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The inverse primary care law in sub-Saharan Africa:

a qualitative study of the views of migrant health workers

Abstract

Background

Many low-income and middle-income countries globally are now pursuing ambitious plans for universal primary care, but are failing to deliver adequate care quality because of intractable human resource problems.

Aim

To understand why migrant nurses and doctors from sub-Saharan Africa did not wish to take up available posts in primary and first-contact care in their home countries.

Design and setting

Qualitative study of migrant health workers to Europe (UK, Belgium, and Austria) or southern Africa (Botswana and South Africa) from sub-Saharan Africa.

Method

Semi-structured interviews with 66 health workers (24 nurses and 42 doctors) from 18 countries between July 2011 and April 2012. Transcripts were analysed thematically using a framework approach.

Results

The reasons given for choosing not to work in primary care were grouped into three main analytic streams: poor working environment, difficult living experiences, and poor career path. Responders described a lack of basic medicines and equipment, an unmanageable workload, and lack of professional support. Many had concerns about personal security, living conditions (such as education for children), and poor income. Primary care was seen as lower status than hospital medicine, with lack of specialist training opportunities and more exposure to corruption.

Conclusions

Clinicians are reluctant to work in the conditions they currently experience in primary care in sub-Saharan Africa and these conditions tend to get worse as poverty and need for primary care increases. This inverse primary care law undermines achievement of universal health coverage. Policy experience from countries outside Africa shows that it is not immutable.

Keywords

human resources; migrants; primary care; sub-saharan Africa;

INTRODUCTION

In 1971, Julian Tudor-Hart published an essay entitled the inverse care law.¹ It pointed out that those most in need of medical care in the UK were still the least likely to receive it, despite universal health coverage for the previous 23 years. It attributed this failure to the persistently poor quality of primary care in areas of social deprivation. Most clinicians were simply not prepared to live and work in poor communities, and the socially-committed few encountered working conditions which could 'change a good doctor to a bad doctor within a very short time'.²

This is not simply a fact of historical interest to the UK. The desire to resolve health inequality has led the World Health Organization and other global agencies to reaffirm the importance of effective primary and first-contact care for achieving health development goals.³ Many low-income and middle-income countries globally are now pursuing ambitious plans for universal primary care provision with varying success.⁴ Most, if not all, are stumbling across the same intractable staffing problems the UK encountered 50 years ago; India is a good example.⁵

In 2010, the authors initiated an EU-funded collaborative project to investigate why countries in sub-Saharan Africa are finding

it so difficult to staff, and therefore deliver effective, primary care. For example, in Uganda in 2011 the proportion of health worker posts vacant was 40% in larger health centres and 55% in smaller (mainly rural) health centres.⁶ In south-eastern Nigeria in 2006, the situation was said to be even worse, with only 29% of the required number of primary healthcare workers in post.⁷ There is a particular shortage of doctors; only 7% of the required number in one study from South Africa.⁸ And, not surprisingly, the doctor shortage is greatest in rural areas; a study of staffing levels in health centres in Windhoek (Namibia) reported no medical staff at all in the outlying clinics.⁹

Migration of health workers is one of the most important contributory factors to the shortage of health workers in many low-income and middle-income countries.¹⁰ Therefore, as part of the present investigation migrant healthcare workers were interviewed to explore why they had not taken up the available posts in primary (or first-contact) care in their own countries. Their accounts help explain to policymakers why their well-intentioned initiatives are failing to provide effective primary care services in sub-Saharan Africa. The authors have already drawn

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How this fits in

The desire to resolve health inequality has led global agencies to reaffirm the importance of effective primary care for achieving health development goals. Many low-income and middle-income countries are now pursuing ambitious plans for universal primary care provision but stumbling across intractable staffing problems. The present results help to explain why: personal insecurity, lack of career opportunity, and poor working conditions seem endemic and probably increase with the need for primary care. This inverse primary care law is not immutable but until solutions are prioritised and implemented in sub-Saharan Africa, individuals in poverty are condemned to receive poor care or no care at all.

attention to these findings in a letter headed 'Why there is an inverse primary care law in Africa'.¹¹ This study reports a full account of the methodology and results.

METHOD

Design

This was a qualitative study using semi-structured interviews exploring why migrant health workers from sub-Saharan Africa had not taken up vacant posts delivering first-contact care in their own countries. Data were collected from July 2011 until April 2012.

Participants

There were 66 responders (24 nurses and 42 doctors) from 18 countries (Appendix 1). Participants had to be born and have completed at least part of their professional training in medicine, nursing, or midwifery in sub-Saharan Africa and since migrated to the UK, South Africa, or Botswana (known to attract African migrants) or Belgium or Austria (not known to do so). Sampling was purposive using various methods: personal, online, and hardcopy flyer networking with local African, migrant, and health organisations and communities for potential participants, with further snowball identification of other potential participants until there was saturation of themes. The aim was to sample doctors and nurses, and to achieve heterogeneity in terms of age, sex, country of origin in Africa, and length of stay in the host country. Recruitment was stopped when the framework analysis of the aggregated data suggested thematic saturation; until that point sampling in individual countries

continued until either there was repetition of key views or the pool of candidates to interview was thought to be exhausted.

Data collection

A semi-structured interview topic guide included migration motives; migration experience; views on primary health care; changes needed in their country of origin to retain health workers; transnational ties and future plans. The interviews took place in England ($n = 12$), Belgium ($n = 14$), Austria ($n = 10$), Botswana ($n = 15$), and South Africa ($n = 15$). Participants were interviewed for 60-90 minutes in English ($n = 47$), Dutch ($n = 5$), French ($n = 8$), or German ($n = 6$) in a place of their choice, usually work or home. Interviewers in all countries were trained and experienced qualitative researchers; of the six interviewers, five were female, one had a clinical background. Interviews were recorded and transcribed by the interviewer or research team. Interviews were conducted until thematic saturation was reached. Transcripts were checked by interviewees whenever possible and crosschecked by other members of the research team (confirmed to have been done in 27 cases).

Data analysis

The research team, using the framework method,¹² agreed to a thematic index after preliminary analysis of all English transcripts by one author. This author then coded into distinct and comprehensive themes and sub-themes using NVivo9 and shared the results by email with the full research team, with audit trail of analysis. The full research team discussed code and theme development. Non-English transcripts were examined by Austrian and/or Belgian research team members for thematic consistency and they contributed new themes and codes if something important from their transcripts was not mentioned in the pre-defined key themes; they provided confirming and non-confirming quotations translated into English. These were assimilated into the draft results, which were circulated by email with the research team. After several iterations the results were finalised and are represented below. The overall process was reviewed against the COREQ Checklist.¹³

RESULTS

The reasons given for choosing not to work in primary care were grouped into three main analytic streams: poor working environment, difficult living experiences, and poor career paths. They were expressed

as reasons for migrating and as potential barriers to returning to work in their home country, particularly returning to work in a primary care setting. Responders from some countries with minimal primary care infrastructure could only report their personal experience of delivering care from a hospital rather than a primary care facility, but all responders shared the consensus view that the difficulties described below were likely to be greatest in community-based facilities.

Poor working environment

Two consistent themes emerged when responders described their experiences of working in primary care or trying to deliver first-contact care from hospital outpatient facilities, these were: lack of resources and unmanageable workload. In addition, those working in primary care facilities often commented on the lack of professional support.

Lack of basic medicines, equipment, and facilities. Lack of adequate resources to deliver a reasonable standard of care was a universal comment by all responders, whether they were describing their employment experience in hospital or primary care. The most acute examples of lack of essential medicines and lack of basic equipment, however, invariably reflected experience in primary care:

'Imagine just referring a pregnant woman because of not having water.' (Nurse from Zambia)

'It's really, there is nothing. How can you treat people without a laboratory or without drugs, medication? No antibiotics, nothing.' (Doctor from Gabon)

'You know how to help them ... but you can't really help them, because you do not have the resources.' (Doctor from Rwanda)

Unmanageable workload. In countries with very little primary care (such as Democratic Republic of the Congo [DRC]), these high workload pressures were described in the hospital outpatient clinics delivering first-contact care rather than in designated primary care facilities. Fragmentation and lack of continuity of care was also mentioned as a source of professional frustration:

'It's overload of patients which is affecting the quality of care. I am telling you, I'm pushing the queue. I am not seeing the patients, I am pushing the queue.' (Doctor from DRC)

'There is no continuity of the care ... people just sit in a queue ... and what my experience is, is that they see the queue, they don't see the people.' (Doctor from Nigeria)

'Here in Europe, you can't imagine. That you are at your wits end ... thinking ... this can't be possible. This nice and lovely idea, of just wanting to help someone ... it's very difficult over there.' (Doctor from South Africa)

Lack of professional support. The likelihood of being left alone without professional support to manage a busy clinic, or conduct any other clinical task such as make a difficult diagnosis or undertake a caesarean section, was perceived as a common occurrence in hospital medicine but as almost invariable in primary care. In addition, lack of the simplest diagnostic facilities in many primary care settings was seen as making the practice of modern Western medicine virtually impossible. Rural practice was seen as particularly problematic:

'You end up being alone in a clinic ... and it is definitely affecting the quality, especially when you're tired.' (Doctor from Congo)

'A lot of it was left to your own devices ... it certainly wasn't quality care.' (Nurse from South Africa)

Difficult living experiences

The main themes emerging centred on personal security and general living conditions (such as accommodation and availability of education for children). Although these issues were not primary care specific, they tended to be less acute for hospital-employed staff because of the more central location of hospitals, which were usually in urban areas, and the feasibility of providing better security in larger and less isolated healthcare facilities.

Personal insecurity Migrants from all countries perceived this as an important issue, although it was a particular issue in urban areas of South Africa and in the more isolated rural areas of countries with histories of recent internal conflict such as Sudan, Zambia, and the DRC.

'I personally wouldn't want to work in — primary care in South Africa. I think you're exposed to so much, you know, so much danger.' (Nurse from South Africa)

'The most difficult ... was when there was lawlessness.' (Nurse from Zambia)

'... it was really very difficult to return back to Sudan, my father and my brother were arrested they are in jail ... there is no secure life there.' (Doctor from Sudan)

Poor living conditions. As well as fear for personal safety, some responders also raised as a concern the lack of access to adequate health care if they became ill. Responders with children also expressed concern about the availability of education in rural areas, and the affordability of education if the salary associated with the post was inadequate (reflecting relatively lower salaries for primary care posts and the increased likelihood that the salary would not be paid). The lack of social facilities for everyday living (such as shops, cinemas) was seen as increasingly problematic in rural areas with poor transport links to an urban centre:

'... there are no big schools over there, so also for their children, they prefer to stay in the cities.' (Doctor from Guinea)

'I would not work there [in a rural area in Nigeria] ... I mean I would need electricity.' (Doctor from Nigeria)

Poor economic rewards. Virtually all the responders mentioned income as an issue. A number said they had stopped getting paid. Many said they 'moonlighted' in the private sector to supplement incomes and this would not be possible in rural areas, particularly if working in primary care. Although income did not seem to be seen as an end in itself, but as a necessary means of achieving personal and family security, primary care was not seen, particularly by doctors, as a viable career option for achieving an adequate income:

'What would encourage me to do it [primary care]? Good hours, having a good lifestyle with it and proper resources ... unfortunately I suppose money as well.' (Doctor from South Africa)

'... I get a 100 dollars [a month], how can I live on that? I always have to go to work by foot, I don't have enough bread to eat for the day, how can I live there [in DRC]?' (Nurse from DRC now training as medical student)

Social and cultural difficulties. Personal isolation was not the only perceived difficulty with living and delivering primary care in rural areas. Responders from more than one country flagged up issues of race and ethnic origin, with racial tensions and

wish to escape ethnic prejudice as a key motivator for migration, particularly from South Africa.

'... you are having to go into certain of those areas, travelling miles to get to places, and then you've got all these cultural issues ... and then you've got a whole language problem.' (Nurse from South Africa)

Poor career paths

No responder saw primary care as a feasible way to fulfil their personal career ambitions, irrespective of concerns about income. The main barriers to career advancement were perceived as the low status of primary care, lack of training opportunities, and high susceptibility to corruption.

Low status of primary care. All the responders perceived primary care as a low status employment option, whether they were doctors or nurses. It was perceived as having particularly low status with politicians and, therefore, at particular risk of employees having inadequate resource to provide care, receiving low salaries, and not being paid at all (particularly when wages for primary care employees were paid locally). They saw no possibility of professional advancement within primary care:

'Primary care ... is looked at as inferior care.' (Doctor from Zambia)

'All the glamour of nursing happens in hospital, not in primary care.' (Nurse from South Africa)

'University hospitals, reference [referral] hospitals ... they have everything.' (Doctor from Rwanda)

Lack of specialist training opportunities. As with the other employment barriers reported, lack of training opportunity was not restricted to primary care and the wish to move abroad for specialist postgraduate training was a common reason given for migration; however, opportunities for postgraduate training in primary care were reported to be less than for any other discipline. Learning by doing was seen as the only option:

'We didn't have the teaching and training because you were ... were dumped there and that was it.' (Nurse from South Africa)

'... the seminars that take place, continuous education, all those things happen in the

cities, and nearly never in rural areas. Over there, they are forgotten.' (Doctor from Guinea)

Effect of corruption on career opportunities. Corruption was a frequent complaint, with career advancement, or in some cases retention of post, often thought to be dependent on bribery. This was not restricted to primary care but perceived susceptibility to lack of any regulation was particularly felt in peripheral areas and was associated with job (and personal) insecurity:

'But things just don't work the way they should work because of corruption that's the big thing and so it affects everyone.' (Doctor from Nigeria)

'... theoretically you have to meet some grades. But beyond that there are some factors under the table you do not know.' (Doctor from Rwanda)

'... and even if you are appointed there, you still need to bribe, you know... if you put him in a post, you expecting him to give you money on a monthly basis.' (Doctor from DRC)

DISCUSSION

Summary

The three main reasons given for choosing not to work in primary care were poor working environment, difficult living experiences, and poor career path. Responders described a lack of basic medicines and equipment, an unmanageable workload, and lack of professional support. Many had concerns about personal security, living conditions (such as education for children), and poor income. Primary care was seen as lower status than hospital medicine with lack of specialist training opportunity and more exposure to corruption.

Effective primary care cannot happen unless these issues are dealt with. Few clinicians (doctors, nurses, or other health workers) with alternative employment options will choose to work in the conditions they experience in primary care, and those that do will be unable to deliver effective care. Their stories suggest that these adverse conditions get progressively worse as poverty and distance from secondary care facilities, and hence the need for good primary care, increases. The failure to recognise and remedy this situation means that achieving Millennium Development Goals (MDGs) in many low-income countries remains a pipe dream.

Strengths and limitations

The strength of the present findings draws from the diversity of the sample (doctors and nurses from 18 countries were interviewed), the coherence of responses, and the triangulation inherent in the method of analysis. The preliminary thematic analysis was reviewed and refined by qualitative researchers from each of the host countries involved in the survey. There was remarkable similarity in the comments made by interviewees about their experiences of primary or first-contact care, despite differences in culture and health system organisation in their home countries. The main limitation is that the interviews were restricted to migrants. The length of personal exposure of each interviewee to primary care was not ascertained, therefore cannot be reported.

Comparison with existing literature

The challenges described by the responders are consistent with previous migrant reports.¹⁴ Their policy importance was highlighted a decade ago.¹⁵ The importance of primary and first-contact care, whether delivered from a community or hospital facility, increases as the amount available to spend on health care decreases; because of the nature of the health services that most need to be delivered and the importance of primary care for health system cost-effectiveness.¹⁶ Although the difficulties described by the responders are not restricted to the primary care sector, they impact most acutely in primary care.¹⁷ This is because health workers actually living and working in a community setting in deprived areas are necessarily those most exposed to the personal insecurity, lack of social opportunity, and poor environmental conditions that are endemic in those areas.

Implications for research and practice

The relative lack of evidence and policy discussion of the effectiveness of different mechanisms to recruit and retain doctors and nurses in rural and other hard-to-staff areas^{17,18} reflects the difficulty policy makers have dealing with delivery and supply-side issues. Financial policy can be made and delivered so much more easily than workforce policy focusing on the detailed reality of delivering care.

Although the responders were from Africa, this is not an Africa-specific problem. The recent experiences of healthcare reform in China similarly illustrate the adverse impact of a health policy, which, although successfully attending to financial and payment mechanisms, ignores supply-

side delivery issues.¹⁹ In the UK, the crucial policy response to Tudor-Hart's paper was a detailed nuts-and-bolts national plan to provide the staff, and working conditions, which allowed the delivery of high-quality primary care.²⁰ A more recent example of obvious relevance to sub-Saharan Africa is the reduction in infant mortality in Brazil (which fell by 4.5% for every 10% step increase in population coverage) consequent on health reform characterised by detailed plans to implement effective primary care delivery.²¹

The previously cited *Lancet* systematic review details a wide range of health policy solutions (from financial incentives to local audit) that have been used successfully to solve staffing problems and increase workforce performance.¹⁸ The authors advise caution, however, in applying the evidence in low-income and middle-income countries without asking whether the conditions necessary for the intervention to work exist locally. For example, the effectiveness of local audit to improve workforce efficiency will depend on the strength of local governance arrangements. The effectiveness of salary incentives to improve recruitment will depend on alternative employment opportunities: such incentives are likely to work for primary care physicians only if they increase the ratio of primary care to hospital sector salaries to more than 0.8.²² And the effectiveness of non-monetary incentives (such as housing provision, personal medical care, and personal security provision) will depend on the extent to which these incentives deal with key local problems for the primary care workforce.

Two supply-side policy solutions to primary care provision that have been implemented successfully in many low-income and middle-income countries are preferential recruiting of students from underserved areas (to which they tend to

return when trained),¹⁷ and role substitution to create a more flexible primary care labour force (by substituting nurses for doctors, training intermediate grade medical officers, involving lay-workers, and encouraging task-shifting within healthcare teams).^{18,23} Many studies show that this can be achieved, subject to appropriate training and support, without loss of clinical quality.¹⁰ The quality of care provided by a health worker of any grade, however, can only be as good as the support they receive, the conditions in which they work, and the strength of the clinical governance overseeing their practice; reflected in the substantial variation in outcomes of trials of the effectiveness of auxiliary workers.²⁴ Expecting less-intensively trained staff to deliver high-quality primary care without support and strong governance is not a solution.

Financial resources are scarce in most of sub-Saharan Africa and primary care is the most affordable policy option for delivering universal health care. Although the importance of financing and payment systems in implementing this policy option should not be ignored, they can have no impact without a supply of trained and supported primary care workers to deliver care. The policy discourse on universal health care in Africa needs to focus on how to provide the necessary human resources to staff and deliver primary care effectively. Success from other countries outside Africa show that innovative supply-side solutions, which consider poor working environments and inadequate career pathways, do make it possible to recruit and retain high-quality clinical staff in primary care even in hard-to-staff areas. The inverse primary care law is not immutable but until these solutions are prioritised and implemented in sub-Saharan Africa, those in poverty are condemned to receive poor care or no care at all.

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Ethical approval

The ethics committee of each partner university involved (Universities of Ghent, Oxford, Vienna, Botswana, and Witwatersrand) provided ethical approval. There were no monetary rewards provided to responders. The data produced in the project are confidential, and interviewees are anonymous in all transcripts and analyses.

Provenance

Freely submitted; externally peer reviewed.

Competing interests

The authors have declared no competing interests.

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Appendix 1. Number of responders per profession per country

Country	Nurses and midwives <i>n</i>	Doctors, <i>n</i>
Angola	1	0
Cameroon	0	1
Congo Brazzaville	1	0
Democratic Republic of Congo (DRC)	2	15
Gabon	0	1
Ghana	0	1
Guinea	0	2
Ivory Coast	0	1
Nigeria	1	4
Rwanda	2	3
Senegal	0	1
Somalia	0	1
South Africa (SA)	9	6
Sudan	0	1
Tanzania	0	1
Uganda	0	2
Zimbabwe	1	1
Zambia	7	1
Total	24	42