



Influences on the choice of health professionals to practise in rural areas

I D Couper, J F M Hugo, H Conradie, K Mfenyana, Members of the Collaboration for Health Equity through Education and Research (CHEER)

Background. Training health care professionals (HCPs) to work in rural areas is a challenge for educationalists. This study aimed to understand how HCPs choose to work in rural areas and how education influences this.

Methods. Qualitative individual interviews were conducted with 15 HCPs working in rural areas in SA.

Results. Themes identified included personal, facilitating, contextual, staying and reinforcing factors. Personal attributes of the HCPs, namely rural origin and/or their value system, determine consideration of rural practice. The decision to 'go rural' is facilitated by exposure to rural practice during training, an understanding of rural needs and exposure to rural role models.

Once practising in a rural area, the context and nature of work and the environment influence the decision to remain,

supported by the role of family and friends, ongoing training and development, and the style of health service management. Personal motivation is reinforced by a positive relationship with the community, and by being an advocate and role model for the local community. Educational factors were often felt to work against the decision to practise in rural areas.

Discussion. The results show the complexity of the interaction between a large number of factors working together to make HCPs choose to go and stay in rural areas. Factors other than educational ones seem more important. A comprehensive approach is needed to attract and retain HCPs in rural areas. Issues for educationalists to address include helping rural-origin students to connect with their own values and communities.

S Afr Med J 2007; 97: 1082-1086.

Recruiting doctors to work in rural areas is an important global concern for health managers and educators. Factors influencing this include specialisation, work in private or public sectors and the type of medicine doctors want to practise. Other issues include children's education, hobbies, spouse's occupation and parents' health.¹⁻⁴ There are few reliable predictors of future career choices,⁵ but for doctors their rural origin appears to be the most significant factor.⁶⁻⁹

We share the belief that exposure to rural health care during training and education which emphasises rural health issues can positively influence health professionals towards working in rural areas.¹⁰⁻¹³ We wished to determine whether or not this was seen to be a factor by health professionals.

Division of Rural Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg

I D Couper, BA, MB BCH, MFamMed

Department of Family Medicine, University of Pretoria

J F M Hugo, MB ChB, MFamMed

Department of Family Medicine and Primary Health Care, Stellenbosch University, Tygerberg, W Cape

H H Conradie, MB ChB, DCH, MPraxMed

Department of Family Medicine, Walter Sisulu University, Mthatha, E Cape

K Mfenyana, BSc, MB ChB, MA, MPraxMed

Corresponding author: I Couper (couperid@medicine.wits.ac.za)

Methods

The design was an exploratory qualitative study using in-depth interviews. A purposive sample of 15 South African health care professionals (HCPs) (doctors, dentists, pharmacists and therapists) working in rural areas in South Africa, for at least 3 years in their current location, was taken. The following variables were considered: gender and ethnicity, private or public practice, university of graduation, health profession and province of work.

Key informants were chosen from suggestions from the Collaboration for Health Equity through Education and Research (CHEER),¹⁴ and from e-mail discussion lists on which South African rural health care professionals are active.

A member of the research team interviewed each person purposively selected from this list. To improve reliability the four interviewers standardised the approach. Reflection, summarising and clarification to explore in detail what participants were saying and to uncover unanticipated ideas, followed clear, open-ended questions.¹⁵ To maximise contextual sensitivity, the interviews were conducted where participants practised, with one exception.

Interviews continued until saturation was reached after the initial question 'What factors have influenced you to practise in your current geographical location?' Two further questions were posed: 'What made you decide not to practise in an urban location?' and 'What factors in your education or training influenced where you practise?' Field notes and audio-taped



interviews were transcribed verbatim. The researchers analysed interviews that they themselves conducted. The researchers identified and described themes and looked for relationships between them. Common and apparently contradictory themes were identified, and a composite analysis of all the interviews was done and cross-checked.¹⁶

The composite analysis was submitted to a number of the interviewees for comment.

Informed consent of participating health professionals was obtained prior to interview. The research protocol was approved by the Committee for Research on Human Subjects of the University of the Witwatersrand, Johannesburg.

Results

Demographics of interviewees are outlined in Table I.

Themes identified are summarised in Table II.

The themes identified are presented in Fig. 1. Personal attributes of the HCPs, namely their rural origin and/or their value system, are critical in determining whether or not consideration is given to rural practice as an option or

Table II. Summary of themes influencing decision to work and stay in rural area

Personal factors
Origin: rural origin and work with own people
Values: political, religious, service to people
Facilitating factors
Role models
Exposure to rural work
Rural peoples' need
Dislike urban life
Context
Work and environment
Nature of rural practice and people
Tranquil rural surroundings
Staying factors
Family and friends
Learning in work
Supportive management
Reinforcing factors
Relationships
Role model and advocacy for local community

Table I. Demographics of key informants

Gender	
Male	10
Female	5
Race	
Black	9
White	5
Indian	1
Profession	
Doctor	10
Dentist	1
Pharmacist	2
Physiotherapist	1
Occupational therapist	1
University	
UL	4
UKZN	2
UCT	2
UWC	2
WSU	1
NMMU	1
UP	1
Wits	1
SU	1
Province	
Limpopo	6
Eastern Cape	4
KZN	4
Western Cape	4

UL = University of Limpopo; UKZN = University of KwaZulu-Natal; UCT = University of Cape Town; UP = University of Pretoria; WSU = Walter Sisulu University; NMMU = Nelson Mandela Metropolitan University; UWC = University of the Western Cape; Wits = University of the Witwatersrand; SU = Stellenbosch University.

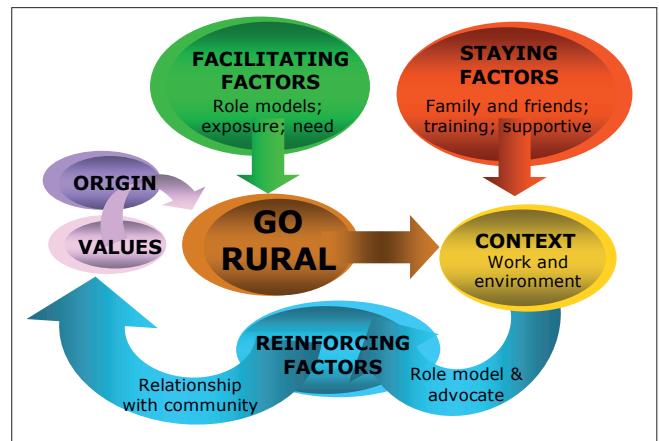


Fig. 1. Composite model of themes.

an obligation. The decision to 'go rural' or 'return rural' is facilitated by exposure to rural practice during training, an understanding of the needs in rural areas and positive role models.

The context and nature of their work and of the environment in which they practise are essential factors in HCPs' decisions to continue working in a rural area. Their ability to stay is supported by the role of family and friends, ongoing training and development, and the style of management of the health service. Personal motivation is reinforced by a positive relationship with the community, and by being an advocate for the local community and a role model for future HCPs. (Abbreviations for categories of HCPs: doctor/medical practitioner = MP, dentist/dental practitioner = DP, pharmacist = P, occupational therapist = OT, physiotherapist = PT).



Personal factors

Deciding to go or return to a rural area is underpinned by personal attributes, including: serving people (especially one's 'own people'), having a community connection, Christian beliefs, political motivation, wanting to serve people in rural areas and the need to make a difference and have an impact.

For those of rural origin, this aspect was the strongest motivating factor. They described a sense of returning home, and of familiarity with and ability to relate to rural people, coming back to roots, family, people, and village and being born there. Some felt a sense of obligation, needing to give something back to the community which had nurtured and supported them, because 'my success is the community's success' (DP). In contrast, going to the city would involve 'disconnection' from the community and be considered a 'desertion' (DP).

Facilitating factors

While values and origin are motivating factors, a decision to go rural is not automatic, but is seemingly facilitated by other factors, namely:

Exposure to rural practice during training, such as rural electives and holiday work. One was encouraged by the emphasis in her occupational therapy course on service delivery and holistic practice, and time spent in a rural area. Some said the content of their training, with an emphasis on rural health care and exposure to family studies (at Walter Sisulu University and University of Limpopo), was important. There was discordance on this factor however, because on being asked specifically, most respondents did not consider educational factors to be a major influence.

Awareness of the needs in rural areas included the absence of doctors in the area (MP), most professionals being white expatriates (P) and personal experience of ineffective treatment as a child (P).

The importance of role models – others working in rural areas were an inspiration.

Dislike of urban life, most respondents mentioning cities as places where they would not like to live as they were 'not nice', lonely, unsafe, crowded, busy, ugly and dehumanising, where one is not 'recognised as someone even if rich' (PT), lacking space, requiring a specialised approach to working and causing a 'pressurised lifestyle'.

One respondent (OT) had unsuccessfully applied for a city job and another (MP) would have moved were it not for the shortage of staff in her hospital – but both no longer wished to move to the city.

Context

Once the HCP has begun rural work, motivation is maintained by the context of the work and the environment, including

physical environment, lifestyle, job satisfaction, nature of rural patients and financial issues.

The natural physical environment including the geography, climate, fauna and flora was much appreciated in different settings and was connected with the rural lifestyle. Respondents reported a better quality of life, tranquillity, safety, peacefulness, lack of traffic, time to relax and opportunities for involvement in community activities.

Job satisfaction was rewarding because of the diversity of tasks and patients, involvement in the community and practising with a broader perspective. 'You are a real primary health care doctor' (MP). One respondent (OT) described how rural practice is diverse while city practitioners are boxed into a specialised environment. Continuity of care, comprehensive care and gatekeeping are rewarding. For some this was linked to being able to combine private and public sector work.

The nature of rural patients was spoken about positively; they were described as easy to talk to, friendly, considerate, appreciative and less demanding. They were often contrasted with their urban counterparts. While city patients demand referral to specialists and specific drugs, 'patients from rural communities come to a doctor because they are ill' (MP).

The financial situation was an important benefit, HCPs earning more (because of rural allowances), being provided with housing (public service) and spending less, so they were able to save. However some private practitioners feel that rural income is less and that state appointments are important to supplement income. One respondent's financial situation was a trap that prevented him leaving rural practice for some time (MP).

'Staying' factors

Family, the choice and happiness of the spouse, extended family, and friends were critical in the decision to go and to stay in rural practice. 'I receive a lot of support from my family and other people' (P).

Rural life enables one to spend more quality time with family and provides a safe environment for children. Children may be close to school in some cases. For others schooling becomes an issue as children get older; one respondent (MP) was moving to the city because of this.

A network of friends is important and the friends of one (MP) persuaded him to set up his practice in the village.

A supportive team, especially the management team in the public health service, with a well-functioning system, is vital in ensuring that HCPs stay in rural practice. Respondents talked about having enough staff, supportive nurses, well-organised hospitals and clinics, medicines in stock and good emergency services, support from management and senior colleagues, and a fair, communicative and supportive management style.



Relationships within the team are important, including a good relationship with the local doctor (P).

Training and development included opportunities to learn with senior colleagues to support and teach. Postgraduate training, especially in family medicine, which doctors were able to do while working in rural areas, was an important contributor.

Reinforcing factors

Being a role model for others and an advocate for the broader community, being able to teach younger colleagues, students and community service professionals, thereby instilling service values and a vision of the potential of rural practice, was important. This responsibility may go beyond the individual mentoring relationship, to a broader role; representing the profession in the area and a broader advocacy role, in terms of community upliftment and improved rural health care.

A close relationship with the community and appreciation from them is important; feeling appreciated and recognised being more important than riches (PT), feeling honoured for 'what I am and what I do', (PT) and a sense of acceptance, being 'within a community' (DP).

Educational influences

In contrast to those who raised their university training as a facilitating factor, when questioned about educational influences on their decision to practise in a rural area, respondents generally felt medical school did not help them choose to work in a rural area. There was a sense of disenchantment and of minimal influence. One interviewee was working in a rural area 'in spite of medical training' (MP). Several felt their university training actively worked against rural practice, only prepared them to work in an urban, white, western society and were actively discouraged by senior people and lecturers from going to the rural areas. The hierarchy at the academic hospital was discouraging and provided an incentive to go rural (MP). Some respondents felt that rural placements had little influence. One spoke eloquently of the incentives (money, status, academic advancement) he was offered to stay in the city and to work at his university (DP). His sense of commitment to the community, who had made sacrifices to allow him to study, enabled him to resist these influences. Apart from any motivational issues, the curriculum did not equip the respondents for rural practice.

Discussion

Demographics

The demographics of the participants are considered to be a fair reflection of the situation in rural practice in South Africa. Apart from nurses who were not included in this study, because few are university-trained, doctors were the dominant

profession. The gender mix reflects the international situation where males predominate in rural practice, especially among primary care physicians.¹⁷

White professionals, often expatriates, dominated rural practice in the past, related to apartheid policies and lack of training opportunities for black professionals. Rapid change has occurred since democracy in 1994; the sample was therefore deliberately skewed towards the new South African demographics of rural practice.

Seven of the eight medical schools and two health science faculties not involved in doctor training (Western Cape and Nelson Mandela Metropolitan Universities) were included.

Findings

These results provide qualitative support for international studies, highlighting the complex interactions among factors that influence how HCPs decide to go to and stay in rural areas. Career decisions of health care professionals¹⁸ include 'demographic' factors, such as gender, age, cultural and ethnic background, and family commitments, together with a more complex set of constructs such as personality, self-perception, self-efficacy and motivation, the role of which is less clear, though no less important, as seen in this study. The model generated from this study helps to conceptualise some of the interactions.

Personal values and place of origin are very important and accord with studies that demonstrate that rural-origin students are more likely to practise in rural areas,^{6-9,19-21} and that personal qualities are very important.⁸ Religious beliefs were previously found to be one of the strongest motivators for working in rural practice;¹ our interviewees reflected such beliefs, together with traditional values and sociopolitical convictions.

Role models have been a greater influence on primary care doctors than their non-primary care counterparts.¹⁸ There is thus a need to identify and encourage existing role models.

While financial incentives are necessary, the work environment, sound management, and team relationships are equally important elements of a rural retention strategy. These can be found in successful rural hospitals.²²

Many educators believe that providing undergraduate students with the necessary skills and positive experiences in rural medicine encourages future practice in rural communities.^{12,23} While there is international evidence in this regard,^{21,24-25} our results suggest that other factors may be more important, which may have to do with the timing and duration of the rural experience.²³ The perceived quality of a rural educational experience is apparently associated with an increased interest in a rural career.²⁶ It is therefore possible that South African health science faculties have not provided experiences of sufficient significance or quality to make an impact. Further research is required to assess this.



Concerns that educational experiences may mitigate against a decision to practise rurally and that exposure to rural practice may discourage students²⁷ need to be taken seriously. A second phase of this study, where urban practitioners are being interviewed, may elucidate this further.

The independent effect of the curriculum is unknown.^{6,20,28} It is unclear whether positive career choices are the result of the training or the unique nature of those who underwent the training.²⁸ In our study, the latter appears more important. Medical school training and characteristics of medical schools are not independently associated with rural practice or retention, but they are important co-factors²⁴ akin to the facilitating factors we describe.

This study enhances our understanding of the relationships among factors influencing HCPs' decisions regarding rural practice. It can assist in reframing the policy question from 'What can be done during health professional training?' to 'What can health science faculties do?' to address the shortage of rural HCPs.²⁹

Positive and negative factors affect recruitment and retention of rural HCPs and their problems need to be tackled using a multidimensional approach.^{4,30} Medical educators may play an important role in preparing students to face these factors and to cope with living in rural communities.³⁰ A partnership between medical educators, rural health service authorities and rural communities is crucial. Our results suggest that educationalists should work particularly on the following areas:

- Selection of HCP students – where they come from and what they believe. The former is easier and is being done in many places, including South Africa, for example, through rural scholarship schemes.³¹ Assessing the values of applicants is more difficult.
- Assisting students and young HCPs to connect with their own roots and values.
- The nature, level and duration of rural exposure and community engagement for students.
- Facilitating rural communities to become more involved with the support of HCPs.
- Supporting and training managers to improve the work context and to use a more participative management style.

While it is important to implement programmes actively on the basis of what is known, developing evidence regarding best practice in regard to these issues is needed.

References

1. Edginton ME, Holst HE. Doctors in rural hospitals in KwaZulu and Natal. *S Afr Med J* 1991; 80: 511-512.
2. Rabinowitz HK, Paynter NP. The rural vs urban practice decision. *JAMA* 2002; 287(1):113.
3. Richards HM, Farmer J, Selvaraj S. Sustaining the rural primary healthcare workforce: survey of healthcare professionals in the Scottish Highlands. *Rural and Remote Health* 5 (online), 2005: 365. <http://www.rrh.org.au> (last accessed 15 November 2005).
4. Kotzee TJ, Couper ID. What interventions do South African qualified doctors think will retain them in rural hospitals of the Limpopo province of South Africa? *Rural Remote Health* 6 (online), 2006: 581. <http://www.rrh.org.au> (last accessed 10 October 2006).
5. Rabinowitz HK. A program to recruit and educate medical students to practice family medicine in underserved areas. *JAMA* 1983; 249: 1038-1041
6. Rabinowitz HK, Diamond JJ, Markham FW, Hazelwood CE. A program to increase the number of family physicians in rural and underserved areas. Impact after 22 years. *JAMA* 1999; 281(3): 255-260.
7. Stearns JA, Stearns MA, Glasser M, Londo RA. Illinois RMED: A comprehensive program to improve the supply of rural family physicians. *Family Medicine* 2000; 32(1): 17-21.
8. De Vries E, Reid SJ. Do South African medical students of rural origin return to rural practice? *S Afr Med J* 2003; 93: 789-793.
9. Somers GT, Strasser R, Jolly B. What does it take? The influence of rural upbringing and sense of rural background on medical students' intention to work in a rural environment. *Rural and Remote Health* 7 (online), 2007: 706. <http://www.rrh.org.au> (last accessed 20 April 2007).
10. Rourke JTB. Politics of rural health care: recruitment and retention of physicians. *CMAJ* 1993; 148(8): 1281-1287.
11. Wise AL, Hays RB, Adkins PB, et al. Training for rural practice. *Med J Aust* 1994; 161: 314-318.
12. Dunbabin JS, Levitt L. Rural origin and rural medical exposure: their impact on the rural and remote medical workforce in Australia. *Rural and Remote Health* 3 (online), 2003: 212. <http://www.rrh.org.au> (last accessed 15 November 2005).
13. Eley D, Baker P. Does recruitment lead to retention? - Rural Clinical School training experiences and subsequent intern choices. *Rural and Remote Health* 6 (online), 2006: 511. <http://www.rrh.org.au> (last accessed 20 April 2007).
14. Reid SJ. A Cheerful Group – The Collaboration for Health Equity through Education and Research (CHEER). *S Afr Fam Pract* 2004; 46(7): 3.
15. Britten N. Qualitative interviews in health research. In: Pope C, Mays N, eds. *Qualitative Research in Health Care*. London: BMJ Books, 2000: chapter 2.
16. Pope C, Ziebland S, Mays N. Qualitative research in health care: Analysing qualitative data. *BMJ* 2000; 320: 114-116.
17. Brooks RG, Walsh M, Mardon RE, Lewis M, Clawson A. The roles of nature and nurture in the recruitment and retention of primary care physicians in rural areas: A review of the literature. *Acad Med* 2002; 77: 790-798.
18. Australian Medical Workforce Advisory Committee (AMWAC). *Career Decision Making by Doctors in Their Postgraduate Years – A Literature Review*. AMWAC Report 2002.1. Sydney: AMWAC, 2002.
19. Rosenblatt RA, Whitcomb ME, Cullen TJ, Lishner DM, Hart LG. Which medical schools produce rural physicians? *JAMA* 1992; 268: 1559-1565.
20. Pathman DE, Steiner BD, Jones BD, Konrad TR. Preparing and retaining rural physicians through medical education. *Acad Med* 1999; 74: 810-820
21. Culhane A, Kamien M, Ward A. The contribution of the undergraduate rural attachment to the learning of basic practical and emergency skills. *Med J Aust* 1993; 159: 450-452.
22. Couper ID, Hugo JFM. Management of district hospitals - exploring success. *Rural and Remote Health* 5 (online), 2005: 433. <http://www.rrh.org.au> (last accessed 10 October 2006).
23. Moore DG, Woodhead-Lyons SC, Wilson DR. Preparing for rural practice: Enhanced experience for medical students and residents. *Can Fam Physician* 1998; 44: 1045-1050.
24. Tavernier LA, Connor PD, Gates D, Wan JY. Does exposure to medically underserved areas during training influence eventual choice of practice location? *Med Educ* 2003; 37: 299-304.
25. Igumbor EU, Kwizera EN. The positive impact of rural medical schools on rural intern choices. *Rural and Remote Health* 5: 417 (online) 2005 <http://rrh.deakin.edu.au> (last accessed 15 November 2005).
26. Shannon CK, Baker H, Jackson J, Roy A, Heady H, Gunel E. Evaluation of a required state-wide interdisciplinary rural health educational program: student attitudes, career intents and perceived quality. *Education for Health* 2005; 18: 395-404.
27. Tolhurst H, Stewart M. Becoming a GP: A qualitative study of the career interests of medical students. *Aust Fam Physician* 2005; 34(3): 204-206.
28. Pathman DE. Medical education and physician's career choices: are we taking credit beyond our due? *Acad Med* 1996; 71: 963-968.
29. Rabinowitz HK, Diamond JJ, Markham FW, Paynter LP. Critical factors for designing programs to increase the supply and retention of rural primary care physicians. *JAMA* 2001; 286(9): 1041-1048.
30. Pong RW, Russell N. Review and Synthesis of Strategies and Policy Recommendations on the Rural Health Workforce. Laurentian University: Centre for Rural and Northern Health Research, 2003. www.cranhr.ca (last accessed 6 October 2005).
31. Ross AJ, Couper ID. Rural Scholarship Schemes: A solution to the human resource crisis in rural district hospitals. *S Afr Fam Pract* 2004; 46(1): 5-6.

Accepted 13 July 2007.