 wholesale pharmacies, 171 manufacturing pharmacies and 15 consultant pharmacies.⁽³⁾

South Africa is currently experiencing a shortage of

pharmacists in both the public and private health care sectors. In 2005, for example, when this study was conducted there were only 4.0 pharmacists per 100,000 population in the public sector, with only 3.4 pharmacists per 100,000 population in the public sector in the Eastern Cape, where Nelson Mandela Metropolitan University (NMMU) is situated.⁽⁴⁾ In 2007, there were 4.5 pharmacists per 100,000 population in the public sector in South Africa, and only 2.9 pharmacists per 100,000 population in the Eastern Cape.⁽⁴⁾ In 1998 there were 1,726 pharmacy students in South Africa, from their second to fourth year of study.⁽⁵⁾ In 2001 approximately 1,000 pharmacy students graduated from South Africa and in the same year 600 pharmacists emigrated abroad.^(6,7)

In a country undergoing social change since 1994 and

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✉ E-mail: ilse.truter@nmmu.ac.za

with the uncertainty that such change brings, many young professional people are exploring other opportunities often to the detriment of the country. Both the South African Government and the South African Pharmacy Council are working on a Human Resources Plan for Health and a Human Resources Plan for Pharmacy.⁽⁸⁾ Yet, little information is available about the motivation for studying pharmacy and the career prospects of pharmacy students currently studying pharmacy in South Africa. No study investigating these factors has previously been conducted in South Africa although it is of the utmost importance for human resources planning in the pharmacy profession.

PRIMARY AIM

The primary aim of the study was to determine the motivation for studying pharmacy, as well as the career prospects, of undergraduate pharmacy students at Nelson Mandela Metropolitan University (NMMU), South Africa. The secondary aims were to provide baseline information that can be used in further studies and to give feedback to professional organizations involved in human resources planning for pharmacy.

METHODOLOGY

A short one-page questionnaire (see Appendix A) was developed and a pilot study was conducted (a colleague who is a pharmacist and consumers were used for the

pilot study). No questionnaire that was used in a previous study could be found, and the questionnaire therefore had to be developed. This study can therefore only be regarded as a preliminary study. The questionnaire was distributed during July 2005 to pharmacy students in all four years of study at NMMU. The study population consisted of all undergraduate NMMU Pharmacy students during their first Pharmacy Practice lecture of the second semester of 2005 (during July). A total of 214 students completed the questionnaire. Students were informed beforehand about the purpose of the study. The survey was anonymous and participation in the study was completely voluntary. The questionnaire was administered at the end of a lecture so that students who preferred not to take part could leave the venue or carry on with other work. Students were given feedback after the results had been analyzed. Basic descriptive statistics were calculated.

RESULTS AND DISCUSSION

Demographic details of respondents

The demographic details of respondents are given in Table 1. Most of the respondents (65.9%, or 141 of the 214 students) were female. Nearly thirty percent (29.4%) of respondents were not South African citizens (44.6% of first-year students who completed the questionnaire were international students).

Table (1): Demographic details of respondents

Year of study	% International students	All students		Total	
		% Females (n=141)	% Males (n=73)	Number	%
First	44.6	27.0	37.0	65	30.4
Second	21.2	31.2	30.1	66	30.8
Third	27.6	15.6	9.6	29	13.6
Fourth	22.2	26.2	23.3	54	25.2
All years	29.4	100.0	100.0	214	100.0

Pharmacy as first choice for a career

Respondents were asked whether pharmacy was their first choice when they had to make a career decision. The percentage of South African and international students who indicated that pharmacy was their first choice is indicated in Figure 1. Only 52.3% of respondents (51.1% of females and 54.8% of males) indicated that pharmacy was their first choice, with many students indicating that medicine was their first choice but that they were not accepted into medical school. This

finding is in agreement with the results of at least two international studies. In a questionnaire survey administered to candidates who applied for entry to the School of Pharmacy at Bradford in the United Kingdom (UK), 25% confessed to an alternative choice of medicine as a career.⁽⁹⁾ In another study conducted in the UK to explore the images and perceptions of pharmacy with potential applicants to undergraduate pharmacy education, it was also confirmed that pharmacy can be the default option to medicine.⁽¹⁰⁾

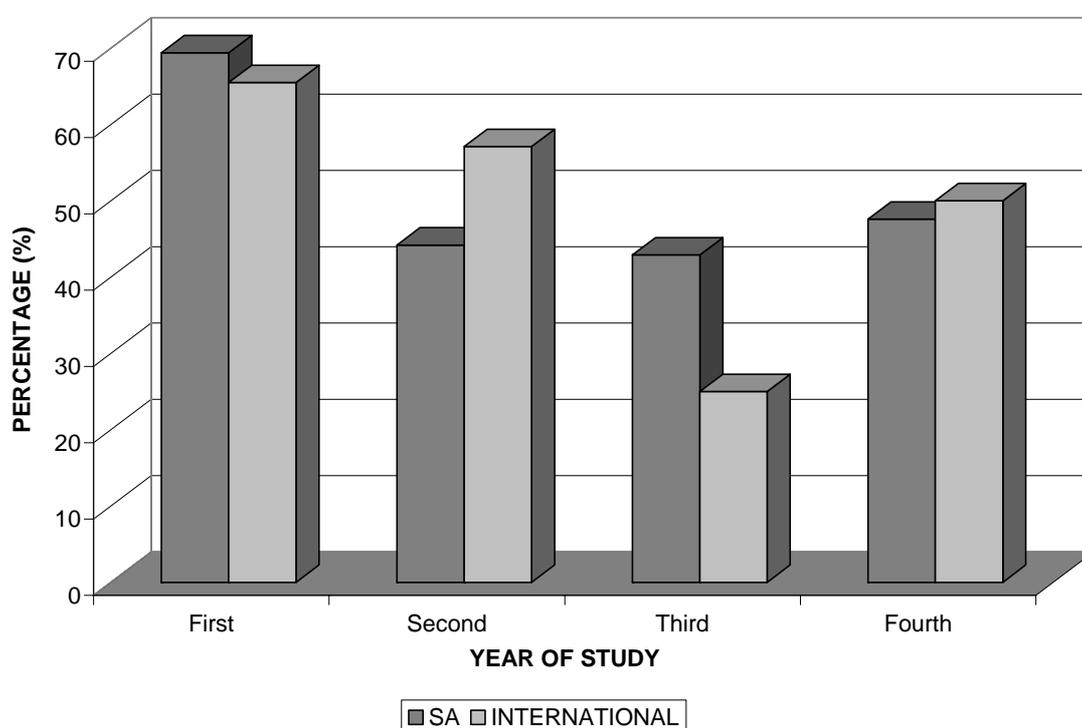


Figure (1): Pharmacy as first choice for a career (n=168)

Most important reasons for studying pharmacy

The following are examples of positive reasons that were given why respondents decided to study pharmacy:

- “Enjoy working with people and it is interesting” (third-year year student).
- “It seems like a huge interesting challenge one,

just had to take on” (first-year student).

- “Just wanna help poor people and advise them on different types of disease and I already own my pharmacy in my country” (first-year student).
- “I love it” (fourth-year student).

However, many students also indicated that *medicine*

was their first choice, but they were not accepted to study medicine. Examples of reasons given were:

- “Pharmacy was my second choice, since I wasn’t enrolled for first choice I had to go for it.”
- “Next best thing.”

There were also a number of interesting responses, such as:

- “Work in a professional environment, where people are supposed to respect you – BUT THEY DON’T” (third-year student).
- “Earning a decent salary” (second-year student).
- “To prove I can do it disregarding whether or not I like it” (second-year student).
- “Good pay and more importantly job security

(which no longer exists)” (second-year student).

- “I thought it would pay well. What a fallacy that turned out to be!” (fourth-year student).
- “For my dad” (second-year student).

Intention of South African students to practice pharmacy in South Africa

Regarding their future as pharmacists, 81.8% of South African students indicated that they plan to practice pharmacy in South Africa and 14.9% plan never to practice in South Africa (illustrated in Figure 2). Interestingly, 11.7% of females and 20.8% of males plan *not* to practice pharmacy in South Africa.

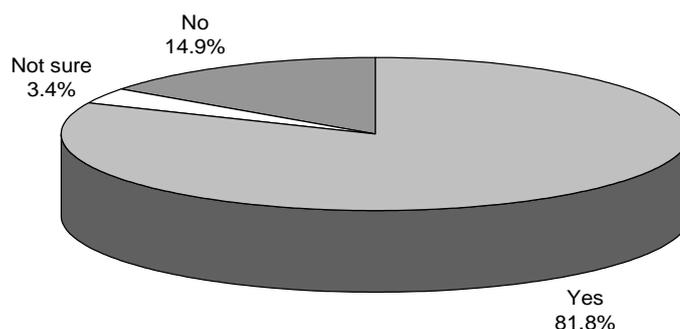


Figure (2): Intention of South African students to practise pharmacy in South Africa (n=148)

Sectors South African students plan to practice

Approximately, a third of the respondents (31.7%) plan to work most of their career in hospital pharmacy,

followed by community or retail pharmacy (23.4%) and manufacturing pharmacy (21.6%) as indicated in Figure (3).

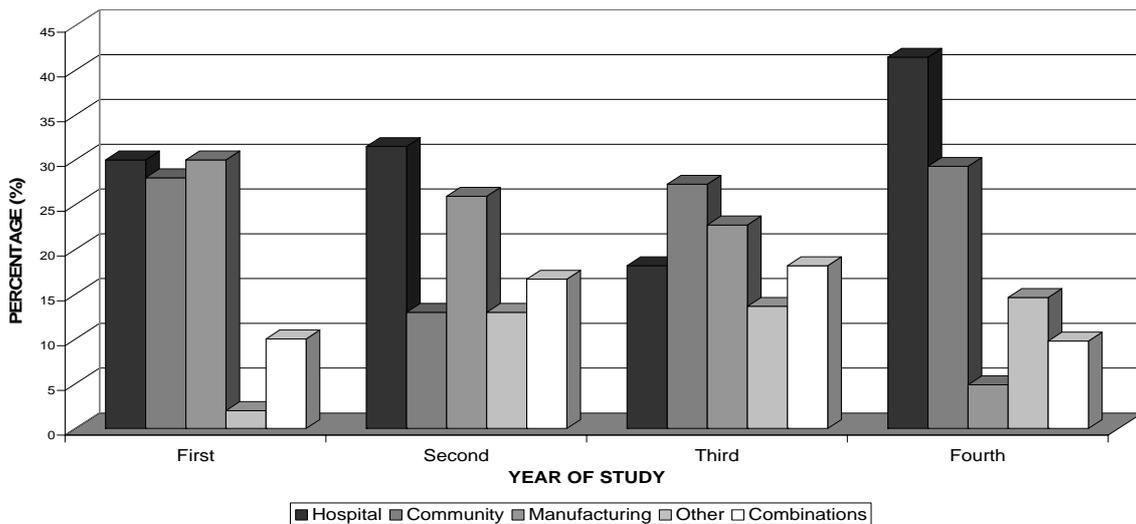


Figure (3): Sectors South African students plan to practise (N = 168)

The category “other” included, for example, respondents who indicated that they want to pursue a career in drug regulation, cosmetics, who want to specialize in animal medicine, work for international organizations such as the World Health Organization (WHO), or who want to study medicine immediately after completing their pharmacy degree.

Interest in postgraduate studies

As can be seen in Figure 4, three-quarters of respondents (75.9%) indicated that they were interested in postgraduate studies after completing their BPharm degree (with slightly fewer South African respondents). Only 39.2% of these students were considering postgraduate studies at NMMU.

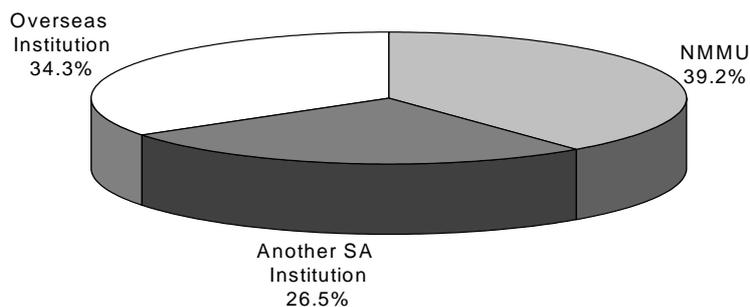


Figure (4): Interest in postgraduate studies (N=212)

South African citizens, planning to work overseas

Approximately, three-quarters of South African respondents plan to work overseas after the completion of

their studies (indicated in Figure 5). Most respondents plan to work overseas for a period of about one to five years.

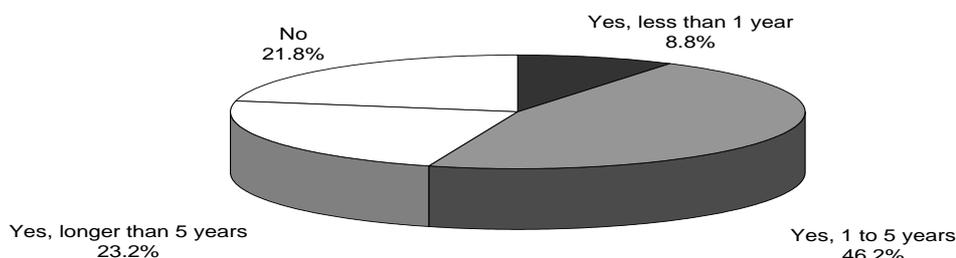


Figure (5): South African citizens, planning to work overseas (N=102)

South African citizens and emigration

A total number of 148 respondents answered this question. The results were as follows:

- More than half of the South African respondents (54.7%) were *considering* emigration after completion of their studies (no difference was found between the genders).
- The highest percentage was for final-year students, where 59.5% of the respondents indicated that they would consider emigrating.

CONCLUSION AND RECOMMENDATIONS

Limitations of the study were that it was only conducted in one of the eight South African Pharmacy Schools and the results are therefore not representative of the country as a whole, and only students who attended their respective lectures on the specific days that the survey was conducted completed the questionnaire. No postgraduate students were included in the study. Furthermore, the reasons why pharmacy students are considering working overseas or emigrating were not investigated.

Yet, the results of this study have important

implications for the future of the pharmacy profession in South Africa in terms of human resources planning. It will be of value to track students' career paths to identify their "migratory" patterns. It also has implications for Pharmacy curricula in South Africa, namely whether a university is training pharmacists for South Africa or for a variety of countries, and therefore whether curricula should be primarily developed for South Africa as is the intention of the South African Pharmacy Council, or whether an optimal curriculum for international students should also be considered. It is recommended that other Pharmacy Schools in South Africa conduct a similar study to establish how the future of the Pharmacy profession in South Africa may look like in the future. The reasons why students are considering leaving the country should also be investigated in future studies.

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