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Trends in internal labour migration from the rural Limpopo Province, male risk behaviour, and implications for spread of HIV/AIDS in rural South Africa

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Introduction

The political economy of migration in South Africa

Two features of South Africa's political economy have strongly dominated, and continue to influence, the patterns of population settlement and mobility in this country and region. Firstly, over the last century South Africa's mining and industrial centres have attracted vast numbers of labour migrants, both documented and undocumented, from rural areas and from neighbouring countries. Current prevalence estimates indicate a minimum of 2.5 million legal migrants, a figure likely to be underestimated, while illegal and undocumented migrants, who are seldom included in statistics, are another huge social phenomenon (Crush and James, 1995) (Lurie, 2000).

Secondly, the structure and functioning of the Apartheid System introduced a deliberate impermanence in the urbanisation process of the South African black population. This was achieved by the infamous and well documented Influx Control and Group Areas Acts (Giliomee and Schlemmer, 1985), (Crush, et al., 1991), (Gelderblom and Kok, 1994). From an urban perspective these laws resulted in a gross inadequacy of urban planning and a diversion of urban settlement into sprawling peri-urban areas, located in bantustans, commuting distance from cities (Giliomee and Schlemmer, 1985), (Graaff, 1987). From a rural perspective people were forced to live in 'homeland' areas, based on a system of ethnic homogeneity. These purported to grant local autonomy to black populations, but in fact were a means to justify low wages and allow industry to avoid the responsibility for the welfare of workers and the reproduction of labour (Lurie, 2000). Within homelands access to land was severely restricted by a process of villagisation (Hallett R, 1984). This created a drastic shortage of land and forced a transition from an agrarian to a capital based rural economy (Gelderblom & Kok, 1994), (Tollman et al, 1997). The outcomes were rural poverty, the labour migration system and vast numbers of disunited families living in dense settlements, largely absent of adult males. These features still characterise the society of South Africa's rural interior, and powerfully influence livelihood strategies and concomitant partnership practices.

The patterns of migration in South Africa have altered considerably over the last three decades with migrant labour tending to become longer term, and with more frequent returns home enabled by infrastructural development (Lurie, 2000). With Influx control lifted in 1987, and changes in labour market, in particular large-scale retrenchments in the mining industry (Crush and James, 1995), one might expect further changes in labour migration patterns in the 1990's.

Migration and AIDS

The association of temporary migration and HIV infection is affirmed by several authors in South Africa (Jochelson et al, 1991), (Lurie, 2000), and other parts of sub-Saharan African (Nunn, et al, 1995), (Pison, et al, 1993), (Decosas, et al, 1995), (Quin, 1994), (Basset, 1992). A study of the sero-prevalence of HIV in rural Kwazulu Natal found a three-fold higher risk of HIV infection among people who had recently changed their place of residence (Abdool Karim, et al., 1992). Mobility increases the risk for HIV and other STDs seemingly because migrants are more likely than non-migrants to have additional sexual partners (Lurie, et al 1997). This situation can be exacerbated by rural migrants experiencing emotional instability on exposure to the urban environment, which can lead to 'temporary solutions in serial and potentially high-risk sexual relationships' (Evian, 1995).

Syphilis was spread in this way throughout Europe, especially in the nineteenth century at the time of industrialization and rapid urbanisation. As in South Africa, job opportunities attracted people from the rural areas, who were particularly susceptible to multiple partnerships and sexually transmitted infections (Shorter, 1992).

While the link between circular migration and increased risk of HIV infection is supported by a variety of literatures, Lurie identifies an important gap in our understanding, i.e. the implication for the rural communities to which the migrants regularly return (Lurie, 2000). He also reports an increase in the frequency of contact between labour migrants and their rural partners, both at work and in the rural setting, due to improved transport infra-structure and other factors like improved working conditions (Lurie, 1997). However, the social disruption institutionalized by a century of extensive labour migration affects not only the migrant in the work-place, but also the extent of sexual networking in the sending area (Dladla, et al, 2001). HIV discordance among migrant couples was investigated in a cohort study involving migrant workers and their partners in Kwazulu Natal. Preliminary data showed that nearly 40% of discordant migrant couples contained an HIV infected woman and an uninfected male migrant partner (Lurie, et al, 2000). This indicates that the link between migration and HIV transmission may be more complex than first suggested and more research is needed to understand the dynamics of the epidemic in rural areas.

Levels of HIV incidence in ante-natal clinics are higher in Kwazulu Natal than in the Limpopo Province (34% in Kwazulu Natal and 20% in Limpopo in 2000)(Department of Health, 2000), while levels of male labour migration remain equally high in both provinces (around 60% of adult males absent for the majority of the time) (Hosegood, 2002), (Collinson, et al., 2001). This may be explained through the fact that the heterosexual HIV epidemic was brought to South Africa mainly through the sex trade in the seaports of Richard's Bay and Durban, which served the Witwatersrand economy while the country was in political isolation (Williams & Campbell, 1998). The epidemic progressed subsequently to the Witwatersrand. Male labour migrants from Kwazulu Natal traveled primarily to Gauteng, Durban, Empangeni and Richard's Bay (Lurie, et al., 1997), while migrant activity from Limpopo is centred on Gauteng and Nelspruit (Collinson, et al., 2000). Thus, an explanation of why the Limpopo epidemic is behind rural Kwazulu Natal, even though the prevalence of labour migration is similar, may relate to the timing of first exposure of migrants to the HI virus in Durban and Richards Bay. While this implies that the epidemic can grow equally large in Limpopo, it also indicates a window of opportunity to intervene and curb the acceleration of the epidemic in the interior provinces.

Aim of the paper

The paper addresses the following three questions:

1. What are trends in labour migration out of the rural Limpopo Province in the decade of 1992 to 2001, in a sub-district that typifies in many ways rural sending communities across the South African interior?
2. Do male labour migrants experience more sexual partnerships than rurally resident men?
3. What are the implications for the spread of the HI virus in the South African interior?

Two data sources are used to address the questions: firstly, the health and demographic surveillance system (HDSS) of Agincourt Health and Population Unit, and secondly, a specialized survey based on the HDSS, which examined the partnership practices and risk perceptions of a sample of migrant and non-migrant men.

Methods

1) Health and Demographic Surveillance in Agincourt

The Agincourt Health and Population Unit (of the University of the Witwatersrand) conducts health and demographic surveillance on a rural sub-district population in the former homeland district of Bushbuckridge, some 500km north east of Johannesburg (see figure 1). A baseline census in the twenty villages of the Agincourt sub-district was conducted in 1992. Since then rigorous annual updates have been conducted, collecting information on all births, deaths, in- and out-migrations in the surveillance population. The update involves visiting every household, where a fieldworker verifies existing records, records new individual- or household- level data, and records the demographic events that have occurred since the preceding year's census update. (Tollman, 1999), (Tollman, et al., 1999) (Kahn, et al., 1999). The study population in 2001 numbered around 68000 people.

During the 2000 census round a cross sectional labour module was conducted, which recorded salient features of labour force participation on all de jure persons in the sub-district aged ten years or older. The definition of “working” and categories of unemployment were derived by starting with conventional definitions and undertaking a process of discussion and refinement with local field staff and community members. Several iterations of questionnaire piloting were conducted in the study site and elsewhere in Bushbuckridge. For the study, “work” was defined as an activity that brought income or resources into the household from outside. Categories of unemployment included whether a person was looking for a job, subsistence farming, doing primarily home domestic work, a student, not looking for a job, disabled, a volunteer, in between fixed period work, in between occasional work, or other reason.

The HDSS is a powerful tool for exploring migration. Migration and household definitions are built into the demographic surveillance process and were developed to capture the movement patterns prevailing in the Limpopo Province. Temporary migrants are defined as household members who are away most of the time but retain a significant link to a surveillance household. A household is defined as the social unit that usually eats together, plus the temporary migrants who are linked to the household. During census updates the residence status of all individuals in the household is updated. This involves recording the number of months that a person is physically resident during the previous year. A person is considered a temporary migrant if the months resident in the surveillance household number less than six and the respondent declares that the migrant retains strong links with the household. If the migrant leaves with a permanent intention the individual is removed from the household roster and considered a permanent migrant.

2) The Agincourt Male Labour Migration Study methods

Between 1998 and 2000 a study of male labour migration was conducted in the Agincourt sub-district, which explored aspects of migration and sexual histories in both migrant and non-migrant men. The study consists of three main components. Focus groups among men and women in the site were conducted in October and November 1998. A questionnaire survey was conducted between December 1999 and May 2000. Finally, a small number of qualitative case studies were conducted over the Easter period of 2000 to gather in-depth life histories of migrants illustrating the intertwining of migrant and sexual histories from a more subjective perspective. The data used for this paper is drawn from the questionnaire survey.

A random sample of 1482 men, aged 20-49, was drawn from the census database. Fieldwork was concentrated over holiday periods of Christmas and Easter and weekends at the end of each month to increase the chances of contacting migrant men on their return home to the rural area. The survey interview was conducted by trained fieldworkers and preceded by an introductory discussion and guarantee of confidentiality. The interview included a self-administered questionnaire covering potentially more sensitive aspects of partnership practices.

All households of sampled respondents were contacted. If respondents were not found at home letters were left informing prospective participants about the nature of the study and encouraging cooperation. A maximum of four household visits were allowed before efforts to contact respondents were dropped. A total of 869 interviews were conducted, of which 857 were completed among men fitting the eligibility criteria. This represents an overall contact rate of 58 percent.

Findings

Figure 2 shows the extent of male temporary migration by age over the observation period. The longitudinal DSS residence status data from 1992 to 2000 is pooled over six census rounds to show the remarkable high levels of prevalence. The likelihood of making a temporary move increases rapidly with each year of age over twenty, increasing fivefold between ages 20-30. The startlingly high mode of 60 % is reached by age 35 and remains at this level until 55. The reduction in the likelihood of a man being a temporary migrant declined gradually after 55, with 20% still migrant at age 68.

Figure 3 shows the trends over time of temporary male migration by age group. The most absent age-group is the 35-54 year olds, whose absence remains consistently high at around 60% over the decade of observation. The younger adult men, aged 15-34, show a U-shaped curve, which declines between 1992 and 1997, turns, and starts to increase rapidly between 1997 and 2000.

The relation between labour and migration status is explored in figure 4 for men aged 20-49. This age group is presented because it is the age group targeted by the labour migration HIV risk behaviour survey and will be explored further in the paper. In 2000 this age group comprised 49% of men who dwelt permanently in the rural area and 51% who were temporary migrants. Of the rural dwellers one third (33%) were employed and two thirds (67%) unemployed. The rural-based unemployed men were comprised of those searching for work (36% of rural dwellers), schooling (20%), and those unemployed but not searching (11%). The latter category was made up men who had either given up searching, were disabled, or were in between some form of seasonal work at the time of the census. As expected, employment was high among the temporary migrants at 83%.

The types of work conducted by the rural-based male population employed in 2000 are given in figure 5. A large proportion (24%) was engaged in unskilled construction work. The next largest category (18%) were artisans, hence better skilled. Fourteen percent held more educated jobs, like teachers or administrators. Informal work was important (12%) as well as more traditional jobs like cattle herding, traditional healing, priest or traditional leaders.

The types of work conducted by the employed male labour migrants in 2000 are given in figure 5. Artisan work was the highest category (18%), which was distributed across several industries, i.e. mining, service or agriculture. Unskilled mine and farm work were important categories, 16% and 15% respectively; followed by informal sector work, unskilled construction work, driving, and security work.

Figure 7 shows the age distribution of all men not working at the time of the 2000 census. The component categories of this group are included to show the age distribution of men searching for work, schooling or not searching for work. The schooling curve shows a leisurely transition out of the schooling system, which declines from a high proportion among teenagers to around zero in the age group 30-34. The men searching for work displayed a clear age mode around 20-29, with the category declining gradually and steadily until age 64. The age distribution of those not searching tilts in the opposite direction, with likelihood increasing gradually until age 50-54, and thereafter curving sharply upwards. The overall unemployment curve gives the inverse of the employment curve, showing that the peak age for employment is 40-44, at which age around 80% of men are employed. The definition of work is important to consider here, since it includes informal sector work, which may be better characterised as underemployment.

The sample characteristics of the Agincourt Male Labour Migration study is given in figure 8, including the sample fraction, age and employment distributions represented at different sampling stages. The column headed 'census' describes the full population of men aged 20-49. The distributions in the sample drawn and the sample achieved are described for comparison purposes. The sample achieved in the survey shows a relatively good match to the population distributions in all categories except the 45-49 year old men, which are underrepresented.

Figure 9 shows a key outcome of the Male Labour Migration study, namely the percentage of men reporting two or more sexual partners in the year preceding interview, by work and migration status. Men reporting two or more sexual partners are differentiated by work and migration status. Unemployed men have the least likelihood of reporting two or more partners, though still fairly high, at 38%. Employed migrant men are the next most likely to report two or more partners in the preceding year, at 45%. The highest category are rural-based, employed men, with more than 50% reporting two or more partners in the year preceding interview.

Figure 10 shows the proportion of employed, migrant men reporting two or more sexual partners in the last year by patterns of returning home to the rural area. Men who work away and who report two or more sexual partners are differentiated by pattern of home return. Employed migrants who return home on a monthly basis have the least likelihood of reporting two or more partners, though still fairly high at 41%. Employed migrants who return three to nine times in a year are the next most likely to report two or more partners in a year, at 47%. Employed migrants who return home less than three times a year are the most likely to report two or more partners in the last year, at 55%.

Figure 11 shows the perceived risk of HIV by migrant status. There is a remarkably low perception of high or moderate risk of HIV infection in both migrant and non-migrant men.

A low risk of HIV infection was reported slightly more often among migrants. The perception of no HIV risk is extremely high in both migrant and non-migrant categories, with 56% of migrants and 65% of non-migrants declaring no perception of HIV risk at all.

Discussion

The value of surveillance data

Population data available through demographic surveillance enable a comprehensive picture of labour and migration status in the Agincourt sub-district. The prospective nature of the data allow the computation of temporary migration trends. These have been appended empirically year by year, thus showing some immunity to recall bias attendant on retrospective studies. Another strength of surveillance work is the ability to conduct studies in the surveillance area, exploiting the population database to draw a random sample. Figure 8 shows the comparison of the Male Labour Migration Study sample with population level characteristics, revealing quite a good match. This strengthens confidence in the ability to draw sub-district level conclusions from the sample survey. A question that is sometimes raised, however, concerns the generalisability of HDSS findings to the wider population of the South African rural interior. The concern is based on whether surveillance has altered the structure of the study population through interventions that other populations have not received. Since the study shows persistent under-development in these rural communities it could be judged that if such an effect exists it must be marginal. Meanwhile, the richness of surveillance data can offer valuable insights on population dynamics.

Trends in male temporary migration

The levels of male temporary migration showed no significant overall shift for older adult males in the decade of observation. This is surprising, since change was anticipated as a result of the lifting of restrictive apartheid laws and changes in the labour market caused by large-scale retrenchments in the mining sector (Crush and James, 1995). The U-shaped curve of younger adult males may be related in part retrenchments and/or despondency in the earlier part of the decade, but this recovers and the curve climbs steeply after 1997. It is presently not clear what caused this reversal in the trend.

Labour markets

Labour migrants have access to different labour markets than men based in rural settings. This also reflects the underdevelopment of rural areas. There are remarkably low levels of agricultural activity outside commercial farms, which are historically white-owned. This reflects partly the cash basis of the rural economy, which is a legacy of Apartheid intervention in rural society, and partly reflects the modernization and urban values that have been injected into rural society by decades of circular migration. Mining is still an important employment sector for temporary migrants from this area, but other industries, like construction and security have become increasingly important. Low tier jobs, that imply low wages, prevail in both home and away settings. Informal sector activities are highly prevalent.

Male labour migration and HIV risk

Several studies done in South Africa and elsewhere purport that male migration leads to higher risk behaviour. Our data show on the contrary that rurally based men demonstrate as much if not more risk behaviour as their migrant counterparts. Moreover the level of reported risk behaviour among migrants depends on the frequency of return. The majority who work in nearby destinations such as game parks or commercial farms report fewer partners than either long-distance migrants who return once or twice a year or resident

employed men. Local unemployed men, who are mostly in the age group 20-29, report fewest partners of all.

Perception of HIV infection risk

A startling statistic displayed in figure 11 is that over 90 percent of men perceive little or no personal risk of infection. This may impact severely on the course of the epidemic, since sexual networking is a key factor in HIV transmission, and is unlikely to reverse from the high levels reported until men have more awareness of personal risk.

Age distribution of unemployment and HIV transmission

The age distribution of unemployment shown in figure 7 shows that the nature of unemployment tends to vary across life-stages. The data comes from a cross-sectional census module conducted in 2000, hence are not ideally suited to reflect the dynamism between different labour states, however, a “transitional” interpretation may have some utility. Most men in the 15-20 age group are either in school, or have transitioned to a stage of unemployment characterized by job searching. The age group 20-29 is the peak age for job searching, with a gradual transition to employment. Employment peaks at age 40-44, with only 13% job-hunting at this stage, while those unemployed but not searching have grown to 7%. From this age upwards employment rates decline, the proportion unemployed, but searching for work, also declines, while the proportion unemployed but not searching increases.

These labour state transitions can impact on HIV transmission in two ways. Firstly, the unemployed who are looking for work are most likely to become temporary migrants, thus becoming newly at risk of infection in the away setting. This points to an opportunity for influencing the epidemic by targeting these unemployed, young men with awareness raising activities.

Secondly, the data show that working men in rural areas are most likely to report more than one partner in the last year. An interpretation of this finding is that transactional sex is fairly common, where men exchange money, or other support benefits like clothes and groceries, for sex. This phenomenon reflects the social disruption and rural poverty contingent on the legacy of an entrenched labour migrant system. An aspect of this phenomenon is the “sugar daddy” syndrome, where older, employed men, with longer sexual histories, are having sex with younger women.

Female labour force participation and associated mobility

Women also move, which also has important impacts. This paper refrains from addressing these issues due to lack of space and the need to stay focused on the male side of the story. However, since this is a critical area, this paragraph briefly sums up some empirical findings from Agincourt that have been presented elsewhere (Collinson et al, 2001). Prior to 1997 the level of female labour participation remained stable and fairly low at levels of 15% of 35-54 year olds and 5% of 15-34 years olds. Then, in 1997 the trend started to climb steeply, and by 2000 these proportions had climbed to 25% of 35-54 years olds and 17% of 15-34 years olds. The types of work were mainly informal selling of food and other goods, farm work and domestic work; although younger women with matriculation or tertiary level education were entering the formal labour market in clerical or business assistant positions. In 2000, 32% of temporary migrant women were employed in Gauteng, 45% on farms in Mpumalanga and 12% in towns along the N4 road, a major development route that connects Gauteng with the port city of Maputo. The consequences of this increased mobility for the female migrant themselves, their families and changing role of women society need to be carefully explored.

Conclusion

Intractably high levels of male labour migration, coupled with a low frequency of long-distance migrants returning home and low levels of personal HIV risk perception, indicate that the potential for spread of HIV in this setting is explosive.

Strategies to enable more frequent contact between migrant men and their rural families, though enormously challenging, are urgently needed. These include structural developments that would either bring labour markets closer to the rural setting, or facilitate more frequent returns home.

Most importantly, prevention and awareness raising activities are urgently needed amongst all men, not especially migrants.

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Figure 1.
A map of South Africa showing the former homeland district of Bushbuckridge and the location of the Agincourt field site

Figure 2.
Proportion of male population considered temporary migrant at time of census, Agincourt 1992-2000

Figure 3.
Trends in proportion of male temporary migrant at time of census, Agincourt.

Work Status	Rural dwellers	Temporary migrants	Total male population
Employed	1943 (33%)	5023 (83%)	6966 (58%)
Unemployed, searching for work	2151 (36%)	614 (10%)	2765 (23%)
Unemployed, schooling	1174 (20%)	340 (6%)	1514 (13%)
Unemployed, not searching	647 (11%)	105 (2%)	752 (6%)
Total (col% (row%))	5915 (100%) (49%)	6082 (100%) (51%)	11997 (100%) (100%)

Figure 4.

Labour and migration status of men aged 20-49, Agincourt, 2000

Figure 5.
Types of work of male rural dwellers

Figure 6.
Types of work of male labour migrants

Figure 7.
Age distribution of all men not working, Agincourt, 2000

	Census	Sample drawn	Sample achieved
N	11997	1482	857
Sample fraction	--	12.4%	58%
Age			
20-24	27.5	26.7	28.8
25-29	21.8	22.9	21.2
30-34	17.1	19.7	19.7
35-39	14.2	16.9	16.6
40-44	10.7	11.5	9.6
45-49	9.0	2.4	4.2
Employment status			
Working	58%	63%	58.4%
Not working	42%	37%	41.6%

Figure 8.

Sample characteristics of Agincourt Male Labour Migration study. Men age 20-49, Agincourt, South Africa, 1999-2000

Figure 9.
Percent reporting 2 or more sexual partners in the last year, by work and migration status

Figure 10.
Percent of employed migrant men reporting 2 or more sexual partners in the last year, by pattern of return

Figure 11.
Perceived risk of HIV by migrant status