Success of a scholarship scheme for rural students

Andrew J Ross

Background. Mosvold Hospital is one of 5 district hospitals providing care for 555 000 indigent people in the Umkhanyakude district, northern KwaZulu-Natal. Recruitment of professional staff is an ongoing challenge for hospital management. An innovative, locally based scholarship scheme, the Friends of Mosveld Scholarship Scheme (FOMSS), was established in 1998 to: (*i*) identify and fund local scholars admitted to a tertiary facility to study health science courses; (*ii*) support these students at university or technikon; and (*iii*) ensure that graduates were integrated into the workforce within the district.

Objectives. To determine the perceptions of FOMSS-supported graduates with regard to the factors leading to success at university/technical college.

Method. All graduates from the 1999 - 2002 cohort of students awarded a scholarship by the FOMSS were invited to participate. Focus group discussions or free-attitude interviews were conducted, followed by a self-administered questionnaire.

Results. Twenty-four students from Umkhanyakude district supported by the FOMSS have graduated. Eighteen are working in the district, 1 has died, 2 have completed their contract time, 1 is doing further studies and 2 are completing their internships. Factors contributing to their success include personal motivation, support at university, and holiday work experience.

Conclusions. Despite educational challenges, students from rural areas are able to succeed at tertiary institutions and will return to work in rural districts. District hospitals can play an important role in the selection and support of students of rural origin.

S Afr Med J 2007; 97: 1087-1090.

Mosvold Hospital (MH) is one of 5 district hospitals providing health care to over 550 000 largely indigent people in the Umkhanyakude district of northern KwaZulu-Natal, South Africa. A high prevalence of preventable disease, high levels of unemployment and a poor standard of education mark this rural, underdeveloped region. Recruitment and retention of professional staff is a major challenge for the hospital management, and in the last decade, with the exception of nurses, health care professionals have been recruited from outside the district. A situational analysis done in 2006 in Umkhanyakude, Zululand and Uthungulu districts showed a 55% vacancy rate for senior medical officers and a 46% vacancy rate for professional nurses (1 171 vacancies for 2 546 establishment posts) (Steve Reid, Centre for Rural Health, Nelson R Mandela School of Medicine, University of KwaZulu-Natal – personal communication, 2006).

In an attempt to provide health care workers for the Umkhanyakude health district, the Friends of Mosvold Scholarship Scheme (FOMSS) was established in 1998. The trustees of the FOM trust were motivated by the belief that rural students have the potential to become health care professionals and will return to work in the district. The trust has established a comprehensive programme to promote careers in the health sciences, inspire scholars to dream about what is possible, raise awareness about HIV/AIDS, fund those accepted to study health sciences, mentor and support students at university and help integrate graduates into the work force in the district. To be eligible for financial support a student must be from the district, gain entrance to a tertiary institution for a health science course, complete at least 2 weeks of work experience at one of the hospitals in the district, be selected by a committee made up of local residents, and sign a year-for-year work-back commitment.

Over the past 8 years, more than 1 500 scholars have attended open days held at the hospitals, there have been 200 applicants for financial support, 80 young people have been trained as peer AIDS educators and 80 students have been supported at university or technical college while studying a wide variety of health science courses. In 2005, the FOMSS helped 52 students, 37 of whom were funded entirely by the FOMSS.

Of these 52, 44 passed their examinations, including 10 who graduated. By the end of 2005, 24 FOMSS students had graduated in 13 different disciplines. Of those who graduated, 18 are working in the district, 1 has died, 2 have completed their contract time, 1 is doing further studies and 2 are completing their internships.

The National Department of Health's Human Resources for Health Plan[1] is a comprehensive human resources plan to address the critical shortage of health professionals in South Africa. The plan aims to improve human health resources by training more health professionals. This is to be

Department of Family Medicine, Nelson R Mandela School of Medicine, Durban
Andrew J Ross, MB ChB, DCH, MFamMed

Corresponding author: *A J Ross (rossa@ukzn.ac.za)*

accomplished by: (*i*) reviewing the capacity of health education and training institutions and ultimately by training more health professionals; and (*ii*) promoting the health sciences to students, especially students from rural and underserved areas.

At the African Academic Association Conference in November 2005[2] it was reported that 50% of all students at South African tertiary education institutions had dropped out during the past 5 years, and that only 22% of students who registered in 2000 had graduated, with another 28% battling through the system 5 years later. From these reports it would appear that unless students (particularly those from rural areas) can be better supported while at university or technical college, the National Human Resources Plan for Health is unlikely to succeed.

The need for good secondary education cannot be over-emphasised if South Africa is to meet its own need for health professionals. Internationally, school performance has been found to be an important prognostic factor when analysing study success.[3] Research at the Medical University of Vienna in 2003 showed that secondary school performance could predict students' study success at medical school.[3] Research in Croatia in 2005[4] showed that rural students with school education inferior to that of their peers in urban areas, were more likely to fail a year and therefore needed additional support at university. However the same study also showed (as have other studies) that students of rural origin are more likely to return to work in rural areas after qualifying.

A summer enrichment programme running at the Mount Sinai School of Medicine[5] in Israel since 1991 has been shown to help educationally disadvantaged students adjust to university life (easing the transition, building confidence and facilitating social connections), resulting in fewer course failures in the first year at medical school.

Research in Australia[6] has shown that rural work experience constituting an integral part of the medical school curriculum improved the marks of final-year medical students, and that rural work experience is a well-accepted strategy for helping to solve the problem of chronic shortages of doctors in rural areas. There does not appear to be any literature evaluating work experience when it is an integral part of a bursary commitment (as is the case in the FOMSS).

Objectives

The aim of this study was to look at the perceptions of FOMSS-supported graduates from Umkhanyakude district with regard to factors leading to success at university/technical college.

Method

This was a qualitative study using focus group discussions (FGDs) followed by a questionnaire.

All graduates from the 1999 - 2002 cohort of students who were awarded a scholarship by the FOMSS were invited to participate in this research.

A self-administered questionnaire with 29 questions was developed and piloted with a final-year medical student from Ingwavuma who was studying at the Nelson R Mandela School of Medicine.

Four FGDs were held involving a total of 17 graduates, 2 groups at MH, 1 at the Jozini District office and 1 in the Department of Family Medicine at the medical school in Durban. One graduate was interviewed at his place of work and 2 were interviewed over the telephone. The same 2 people carried out the FGDs. Data were recorded by hand and by tape recorder. Questionnaires were completed after the discussions. Notes taken during the FGDs were transcribed and supplemented with the data recorded by tape recorder. Data from the FGDs were analysed to identify recurrent themes. Data from the questionnaires were transcribed onto Excell and analysed using the SPSS statistical package. Complete transcripts and the analysis were sent to the participants for validation.

Ethical approval for the study was obtained from the Ethics Committee of the University of KwaZulu-Natal.

Results

Between 1999 and 2002, 37 students were awarded scholarships from the FOMSS. By the time of the study (August 2006), 24 of these students had graduated and another 4 were in their 4th year of study (2 in medicine, 1 in physiotherapy, and 1 in dentistry). Eight students had been excluded from the university at which they were studying, 5 in their first year. Thus of the 32 in the 1999 - 2002 cohort who could have been expected to graduate, 24 (75%) had done so. However, the selection and support protocols of the FOMSS had not been followed fully in the case of at least 5 of the 8 excluded students. If these 5 students are excluded, the overall success rate would be 24/27 (89%).

Twenty of the 24 graduates from the 1999 - 2002 cohort were interviewed, with an equal number of male and female students. Nineteen students completed a structured questionnaire at the end of the discussions/interviews. The mean age of the students was 26.7 years (range 22 - 34 years). Six students began university the year after passing matric, while the other 13 waited from 1 to 5 years before starting their course. The mean wait was 2.8 years. The mean grade point average (GPA) for matric was 27.5 (range 21 - 39). Ten students completed their degrees in the prescribed time, 6 took 1 extra year and 3 took 2 or more extra years. There was no correlation between GPA and the time taken to obtain a degree but students who went to university immediately after completing matric were more likely to take extra time to complete their

degree than those who delayed entry. Eighteen students did their undergraduate studies in 1 of 10 local Department of Education rural schools, while 1 attended a private school for her matric year only. Undergraduate studies were done at 1 of 7 different tertiary institutions, and involving 11 different health science courses.

The predominant explanation for their success at university/technical college, highlighted by the students in both qualitative and quantitative studies, was the high level of support provided. This support took two forms, viz. personal contact by the main FOMSS mentor, and mutual support among the FOMSS students. Mentoring in this context is understood to mean 'a relationship in which a mentor helps a student to reach his/her potential. It is more "how can I help you" than "what should I teach you"'.[7]

Regular visits to the campuses supplemented by telephone calls by the main mentor made the students feel that he was there for them and that he cared. Struggling students were encouraged to analyse their situation using questions such as 'What do you think is the problem?' and 'What have you done to find a solution?'. Wherever practicable, solutions were found quickly and included interventions such as the student (and sometimes the mentor) contacting a lecturer or head of department, finding better accommodation, or providing a computer for FOMSS students where university resources were inadequate, etc. One student said, 'If we needed money or books we phoned Dr R and got it [money] easily'. Another commented, 'When you get everything you need it is easy to focus on study' and 'Resources needed were supplied without any fuss'. One student said, 'A key factor in my success was that all of us from Mosvold supported each other. I did not feel lonely.' Another said, 'We were like family'. Another said, 'We came from the same place and understood one another'. FOMSS students were expected to meet regularly to share problems and ideas and to encourage each other. They said that this helped them to 'stay in line'. 'We helped each other to access university resources, to work hard and succeed.' 'You can make it' was an oft-repeated phrase. Eighty-nine per cent of those who completed the questionnaire (17/19) mentioned that support either from the students or from FOM (or both) was a key to success. Students who commented on the mentoring provided by the institution said it was of little value, partly because the FOMSS students were unable to relate to mentors who, they felt, lived in a different world: 'I was from a rural area and she [the mentor] was unable to understand my problems'.

Another key factor was the students' motivation to succeed. Many students mentioned their background of extreme poverty. 'If I fail they [my family] have no resources to support me.' Others were motivated to help the community or to return home with a degree. This self motivation was reinforced by the expectations of the main FOM mentor, accountability to the department the student was training to work in, knowledge of the source of the funds, vacation work with FOM students from other campuses, and by the expectations of their secondary school, which they had to visit as an HIV/AIDS educator during vacations.

Only 5 of the 19 students mentioned paid vacation work as one of the 5 keys to success, but when asked in the questionnaire specifically about vacation work as a contributor to success, 16 students said it was very important and 3 said it was important. During the FGDs almost all students mentioned that vacation work was an important contributor to success. It was said to contribute directly to learning, e.g. drug names in the case of a pharmacy student, and hands-on experience in the case of dental therapy, physiotherapy, and occupational therapy students. 'It gave us an edge as we had already seen similar patients at Mosvold (e.g. a child with cerebral palsy (CP)), and felt confident.' Students said that it provided experience not available at university, helped with the application of theoretical knowledge, and boosted confidence. Vacation work also established relationships with staff members whom the students anticipated working with in the future. The staff remained in contact with them during term time by means of phone calls or visits. It also increased the motivation to succeed as students came face to face with sick people needing care and were encouraged by hospital staff members to graduate and return to help. Although small, the pay was very important to the students as it gave them some pocket money and the means to buy clothes and help family members. There was also the realisation that pay was important, and it encouraged them to feel that they could get more pay in the future.

Other factors that contributed to success mentioned by the respondents were small group discussions which took place during vacation work at MH. Topics covered included HIV/AIDS, life skills, study skills, financial management, how to cope at university and time management. Although only 1 student mentioned the selection process as a key to success it is obvious that the selection of well-motivated students and the appropriate choice of course are important. The FOMSS procedure of requiring work experience in the department of the students' choice before starting the university course may well help to ensure success. Seventeen of the 19 students who completed the questionnaire got the degree they wanted.

Discussion

The results reported in this study justify the belief of the FOM trustees that students from rural areas have the ability to train to become health care workers. If this is true of Umkhanyakude district it is likely to be true of other rural districts throughout South Africa. However experience shows that providing funds for scholarships to pay the expenses of training is not enough – in fact lack of funds may be the easiest problem to overcome.

The university environment is very different from that of high school and even the best-prepared students from the best high schools face challenges. The transition is much more difficult for students from a poverty-stricken background and resource-starved schools without any role models to emulate or family to provide support. Ideally the standard of education in rural high schools needs to be improved, but this is a long-term strategy. This study has shown that despite the handicap of a rural high school education and low GPAs, students can still succeed.

What are the keys to success, in addition to adequate finance? A high level of motivation has been shown to be a very important ingredient of success in any sphere of life, but particularly with regard to academic success. But how can a selection committee ensure that a student is highly motivated? At selection interviews almost all applicants will endeavour to persuade the selection committee that they are exceptionally highly motivated to follow the field of study for which they have applied. Possibly the FOMSS insistence on work experience under observation in the relevant field of study before awarding a scholarship is one means of checking on the high level of motivation claimed by would-be students.

However finances and initial motivation alone are not enough. Finances need to be available when required, without bureaucratic delay, and motivation needs to be maintained in the face of frequent discouragement. The FOMSS has shown a way of meeting both these needs. Money is available when required because of the close relationships established with the students, particularly between the chief mentor and the students. Natural checks on the abuse of such an arrangement have been the bonding between FOMSS students and the responsibility they assume for one another. Motivation to succeed is maintained by the same two processes. 'Another key to my success was that all of us from Mosvold were supporting each other. I did not feel lonely.'

Positive lessons learned from the summer enrichment programme at the Mount Sinai School of Medicine in Israel find some resonance in the FOMSS; short vacation courses and senior FOMSS students supporting their juniors help the latter to adjust to university life, easing the transition and facilitating social connections. Furthermore vacation work and assignments at the students' Alma Mater built confidence in their ability to speak in public and make presentations.

In Australia, rural work experience during the medical curriculum improved the marks of final-year medical students and increased the likelihood of their returning as graduates to work in rural areas.[6] The FOMSS students were unanimous in agreeing that vacation work contributed to their success, rating it important (*N*=3) or very important (*N*=16). The FOMSS has not been running for long enough to show that students will consistently return as graduates, but early signs are very good – so far not a single graduate has balked at completing his/her agreed work-back, compared with other scholarship schemes where failure to fulfil commitments are notoriously common.

Conclusions and recommendations

MH is no different from other district hospitals throughout South Africa. Each district hospital can and should assume a measure of responsibility, in partnership with the provincial bursary programme and any other funding initiatives, for finding suitable candidates (through open days, work experience and local selection committees); for enthusiastically and passionately mentoring and supporting these students at university (by regular visits or telephone contact, encouraging peer support groups and facilitating holiday work experience); and for ensuring that on graduating they are integrated into the hospital work force (by advertising posts timeously, provision of appropriate equipment and accommodation, etc.). It is possible to encourage and support training of local scholars to meet the human resources needs of our district hospitals so that quality health care can be provided to all people of South Africa.

I wish to acknowledge the assistance of Professor S M Ross and Dr M Ross, Kerry Vermaak for her helpful comments and Tonya Esthuizen for the statistical analysis.

References

1. Mahlathi P. *National Human Resources for Health Plan*. Pretoria: National Department of Health, 2006.
2. Hlehla S. SA student drop out shock. *Natal Mercury* 2005; 29 November.
3. Haidinger G, Frischenschlager O, Mitterauer L. Prediction of success in the first year exam in the study of medicine – a prospective study. *Middle European Journal of Medicine* 2005; 117: 827-832.
4. Polasek O, Kolcic I. Academic performance and scientific involvement of final year medical students coming from urban and rural backgrounds. *Rural and Remote Health* 6 (online), 2006; no. 530, pp. 1-7.
5. Kornitzer B, Ronan E, Rifkin M. Improving the adjustment of educally disadvantaged students to medical school: The summer enrichment program. *Mt Sinai J Med* 2005; 17: 317-321.
6. Walters LK, Worley PS, Mugford BV. The parallel rural community curriculum: it is a transferable model? *Rural and Remote Health* 3 (online), 2003; no. 236, pp. 1-9.
7. Bieehl B. *Mentoring*. Nashville, Tennessee: Broadman & Homan, 1996.

Accepted 5 December 2006