The internal migration between public and faith-based health providers: a cross-sectional, retrospective and multicentre study from southern Tanzania

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Abstract

OBJECTIVE To assess the magnitude, direction and underlying dynamics of internal health worker migration between public and faith-based health providers from a hospital perspective.
METHODS Two complementary tools were implemented in 10 public and six faith-based hospitals in southern Tanzania. A hospital questionnaire assessed magnitude and direction of staff migration between January 2006 and June 2009. Interviews with 42 public and 20 faith-based maternity nurses evaluated differences in staff perspectives and motives for the observed migration patterns.
RESULTS The predominant direction of staff movement was from the faith-based to the public sector: 69.1% (n = 105/152) of hospital staff exits and 60.6% (n = 60/99) of hospital staff gains. Nurses were the largest group among the migrating health workforce. Faith-based hospitals lost 59.3% (n = 86/145) of nurses and 90.6% (n = 77/85) of registered nurses to the public sector, whereby public hospitals reported 13.5% (n = 59/436) of nurses and 24.4% (n = 41/168) of registered nurses being former faith-based employees. Interviews revealed significantly inferior staff perspectives among faith-based respondents than their public colleagues. Main differences were identified regarding career development and training, management support, employee engagement and workload.
CONCLUSION This study revealed considerable internal health worker migration from the faith-based to the public sector. Staff retention and motivation within faith-based hospitals are not restricted to financial considerations, and salary gaps can no longer uniquely explain this movement pattern. The consequences for the catchment area of faith-based hospitals are potentially severe and erode cooperation potential between the public and private health sector.

keywords public/private, brain drain, health worker migration, staff perspectives, human resources, Tanzania

Introduction

Whilst the African region carries 24% of the global disease burden, it has only 3% of the global health workforce and less than 1% of the world's expenditure for health at its disposal (WHO 2006). For decades, there has been a lack of strategic workforce planning and underinvestment in human resource for health (Kolehmainen-Aitken 2004). Further contributory factors include early retirements, the burden of HIV/AIDS and losses due to health worker migration within and outside developing countries (Chen *et al.* 2004; Mullan 2005; Orach 2008). Awareness of this migration has moved up the political agenda, and there is growing concern regarding its negative impact on health systems' effectiveness (Diallo 2004; Dodani & Laporte 2005; Connell *et al.* 2007).

Health worker migration is motivated by the search for better opportunities such as a higher standard and quality of life, increased salaries or more stable political conditions (Dodani & Laporte 2005). Diallo (2004) provides a further distinction of migration types and differentiates between international, cross-industry and internal health worker migration (Diallo 2004). The latter most commonly refers to migration between rural and urban areas, resulting in an overconcentration of the health workforce in urban areas (Gupta *et al.* 2003; Diallo 2004; Kabene *et al.* 2006). However, internal migration is not limited to geographic relocation and rural–urban

divide. In Mozambique, absorption of medical staff by donor agencies and non-governmental organisations (NGOs) engaged in health exceeds physician loss caused by external migration (Sherr *et al.* 2012).

There are indications that Tanzania's health system is experiencing internal health worker migration not only in terms of rural to urban migration flows, but also between the public and faith-based health sector (Tanzania MoHSW 2007; Songstad *et al.* 2011, 2012). The latter appears to have been triggered by salary and benefits increases introduced for public sector health workers in 2005 and 2006. Until then, faith-based organizations (FBOs) were associated with higher salaries as well as better benefit packages, working environments and training opportunities (Songstad *et al.* 2012). This changed in the wake of the government's response to a countrywide health worker strike in 2005 (Isangula 2012). The combined resulting salary increase for the period 2005–2008 was 220% for junior medical doctors and 122–178% for assistant medical officers, clinical officers and nursing staff (Songstad *et al.* 2011). The view that FBOs offered better working conditions became undermined. This happened at a time when FBOs were facing significant financial constraints, caused by changes in the modalities of donor support and decreased private contributions from supporting churches in the northern hemisphere (Adjei *et al.* 2009).

The implications of this development are of particular relevance given the pivotal role FBOs play in Tanzania's health sector. Although data are not fully verifiable, the public-to-private health service ratio is most commonly estimated around 60:40 (HERA 2005), with FBOs providing almost one-third of all services (Kruk *et al.* 2009). In rural areas, the proportion of services provided by FBOs is as high as 53%, indicating large variety in relative contribution between urban and rural areas (Adjei *et al.* 2009). When it comes to the hospital level, the public-to-private ratio is reversed to 40:60, with 40% of the country's hospitals run by FBOs and 20% by other private providers (Tanzania MoHSW 2008a). At primary care level, the contribution of FBOs is less pronounced – 22% of health centres and 13% of dispensaries are owned by FBOs. Furthermore, FBOs own 36% of training institutions including almost half (49%) of the nursing colleges (Tanzania MoHSW 2008c). Besides generally operating in disadvantaged areas, FBOs have a reputation for providing better services than the public sector (Mamdani & Bangser 2004; Leonard & Masatu 2007; Gill & Carlough 2008). Reasons for this have traditionally included the FBO's social mission (Hutchinson *et al.* 2011), their superior availability of supplies and curative care (Gilson *et al.* 1994; Mamdani & Bangser 2004; Pereira *et al.* 2011) and effective human resources – including committed expatriate volunteer health professionals providing curative care and in-service training for local staff (Gill & Carlough 2008).

The collaboration between the public and private health sector is organised within the public–private partnership approach (PPP) outlined in the country's health policy (Tanzania MoH 2003). This approach seeks to increase integration of private actors into the public health system through joint planning efforts aimed at cutting back duplication and unhealthy competition (HERA 2005; Tanzania MoHSW 2007). However, implementation of the approach remains challenging, resulting in the perception of coexisting systems, rather than collaborating and complementary partners (Tanzania MoHSW 2008b). The imbalanced distribution of health workers between rural and urban areas (Munga & Mæstad 2009) as well as between the public and FBO sectors (Songstad *et al.* 2012) has implications for the already tense human resource situation. Based on staffing level guidelines and excluding training institutions, public health facilities lack 64.5% of the required number of staff, whereas private facilities are suffering staff shortages as high as 86.4% (Tanzania MoHSW 2008a). Various reasons have caused this crisis, including health worker migration within and outside the country (Tanzania MoHSW 2008b). However, its magnitude remains largely unquantified due to lack of reliable data, so that the full implications are not yet fully understood.

The purpose of this study was to explore health worker migration from a hospital level perspective. An emphasis is placed on quantification, direction patterns and motives of internal migration between public and FBO facilities in southern Tanzania.

Methods

Study area

The study was conducted in southern Tanzania and included the administrative boundaries of Lindi and Mtwara regions as well as Tunduru district of Ruvuma region. All 16 facilities classified as hospitals (Tanzania MoHSW 2007) were assessed. Two complementary tools were developed for the purposes of this study: a hospital questionnaire and a staff perspective questionnaire.

Definitions

The term *active internal staff movement* was used to refer to the movement of health professionals from one health facility to another. Loss of health professionals due to deaths, retirements or prolonged training was excluded

from this definition. The assessment differentiated between two forms of staff movement: *active internal staff exits*: staff who left the assessed hospitals to continue working in a different facility and active *internal staff gains*: staff who entered into the assessed hospitals after leaving their former workplace. In the following, the terms *staff exits* and *staff gains* are used for simplicity.

Hospital questionnaire

The questionnaire quantitatively assessed active internal staff movement at the hospital level. Key informants in hospital facilities (medical officers in charge and other members of hospital management) were interviewed about availability of human resources and staff movement between January 2006 and June 2009. For the latter, data collection included sector *destination* of staff exits and sector *origin* of staff gains, being either public or private health facilities. The findings from this tool were verified through discussion with colleagues, supervisors and additional members of the hospital management to achieve best possible accuracy. Hospital administrations were in possession of records of employees' level of training and former workplaces. This source was also used for cross reference. Information was excluded if either sector destination or sector origin was uncertain.

In addition, hospital characteristics such as number of beds and annual number of deliveries were recorded. Inpatient turnover was not part of the initial assessment but was obtained from district health plans.

Staff perspective questionnaire

The questionnaire sought to detect differences in staff perspectives between public and FBO health workers and motives for active staff movement. A health worker job satisfaction tool (The Capacity Project 2006) was modified to meet the study purpose.

The tool covered a total of 10 information categories: (1) career development and training; (2) management support; (3) employee engagement; (4) HIV/AIDS protection; (5) workload; (6) salary; (7) benefits; (8) resources; (9) personal staff movement in the past and (10) intention to leave. Component 9 was used to refer to active staff gains, whereas component 10 can be regarded as future active staff exits. For both, sector origin or intended sector destination as well as motivating factors were recorded. For the first eight information categories, 18 items (measures) were assessed using a Likert five-point rating scale. For each item, respondents were asked about their level of consent regarding its presence: (1) strongly disagree; (2) disagree; (3) neutral; (4) agree and (5) strongly agree and to rate its importance: (1) very unimportant; (2) unimportant; (3) neutral; (4) important and (5) very important. The adaptation of the tool was undertaken with input from the national PPP task force and human resources for health working group. It was subsequently translated into Kiswahili using the back-translation method. Testing for Cronbach's alpha revealed a sufficient level of internal consistency: 0.75 for the questions whether items are in place and 0.72 for the questions about their importance. In addition, open questions recorded staffs' own views and experiences of active staff movement.

To facilitate comparability, use of the tool was focused upon registered and enrolled hospital maternal health nurses. Random sampling based on a complete list of maternal health nurses did not prove possible, given high rates of staff absence. Instead, all nurses present on the day of the assessment were asked to take part.

Answers were grouped into binary variables representing the two highest ranks on the scale: (4) and (5) as present or important or the two lowest ranks and neutral responses: (1); (2) and (3) as not present or not important (Peters *et al.* 2010). Discordance was calculated as the percentage of respondents rating items as important but not present. Comparison of public and FBO responses used binomial logistic regression adjusted for age, as all respondents were female maternity nurses.

For both tools, consent was confirmed via signature. The interview data were coded and double entered into an MS Access 2007 database. Statistical analysis was performed using STATA 11. Ethical clearance was granted by the Tanzania National Institute for Medical Research Review Committee and the University of Heidelberg in Germany.

Results

The study area of Lindi and Mtwara regions as well as Tunduru district of Ruvuma region is divided into 12 districts and has a population of approximately 2.5 million (Tanzania NBS 2002; The World Bank 2011). The majority of facilities in the study area (total $n = 428$) are dedicated to primary health care (dispensaries: 87.4%; health centres: 8.9%), whilst the 16 hospitals account for 3.7% (Tanzania MoHSW 2008a). All public ($n = 10$) and FBO ($n = 6$) hospitals in the study area were assessed (Table 1). Among public hospitals, two were classified as level 2/regional hospitals, whereas all others were classified as level 1 hospitals (Tanzania MoH 2003; Tanzania MoHSW 2007).

Table 1 Characteristics of public and FBO hospitals in the study area

	Public hospitals *n* (%)	FBO hospitals *n* (%)	Total *n*
Number of hospitals	10 (62.5)	6 (37.5)	16
Hospital level*			
Level 1 hospitals	6 (42.9)	8 (57.1)	14
Level 2 hospitals	2 (100)	0 (0.0)	2
Hospitals by region			
Lindi	5 (62.5)	3 (37.5)	8
Mtwara	4 (80.0)	1 (20.0)	5
Ruvuma (Tunduru district)	1 (33.3)	2 (66.7)	3
Human resources			
Medical doctors	23 (63.9)	13 (36.1)	36
Assistant medical officers	56 (73.7)	20 (26.3)	76
Clinical officers	101 (80.2)	25 (19.8)	126
Nurses	476 (72.9)	177 (27.1)	653
Registered	182 (64.5)	100 (35.5)	282
Enrolled	294 (79.2)	77 (20.8)	371
Beds			
Inpatient beds	1637 (63.6)	935 (36.4)	2572
Maternity beds	311 (62.8)	184 (37.2)	495
Delivery beds	42 (64.6)	23 (35.4)	65
Patient turnover			
Inpatient visits (January–December 2009)†	63 046 (72.0)	24 509 (28.9)	87 555
Births total (January–December 2008)	15 208 (79.1)	4014 (20.9)	19 222
Normal deliveries	13 443 (81.2)	3121 (18.8)	16 564
C-sections	1765 (66.4)	893 (33.6)	2658

*Hospital-level classification derived from the National Health Policy 2003 (Tanzania MoH 2003) and the Primary Health Service Development Program 2007–2017 (Tanzania MoHSW 2007).
†Excluding Tunduru district (public $n = 1$; FBO $n = 2$ hospitals: data could not be obtained). Patient turnover derived from district health plan information.

Magnitude and sector destination of staff exits

The results displayed in Tables 2 and 3 concentrate on the findings from hospitals in Lindi and Mtwara regions, as data availability and quality were insufficient in Tunduru district.

Table 2 shows staff exits experienced by the assessed public ($n = 9$) and FBO ($n = 4$) hospitals in Lindi and Mtwara between January 2006 and June 2009. Hospitals reported 152 staff exits with either public or FBO sector destination. Nurses were the largest group among the exit population, accounting for 75.7% ($n = 115/152$) of staff exits. Among nurse exits, 16.5% ($n = 19/115$) had the qualification of an enrolled nurse, whereas 83.5% ($n = 96/115$) were registered nurses. Registered nurses undergo longer pre-service training and are better qualified (TNMC 2007).

Differences in sector destination and exit burden were revealed between public and FBO hospitals: the major destination of staff exits was the public sector, which received 150 health professionals. Among the latter, 30.0% ($n = 45/150$) had a public and 70.0% ($n = 105/150$) a FBO hospital origin. In contrast, FBO destination was reported for two health professionals only.

FBO hospitals also carried a higher relative exit burden (staff exits in per cent of workforce employed at time of assessment), accounting for 69.7% ($n = 106/152$) of staff exits or 30.1% of their workforce ($n = 106/352$), respectively. In contrast, the seven public level 1 hospitals accounted for 23.7% ($n = 36/152$) of staff exits, representing only 4.3% ($n = 36/836$) of their workforce. The effect is intensified when the subgroup of nurses is considered: FBO hospitals lost 59.3% ($n = 86/145$) of their nurse workforce to the public sector, whereas nurse exits from all public level 1 hospitals accounted for only 7.6% ($n = 20/262$).

The two public regional hospitals accounted for 6.6% ($n = 10/152$) of the entire exit population, with a relative staff exit burden slightly lower than in public level 1 hospitals.

Magnitude and sector origin of staff gains

Table 3 shows recorded staff gains, thus staff who entered into the assessed hospitals after leaving their former workplace. Data were accessible in 12 hospitals (public: $n = 9$; FBO: $n = 3$). In total 99 staff gains with either public or FBO sector origin were reported for the selected period. In line with the findings from the staff exit section, nurses were the largest group, accounting for 80.8% ($n = 80/99$) of the staff gain population. Further, differences regarding the level of qualification among nurse gains (68.8% ($n = 55/99$) registered nurses and 31.3% ($n = 25/99$) enrolled nurses) confirmed the trend from the previous section.

In summary, the nine public hospitals received 89.9% ($n = 89/99$) of reported staff gains, with level 1 hospitals alone accounting for 61.6% ($n = 66/99$). The remaining 10.1% ($n = 10/99$) were reported by the three FBO hospitals. In accordance with the main sector destination of staff exits being the public sector, with FBO hospitals serving as major source, the predominant sector origin of staff gains, likewise, was the FBO sector (78.8%; $n = 78/99$).

Table 2 Absolute and relative staff exit burden between January 2006 and June 2009 (total staff exits: $n = 152$)

		Destination of staff exits					
	Employed	To public sector		To FBO sector		Total	
Origin	*n*	Absolute *n* (% exits)	Relative% employed	Absolute *n* (% exits)	Relative% employed	Absolute *n* (% exits)	Relative% employed
Level 1 hospitals							
From public hosp. ($n = 7$)							
Total	836	35 (23.0)	4.2	1 (0.7)	0.1	36 (23.7)	4.3
Nurses	262	19 (12.5)	7.3	1 (0.7)	0.4	20 (13.2)	7.6
RNs	104	12 (7.9)	11.5	0 (0.0)	0	12 (7.9)	11.5
ENs	158	7 (4.6)	4.4	1 (0.7)	0.6	8 (5.3)	5.1
Others*	574	16 (10.5)	2.8	0 (0.0)	0	16 (10.5)	2.8
From FBO hosp. ($n = 4$)							
Total	352	105 (69.1)	29.8	1 (0.7)	0.3	106 (69.7)	30.1
Nurses	145	86 (56.6)	59.3	1 (0.7)	0.7	87 (57.2)	60
RNs	85	77 (50.7)	90.6	1 (0.7)	1.2	78 (51.3)	91.8
ENs	60	9 (5.9)	15	0 (0.0)	0	9 (5.9)	15
Others*	207	19 (12.5)	9.2	0 (0.0)	0	19 (12.5)	9.2
Level 2 hospitals							
From public hosp. ($n = 2$)							
Total	393	10 (6.6)	2.5	0 (0.0)	0	10 (6.6)	2.5
Nurses	174	8 (5.3)	4.6	0 (0.0)	0	8 (5.3)	4.6
RNs	64	6 (3.9)	9.4	0 (0.0)	0	6 (3.9)	9.4
ENs	110	2 (1.3)	1.8	0 (0.0)	0	2 (1.3)	1.8
Others*	219	2 (1.3)	0.9	0 (0.0)	0	2 (1.3)	0.9

Some numbers may not add up to 100% due to rounding; hosp., hospitals; RN, registered nurse; EN, enrolled nurse.
Absolute *n* (% exits) = absolute exit burden is the number of staff exits reported by the hospitals (% of staff exit population; total: $n = 152$).
Relative % employed = relative exit burden is staff exits as percentage of number employed in the hospitals at time of the assessment.
*Others = non-nurse healthcare professionals (e.g. medical doctors, clinical officers, assistant medical officers, medical attendants, laboratory and pharmaceutical staff).

The relative staff gain benefit (staff gains in per cent of workforce employed at time of assessment) reflects the actual dimension of staff inflow. Concentrating on staff gains with FBO sector origin and in particular on nurses, the share of former FBO employees in public hospitals is remarkable: 15.3% ($n = 40/262$) of nurses overall and 26.9% ($n = 28/104$) of registered nurses. This means that one in four registered nurses working in a public level 1 hospital was absorbed from the FBO sector between January 2006 and July 2009. The three FBO hospitals also showed a relative staff gain benefit, though not quite as high as in public hospitals. In the two public regional hospitals, these figures were slightly lower than in level 1 hospitals.

Staff perspective questionnaire

Staff perspective interviews with maternal health nurses were conducted in all 16 hospitals in the study area. Table 4 provides an overview of the respondents' characteristics. Interview coverage was 43.8% ($n = 42/96$) across public hospitals and 50.0% ($n = 20/40$) across FBO hospitals. The majority of maternity nurses working in public hospitals were enrolled nurses, whereas the majority in FBO hospitals were registered. This is similar to the composition of the overall nurse workforce (Table 1). Public nurses had longer working experience than their FBO counterparts.

Differences in staff perspectives between public and FBO hospital maternity nurses

Table 5 compares discordance of staff perspective items (measures considered important but not present) between public and FBO nurses. Both respondent groups showed low levels of discordance regarding the timely payment of salaries (9.8% overall) and the *presence of protective policies and procedures for HIV/AIDS* (14.5% overall), reflecting general satisfaction with these particular items.

Table 3 Absolute and relative staff gain benefit between January 2006 and June 2009 (total staff gains: $n = 99$)

		Origin of staff gains					
	Employed	From public sector		From FBO sector		Total	
Destination	*n*	Absolute *n* (% gains)	Relative% employed	Absolute *n* (% gains)	Relative% employed	Absolute *n* (% gains)	Relative% employed
Level 1 hospitals							
To public hosp. ($n = 7$)							
Total	836	10 (10.1)	1.2	51 (51.5)	6.1	61 (61.6)	7.3
Nurses	262	4 (4.0)	1.5	40 (40.4)	15.3	44 (44.4)	16.8
RNs	104	1 (1.0)	1.0	28 (28.3)	26.9	29 (29.3)	27.9
ENs	158	3 (3.0)	1.9	12 (12.1)	7.6	15 (15.2)	9.5
Others*	574	6 (6.1)	1.0	11 (11.1)	1.9	17 (17.2)	3.0
To FBO hosp.($n = 3$)							
Total	205	2 (2.0)	1.0	8 (8.1)	3.9	10 (10.1)	4.9
Nurses	59	2 (2.0)	3.4	6 (6.1)	10.2	8 (8.1)	13.6
RNs	27	2 (2.0)	7.4	4 (4.0)	14.8	6 (6.1)	22.2
ENs	32	0 (0.0)	0.0	2 (2.0)	6.3	2 (2.0)	6.3
Others*	146	0 (0.0)	0.0	2 (2.0)	1.4	2 (2.0)	1.4
Level 2 hospitals							
To public hosp. ($n = 2$)							
Total	393	9 (9.1)	2.3	19 (19.2)	4.8	28 (28.3)	7.1
Nurses	174	9 (9.1)	5.2	19 (19.2)	10.9	28 (28.3)	16.1
RNs	64	7 (7.1)	10.9	13 (13.1)	20.3	20 (20.2)	31.3
ENs	110	2 (2.0)	1.8	6 (6.1)	5.5	8 (8.1)	7.3
Others*	219	0 (0.0)	0.0	0 (0.0)	0.0	0 (0.0)	0.0

Some numbers may not add up to 100% due to rounding; hosp., hospitals; RN, registered nurse; EN, enrolled nurse.
Absolute *n* (% gains) = absolute staff gain benefit is the number of staff gains reported by the hospitals (% of staff gain population; total: $n = 99$).
Relative % employed = relative staff gain benefit is staff gains as percentage of number employed in the hospitals at time of the assessment.
*Others = non-nurse healthcare professionals (e.g. medical doctors, clinical officers, assistant medical officers, medical attendants, laboratory and pharmaceutical staff).

In contrast, the highest levels of discordance were found for *sufficient staffing level* (96.8% overall), *satisfactory benefits package* (95.2% overall), *satisfactory salary level* (91.9% overall), *fair rates of pay and pay raises* (72.2% overall) and a *satisfactory work-life balance* (62.9% overall). For the latter, FBO respondents showed a significantly higher level of discordance ($P = 0.006$; odds ratio 0.11; 95% confidence interval (CI) 0.02, 0.53) than their public counterparts, despite high levels of discordance among both groups.

As demonstrated in Table 5, FBO nurses showed significantly higher levels of discordance in 9 of 18 items. These cover categories such as *career development and training*, *management support*, *employee engagement* and *workload,* signifying comparably less favourable staff perspectives among FBO employees. FBO nurses reported significantly higher mean weekly working hours than their public colleagues (FBO mean: 52 h (IQR 43.5–56) *vs.* public mean: 46 h (IQR 43–49); $P = 0.0071$) and complained about inadequate and unequal access to training. During the 1.5 years prior to the assessment, 50.0% ($n = 10/20$) of FBO nurses attended training, whereas 92.9% ($n = 39/42$) of public respondents had accessed such opportunities.

Personal staff movement in the past (staff gains)

Personal staff movement in the past, equalling the definition of active staff gains, was reported by 32.3% ($n = 20/62$) of nurses present on the day of the interview. The main movement was from the FBO to the public sector ($n = 12/20$), followed by movement within the public ($n = 4/20$) or within the FBO sector ($n = 1/20$). The assessment also identified former public nurses ($n = 3/20$) who moved into FBO hospitals after they had reached retirement age and had to give up public sector employment.

Motives for leaving their former workplace reported by the main group – former FBO nurses, who moved into

Table 4 Staff perspective questionnaire – respondent characteristics

	Public *n* (%)	FBO *n* (%)	Total *n* (%)
Number of respondents	42	20	62
Gender			
Male	0 (0.0)	0 (0.0)	0 (0.0)
Female	42 (100)	20 (100)	62 (100)
Age			
<25	1 (2.4)	1 (5.0)	2 (3.2)
25–34	13 (31.0)	7 (35.0)	20 (32.3)
35–44	18 (42.9)	7 (35.0)	25 (40.3)
45–54	9 (21.4)	1 (5.0)	10 (16.1)
55–65	1 (2.4)	4 (20.0)	5 (8.1)
Place of employment			
Lindi	19 (45.2)	7 (35.0)	26 (41.9)
Mtwara	20 (47.6)	7 (35.0)	27 (43.5)
Ruvuma (Tunduru district)	3 (7.1)	6 (30.0)	9 (14.5)
Qualification			
Registered maternity nurse	9 (21.4)	13 (65.0)	22 (35.5)
Enrolled maternity nurse	33 (78.6)	7 (35.0)	40 (64.5)
Years at current worksite			
0–1	8 (19.0)	7 (35.0)	15 (24.2)
2–5	7 (16.7)	7 (35.0)	14 (22.6)
>5	27 (64.3)	6 (30.0)	33 (53.2)
Number of hospitals	10 (62.5)	6 (37.5)	16 (100)

Some numbers do not add up to 100% due to rounding.

public hospitals (n = 12/20) – concerned FBO deficits related to the areas of: *salary and access to loans* (n = 9/12), *benefits* (n = 6/12), *management support* (n = 5/12) and *working environment* (n = 4/12).

Intention to leave (future staff exits)

When asked about the development of concrete plans to leave their current worksite within the next 2–3 years, 60.0% (n = 12/20) of FBO nurses confirmed such ambitions. All of them planned to seek work in a public health facility. Among the eight FBO nurses who did not intend to leave, four were aged above 60 years and therefore had reached public sector retirement age. In contrast, only 7.1% (n = 3/42) of public nurses planned to migrate, but within the public sector. None of both respondent groups intended to move to the FBO sector.

Main motives for leaving showed strong similarity with the aspects reported by the public maternity nurses previously employed in the FBO sector. Answers given by the main group of future active staff exits (FBO nurses, who intended to move to the public sector) are displayed in Table 6.

Perceptions of better salary and access to loans were major issues causing FBO nurses to consider transferring to the public sector. However, the self-reported median monthly salary excluding additional sources of income was 324 418 Tsh. (interquartile range (IQR) 318 500–432 500) among FBO nurses (n = 20) and 325 500 Tsh. (IQR 315 000–435 000) among public nurses (n = 42), showing no significant difference in a linear regression model (95% CI −51 634–81 508; P = 0.655), nor when adjusting for level of training and years of experience (95% CI −6689–134 698; P = 0.075).

Another driving factor was poor support from management. A difficult relationship with the hospital management such as the failure to value employees, their unfair or unequal treatment or lacking concern for their problems was reported by half of the FBO nurses intending to move.

Dissatisfaction with the benefits package, including more favourable pensions and retirement benefits in the public sector, was also reported. Public employees receive pensions from the Public Service Pension Fund, whereas FBO employees are under the responsibility of the National Social Security Fund.

Discussion

This study shows that the internal migration of health workers between public and faith-based providers is considerable. The predominant direction is from the FBO to the public sector. In this first attempt to systematically quantify this migration, FBOs carried a higher absolute and relative exit burden, whereas the public sector experienced the major staff gain benefit. Nurses, particularly registered nurses, were the largest group among the migrating health workforce. This supports the view that more highly qualified health workers have increased opportunities to migrate (Kabene *et al.* 2006).

Compared to rural to urban migration flows, it is likely that the observed migration pattern shows some overlapping as FBO facilities are mostly operating in particularly remote areas. Yet, the reported motives for personal staff movement clearly exceed the picture of strictly rural to urban migration flows. Instead, perceptions of a more favourable situation in the public sector regarding salary and access to loans, management support, benefits (including pensions), access to training and availability of staff were reported as major push and pull factors. Others have identified similar reasons for public sector preference, yet with a stronger emphasis on pension differentials (Songstad *et al.* 2012). Buchan *et al.* (2003) argue that to a certain extent, there is a mirror image of push and pull factors triggering health worker migration, which shows overlapping with our findings (Buchan *et al.*

Table 5 Public and FBO nurses reporting items as important but not present (=discordance)

Item	Public (n = 42) n (%)	FBO (n = 20) n (%)	P-value	OR (CI_{95})
Career development and training				
Opportunities to improve professional skills	8 (19.0)	9 (45.0)	0.039	0.29 (0.09, 0.94)
Achievable career aspirations	6 (14.3)	8 (40.0)	0.035	0.26 (0.07, 0.91)
Training opportunities	9 (21.4)	7 (35.0)	0.246	0.50 (0.15, 1.62)
Management support				
Transparency of organizational long-term goals	22 (52.4)	16 (80.0)	0.040	0.27 (0.07, 0.94)
Valuation of employees	16 (38.1)	14 (70.0)	0.023	0.26 (0.08, 0.83)
Concern for employees' problems	24 (57.1)	14 (70.0)	0.327	0.57 (0.18, 1.77)
Employee participation in decision processes	14 (33.3)	15 (75.0)	0.004	0.17 (0.05, 0.56)
Employee engagement				
Satisfied working for current employer	1 (2.4)	8 (40.0)	0.002	0.03 (0.00, 0.27)
Recommend workplace to others	4 (9.5)	8 (40.0)	0.008	0.16 (0.04, 0.62)
Achievable personal and professional goals	6 (14.3)	11 (55.0)	0.001	0.13 (0.04, 0.46)
HIV/AIDS protection				
Protective policies and procedures	5 (11.9)	4 (20.0)	0.433	0.56 (0.13, 2.40)
Workload				
Satisfactory work-life balance	21 (50.0)	18 (90.0)	0.006	0.11 (0.02, 0.53)
Salary				
Satisfactory salary level	39 (92.9)	18 (90.0)	0.71	1.43 (0.21, 9.60)
Fair rates of pay and pay raises	32 (76.2)	14 (70.0)	0.611	1.36 (0.41, 4.50)
Timely payments	3 (7.1)	3 (15.0)	0.338	0.43 (0.08, 2.39)
Benefits				
Satisfactory benefits package	40 (95.2)	19 (95.0)	0.994	0.99 (0.08, 12.28)
Resources				
Availability of adequate resources	15 (35.7)	4 (20.0)	0.174	2.48 (0.67, 9.21)
Sufficient staffing level	41 (97.6)	19 (95.0)	0.830	1.40 (0.65, 29.94)

Binominal logistic regression adjusted for age; OR, odds ratio; CI_{95}, 95% confidence interval.

2003). Yet, in Tanzania's decentralised health system, the facilitated in-migration into public health facilities and public recruitment practices may be considered an additional pull factor.

The immediate consequences of the migration pattern pose challenges for the FBO facilities and their catchment area populations. Disproportionate staff exits reduce the ability to provide adequate services. This is perpetuated by the imbalanced character of staff turnover, reflecting the observed disparity of staff movement between the FBO and public sector. The dynamic of such high and imbalanced staff turnover results in a vicious circle: excessive loss of skilled health professionals causes decreased institutional knowledge, hampering organisational function and team efficiency (WHO 2006). As staff increasingly leaves FBO hospitals, the working environment for the remaining staff becomes progressively difficult. For example, workload increases (public maternity nurses have significantly lower mean weekly working hours than their FBO colleagues). The situation is likely to be further aggravated as staff shortages in the FBO sector are even worse than in the public sector (Tanzania MoHSW 2008a), giving them less compensatory capacity and making them more vulnerable towards staff exits. It has been reported previously that the absence of sufficient staff has a negative impact on the job satisfaction and morale of the remaining employees whilst reducing the effectiveness of healthcare delivery and productivity (Cavanagh & Coffin 1992; Dussault & Franceschini 2006; Connell *et al.* 2007). The human resource shortage was also stated by FBO maternity nurses intending to move to the public sector. In turn, low job satisfaction has been associated with high turnover rates, ranking it among the primary reasons for staff movement (Tzeng 2002; Pillay 2009) and intention to leave (Larrabee *et al.* 2003).

In Tanzania, FBOs argue that they are losing staff to the public sector in the wake of government pays and benefits increase (Ministry of Foreign Affairs of Denmark 2007). This is in line with the general principle of salary differentials fuelling migration behaviour (Vujicic *et al.* 2004). However, no significant salary differentials between public and FBO maternity nurses were detected. It is likely that the FBO hospitals involved in the study did in fact manage to adjust their salary schemes to keep it in line with government levels, either via their own financial efforts or through the reception of staff grants

Table 6 Motives of FBO nurses intending to move to a public health facility (n = 12/20)

Category	Illustrative quote	n
Salary and access to loans		8
Salary increase	'Salaries should be changed so that we get the same as those working for the government (age 26)	7
Timely payments	'Our salary should be paid on time (age 42)	1
Access to loans	'The hospital management should give us access to loans in the banks like the government staff gets it (age 25)	1
Management support		6
Valuation of employees	'I like to work in a government facility because here they don't recognize and appreciate the staff' (age 25)	3
Concern for employees' needs	'The administration must change. They should care for their employees. If you have a problem they never listen to you' (age 25)	2
Equal treatment of employees	'All staff should be treated equal' (age 28)	1
Benefits		5
Improved package general	'They should improve workers' benefits in this facility' (age 28)	4
Retirement benefits	'I need to work where I can get good retirement benefits. The NSSF is exploitive – I will change because I want to have the government retirement scheme when I retire' (age 42)	2
Training		5
Increased access	'If they send me to school for further studies, if they send me to different seminars – I will stay' (age 26)	5
Equity in access	'There are seminars but most of the times it is the matron who attends these, although she is not providing health services' (age 26)	1
Human resources		5
Increased number of staff	'We need an increased number of health workers' (age 42)	5
Working environment		4
Unspecified	'Working environment does not attract me at all' (age 25).	3
Rural location	'The working environment is very bad – this is a very rural location' (age 28)	1

from the public sector. However, there are notable differences in access to loans and pensions, indicating that any such adjustments did not extend to the wider benefits package.

An important finding from this study is that FBO staff is not only dissatisfied with the level of financial incentives received. Rather, they showed significantly higher levels of discordance regarding management support, career development, employee engagement and workload. Furthermore, a sense of unfair and unequal treatment of staff and a failure to sufficiently retain current workers were reported. Whilst sufficient financial incentives are crucial for health worker productivity (Mathauer & Imhoff 2006), the role played in staff retention by good leadership and a supportive management should not be overlooked (Coomber & Barriball 2007).

Limitations

Collecting staff movement information within Tanzania is a difficult task, as there is no formal mechanism in place to monitor health professional's movement within the country. It cannot be determined to which degree record gaps influence the quantitative results. However, a systematic variation of data completeness between the public and private hospitals is not considered likely, as the field research team found no apparent differences in recording practices or the extent to which information was provided by colleagues and supervisors for cross reference. Even if the total extent could not be entirely covered, magnitude trends, predominant direction patterns and factors influencing this behaviour can be derived from the findings. The process of verifying staff gains proved to be easier to undertake and may therefore be considered more rigorous than for exits. This is because health workers concerned and their colleagues could both be consulted to confirm their sector origin. Furthermore, hospital administration records often included this information.

It must be noted that the study was carried out in a limited number of hospitals and districts, so that further research is required to determine whether our findings can be generalised beyond the study area. Also, the period reviewed covers 3.5 years prior to the assessment. It dates back to the starting point of the public sector salary reform process but does not allow comparison with migration prior to public sector salary increase. Qualitative information was derived from a sample of 62 nurses and was not extended to other cadres. Even though nurses were shown to be the largest group among the migrating workforce, this selection represents a limitation

of our study. We point out that information about working hours, salary and number of trainings was self-reported and may therefore be subject to bias.

Conclusion

Given the pivotal role of Tanzania's faith-based health sector, the internal migration of health workers towards public sector employment is shown to be considerable. This not only contradicts the principle of cutting back unhealthy competition as demanded by the health sector's PPP approach, but potentially exacerbates inequalities in health worker density and access to care, particularly in areas served by FBO hospitals. There is an urgent need to harmonise key employment conditions, such as benefits and pension schemes, but also workload, management practices and opportunities for career development across the decentralised health system. Efforts to scale up the number of skilled health workers and to improve retention in rural areas need to target both the public and FBO sectors. An improved integration of FBOs into the public healthcare system could assure more comparable working conditions and could help mitigate the observed migration pattern. The basis for such efforts could be increased advocacy for implementing partnerships between public and private actors in health. This could reduce prevailing misperceptions and lacking familiarity between partners as prerequisite for coordinated improvements.

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