Sexual behaviour and perceptions of risk: Male rural-urban migrants in Tanzania

Draft

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Background

Migration is an important process of change among rural populations in developing countries, and rural to urban migration (both temporary and permanent) has important outcomes for both the sending and receiving societies. Migration has always facilitated the spread of any infectious disease, and the early stages of the HIV epidemic in sub-Saharan Africa were highly correlated with long-distance trade routes. For example, relatively higher HIV incidence has been mapped along main roads, where mobility is higher (Wawer[1] et al, 1991; Barongo[2] et al, 1992; Boerma[3] et al, 1999). This paper presents results from a comparison with individual-level analyses of two male Maasai populations in Tanzania, one (composed of recent rural-urban migrants) in an urban area and one in a rural area. Data on HIV prevalence were not collected.

Many studies of HIV/STDs implicitly assume that current residence reflects the place of exposure, thus failing to capture notions of migration and its interaction with sexual behaviour conducive to HIV transmission. There is therefore an urgent need to understand in more depth the interaction between migration and exposure to sexual risk, for both the migrant and their community of origin. The focus here is on internal rural-urban migration in Tanzania and its interaction with HIV risk. Much of the research to date has focused on international migrants, refugees and internally displaced persons (see, for example, UNAIDS, 2000), with a few exceptions (Obbo, 1993; Colvin *et al*, 1995; Herdt, 1997; Lurie *et al*, 1997; Hope, 2000; Thiam et al[4], 2003).

Migration is a primary cause of behaviour change – by their very act of migrating, migrants are different from those who do not migrate. When people migrate, they are exposed to behaviours and norms that tend to be different from those of their place of origin. This is particularly so in the context of sexual behaviour, where rural-urban migration may result in changing exposure to risk of HIV infection (Girdler-Brown, 1998). Migration has been identified as an independent individual risk factor for the acquisition of HIV (Nunn[5] et al, 1995; Pison[6] et al, 1993; Lagarde et al[7], 2003; Hope[8],

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[1] Wawer, M. et al (1991) Dynamics of the spread of HIV-1 infection in a rural district of Uganda BMJ 303:1301-6

[2] Barongo, L. R. et al (1992) the epidemiology of HIV-1 infection in urban areas, roadside settlements and rural villages in Mwanza region, Tanzania AIDS 6:1521-1528

[3] Boerma, J. T. et al (1999) Spread of HIV infection in a rural area in Tanzania AIDS 13:1233-1240

[4] Thiam, M. et al (2003) Migration and HIV in northern Senegal Population reference Bureau www.prb.org Accessed 01/12/2003

[5] Nunn, A. J. et al (1995) Migration and HIV-1 seroprevalence in a rural Ugandan population AIDS 9:503-506

[6] Pison, G. et al (1993) Seasonal migration: a risk factor for HIV infection in rural Senegal AIDS 6:196-200

2000; Boerma et al 2002; Zuma et al[9], 2003; Lurie et al, 2003[10]; Lagarde et al, 2003[11]).

Urban migrants are an important target group for national AIDS prevention strategies in many sub-Saharan African countries, not least because urban areas are perceived as anonymous places where there is a loosening of familial and community control on sexual behaviour. Sexual behaviours and norms vary when people move from one environment to another. Sherr suggests that this might bring with it "change from the norm, a release from social context, a need to be integrated into a new social context (which may be a strong rigger to abandon caution), and psychological stress" (Sherr[12], 2003)

Populations involved in wide range of moves to urban areas (permanent, circular, short-term) are numerically much larger than population movements in response to crisis situations (e.g.: refugee). The focus of the current study is rural-urban migration by men in Tanzania. Studies of have noted that ethnicity is strongly associated with risky sexual behaviour (see, for example, Kenya: Akwara et al, 2003[13]). This study focuses on one ethnic group, the Maasai of Tanzania. Here, Maasai refers to the broadest conceptualisation of " Maasai" as an ethnic group, using Hutchinson and Smith's (1996) definition of an ethnic group. The debate surrounding "Maasainess" (Spear and Waller, 1993) is noted, and implicit throughout the study. Three key research questions form the framework of the current study:

1. Does the marital behaviour of rural-urban migrants differ from rural residents?
2. Does the sexual behaviour of rural-urban migrants differ from rural residents?
3. How do the sexual experience and behaviour of migrants differ from rural residents?
4. Do rural-urban migrants have higher levels of HIV knowledge than rural residents?

Sexual behaviour remains the "primary target" of AIDS prevention efforts worldwide (UNAIDS, 1999: 5). However, many authors have argued that sexual behaviour alone is far too narrow a lens through which to examine the experience and behaviour of individuals (MacPhail & Campbell, 2001; Holland et al, 1990; Kippax & Crawford, 1993; Dixon-Mueller, 1993; Collumbien & Hawkes, 2000; Zeidenstein & Moore, 1995). Social scientists, most notably demographers, have tended to focus on just one element of sexuality – sexual behaviour. In part this is due to the focus on fertility – the production of live births. It must also, in part, be due to the fact that sexual behaviour – whilst not open to participant observation – is amenable to

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[7] Lagarde, E. et al (2003) "Mobility and the spread of human immunodeficiency virus into rural areas of west Africa"
[8] Hope, K. R. (2000) "Mobile workers and HIV/AIDS in Botswana AIDS Analysis Africa 10(4) 6-7
[9] Zuma, K. et al (2003) "Risk factors for HIV infection among women in Carletonville, South Africa: migration, demography and sexually transmitted diseases" International Journal of STDs and AIDS 14(12):814-817
[10] Lurie, M. N. et al (2003) "The impact of migration on HIV-1 transmission in south Africa: a study of migrant and nonmigrant men and their partners" Sexually transmitted diseases 92003) 30(2): 149-156
[11] Lagarde, E. et al (2003) "Mobility and the spread o human immunodeficiency virus into rural areas of West Africa" International Journal of Epidemiology 32:744-752
[12] The psychological impact of the AIDS epidemic- concerns for Africa
[13] Akwara, P. et al (2003) "Perception of risk of HIV/AIDS and sexual behavio0ur in Kenya" Journal of Biosocial Science 35(3):385-411

retrospective "decontextualised and quantifiable individual behaviours" (MacPhail and Campbell, 2001: 1614). Indeed, Herrell, for example, describes sexual behaviour as a "hidden discourse" (1991:200). Such data do not tell us anything of the individual contexts of condom use, and how these conflicts are mediated through society and experience. Motivations for condom use (and non-use) are complex and are not necessarily the result of premeditated thought.

Absent from most of the research and practice about condom use as a HIV risk-reduction strategy is a consideration of the sexuality of the people – generally, heterosexual adults – at whom most of the condom intervention programmes are targeted. Here, sexuality is defined as "a social construction of a biological drive" (Zeidenstein & Moore, 1995:2). Individual's (and couple's) condom use – and the reasons for non-use – tend to be removed from the context - economic, social, political, cultural - in which the decision is made. A narrow sexual behaviour change approach is at odds with wider changes within the broad disciplines of reproductive health and demography, in which there has been a shift away from structural "explanations" of behaviour (what people say they should do) towards a perspective that takes into account agency (what people actually do) (Kreager, 1982; Hammel, 1990; Greenhalgh, 1995; Lockwood, 1995; Fricke, 1997; Basu & Aaby, 1998). For example, Bledsoe's work on fertility and contraception in The Gambia demonstrates that reproduction is a complicated outcome of based upon locally constructed notions of the body and age (Bledsoe, 1994), and not on some structurally determined notion of "correct" reproduction. Institutional approaches (for example, McNicoll, 1980) argue that behaviour (reproduction) is an outcome of political processes involving power and inequality at a variety of scales from the individual to society. These broader epistemological shifts in both approach and methodology contrast sharply with an emphasis thus far on narrowly deterministic sexual behaviour vis a vis condom use.

This study argues that there is a need to move away from a narrow focus on sexual behaviour and move towards a broader notion of sexuality, that incorporates sexual behaviour as just one dimension (after Dixon-Mueller, 1993). Local meanings and explanations of sexuality and sexual behaviour are rare in HIV/AIDS documentation in general. Linked to the argument for a more detailed assessment of sexuality is the need to expand the focus of perspective away from the population of interest (be it individual or community or society), and to incorporate how perceptions of non-members of the population perceive the population's sexuality. Of importance is how others, particularly service providers in the context of condom promotion and provision, view a group's sexuality. If, for example, a group of people is perceived as being unwilling or opposed to condom use, then a resource-poor service provider is unlikely to focus efforts on condom distribution among that particular population. Perceptions of one group about another group's "otherness" or "difference" have been proven to have a large impact on the level and quality of reproductive health services in general[14].

[14] For example Tweedie, I. & M. Lemba (1996) "Perceptions of health providers, family planning, and contraceptives in Zambia: "Smoke that Thunders". Johns Hopkins School of Public Health, Center for Communication Programs. Miller K; Miller R; Fassihian G; Jones H "How providers restrict access to family planning methods: results from five African countries". Haddad and Fourneir (1995)"Quality, cost and utilisation of health services in developing countries. A longitudinal study in Zaire"

This study uses Dixon-Mueller's multi-dimensional framework of sexuality, based on the premise that "Sexuality has different meanings for different people in different contexts" (1993: 273). Because the focus of demography has tended to be on (generally) quantifiable outcomes, in particular live births, the focus has been on a "model of mutually monogamous, penile-vaginal intercourse" (Zeidenstein and Moore, 1995: 5) and sexual behaviour, which is readily quantifiable[15], if not observable. Dixon-Mueller refers to this as the "quantity, not quality" (1993: 270) approach, one which ignores the multi-dimensional nature of sexuality and sexual behaviour, an outcome of, amongst others: age; gender; ethnicity; race; patronage; physical strength; marital status; access to material and social resources; ideology; expectations; desire; agency; expectations; and, cultural concepts of masculinity and femininity. Further, each of these factors operates at a variety of scales, from the individual actor to the household to the community, and may operate in different directions. The framework is summarised below.

Framework of sexuality based on Dixon-Mueller (1993)

<table>
<tr><th colspan="2">Behavioural and objective</th></tr>
<tr><td>Sexual partnerships
Number of each person's sexual partners, current and past;
Timing and duration of sexual partnerships throughout the person's lifetime;
Identity of partners (socio-economic characteristics, relationship);
Conditions of choice under which each partner is selected or imposed;
Rate and conditions of change of partners</td><td>Sexual acts
Nature, frequency, and conditions of choice of specific sexual practices in which individuals and couples engage</td></tr>
<tr><th colspan="2">Physiological or cultural and subjective</th></tr>
<tr><td>Sexual meanings
Process by which sexual thoughts, behaviours and conditions are interpreted and ascribed cultural meaning
Collective and individual beliefs about the nature of the body;
What is considered erotic or offensive;
What and with whom it is appropriate or inappropriate for men and women (according to their age and other characteristics) to do or to talk about sexuality;
Cultural concepts of masculinity and femininity;
Shifts in the meaning and expression of sexuality over the life cycle</td><td>Sexual drives
Physiological and socio-psychological aspects of sexuality;
Individual's' perceptions of their on and others' sex drives and enjoyment</td></tr>
</table>

[15] Assuming correct retrospective reporting

The proximate determinants framework been used widely in demography for fertility (Bongaarts) and early age mortality (Mosley and Chen). More recently, it has been used as a framework for the conceptual study of HIV/AIDS from an epidemiological perspective to examine the similarities and differences between two study populations (Boerma, 2002; Boerma, 1999). Distal determinants (which operate on HIV prevalence through the proximate determinants) include structural socio-cultural (e.g.: ethnicity) and socio-demographic (e.g.: education, nuptiality) factors. Proximate determinants are those variables that, if they change, there is a direct effect on the reproduction rate of infection – and include: rate of sex partner change (including behavioural heterogeneity and partner concurrency), risk of transmission per sexual act (including co-factors such as condom use, STI prevalence, presence of male circumcision) and duration of infectiousness (May and Anderson[16], 1987). The biological outcome of the proximate determinants framework as applied to HIV is population-based HIV prevalence.

By outlining the socio-cultural context of sexuality and combining this with quantitative data on the proximate determinants of HIV infection, the current study attempts to straddle these two (often competing) perspectives. By presenting data from both rural-urban migrants and rural residents drawn from one ethnic group, an attempt is made to examine the impact of "change" i.e.: rural-urban migration on HIV-related behaviour within one ethnic group. Sexual behaviour is just one kind of human behaviour and needs an understanding of the social and cultural context of behaviour. Using Dixon-Mueller's (1993) schema, the next section outlines the cultural context of sexuality for Maasai.

Study context

The Maasai of Kenya and Tanzania are one of the best-known pastoralist populations in the world, indeed Spear suggests, "Everyone 'knows' the Maasai" (1993: 1). Maasai ethnography has been extensively studied by anthropologists over the last century[17] Ties (economic, structural, social, marital, linguistic) with other ethnic groups have been identified by a number of authors (Spencer, 1973; Berntsen, 1979; Galaty, 1981; Spear and Waller, 1993), and the traditional notion of the Maasai as an independently functioning ethnic unit, which practices no agriculture, has now largely been discarded (Coast, 2002). In recent decades the influence of nation states, monetisation of the traditional economy, formal education, land tenure changes and demographic factors have all played a part in shaping the current socio-economic situation of Maasai in Tanzania.

In Tanzania, Maasailand includes much of Arusha Region (Ngorongoro and Monduli Districts), and that area known as Maasai Steppe to the south of the Pangani River (Map 1). The study site for the rural-urban migrants is Arusha municipality (needs description). The rural study site is a Maasai village, *Engare Naibor*, an

[16] Mar, R. M. & Anderson, R. M. (1987) Transmission dynamic of HIV infection Nature 37-142

[17] Fischer; Thomson; Sheldon; Baumann; Hinde; Hollis; Hollis; Merker; Shelford; Sandford; Leakey; Fox; Whithouse; Fosbrooke; Jacobs; Jacobs; Koenig; Jacobs; Llewelyn-Davies; Ole Sankan; Berntsen; Kipuri; Jacobs; Waller; Llewellyn-Davies; Galaty; Kipuri; Llewelyn-Davies; Arhem; Ole Saitoti; Talle; Talle; Spencer; Waller; Kipuri; Kituyi; Ole Saitoti; Rigby; Llewelyn-Davies; Matampash; Spear & Waller; Oddie; von Mitzlaff; Ibrahim & Ibrahim; Helmut; Sicard

agropastoralist population served by basic infrastructure, including a primary school and a dispensary. It is located approximately 30 kilometres from tarred road, which runs between the Kenya-Tanzania border town of Namanga and Arusha. In the introduction to his ethnography *The Maasai of Matapato*, Spencer observed "Writers had tended to note that the Maasai do this or that, rather than noting, for instance, that the Purko Maasai do this or the Kisonko Maasai do that" (1988:2). Whilst acknowledgement is made here of subtle differences between, say, clans and sub-clans, such a discussion is beyond the scope of this study. In terms of the broader social organisations and major demographic behaviour, the similarities are far greater than the sum of the detailed differences. This section outlines firstly, a thumbnail sketch of contemporary Maasai socio-demographic conditions. Secondly, a description of the context of Maasai sexuality. Thirdly, extant information on HIV levels, knowledge and attitudes among Maasai. Fourthly, extant information on knowledge, attitudes and practice towards contraception among Maasai.

Socio-economic setting

Livestock remain very important to socio-economic organisation, with over 98% of all households owning livestock (Coast, 2000). This broadly agropastoralist population is undergoing the same general process of diversification of rural livelihoods that is taking place across sub-Saharan Africa (Ellis, 2002; Bryceson and Jamal, 1997; Bryceson, 1999; Iliya and Swindell, 1997). Mobile pastoralist populations such as the Maasai have suffered disproportionately as a result of recent losses of land due to the confused legacy of land law created by successive periods of colonial administration, *ujamaa* villagisation and economic liberalisation (Shivji, 1998), and the events in Maasai rangelands have been well documented (Brockington, 2002; Igoe and Brockington, 1999; Africa Watch, 1990).

The importance of transhumance for pastoralism as part of a strategy to cope with the high degree of inter-annual variability in the savanna ecosystem has been well documented (for example, Behnke and Scoones, 1993). Several authors note increasing levels of sedentarisation by the Maasai (Grandin, 1991; Fratkin, 1994; Rutten, 1998; Coast, 2002). Reasons for increased sedentarisation include individual land tenure (and the erection of fences), cultivation, and increased use of education services. However, the rate of primary school enrolment remains low, estimated at only 9% of Tanzanian Maasai 7-12 year olds currently attending school (Coast, 2002), relative to the national rural average of 47% (UNDP, 1999)[18]. That Maasai are becoming increasingly exposed to processes of marginalisation and destitution has been noted by several authors (Arhem, 1985; Talle, 1999; Hillman, 1994; Homewood 1995).

Outmigration from the traditional rural economy for paid employment elsewhere by Maasai men[19] is a relatively recent phenomenon[20]. Recent research by the author in other areas of Maasailand shows, for example, how in the space of less than 5 years, individual outmigration for paid employment increased from less than 5% of

[18] This situation is, however, changing rapidly, with the recent abolition of fees for primary school attendance across Tanzania.

[19] Some, largely destitute, Maasai women do migrate to urban areas, but on a much smaller scale compared to Maasai men.

[20] May (2002) suggests that this process began in 1997, although it is unclear upon what she bases this date.

households to above one in five households (Homewood, Coast & Thompson, *n.d.*[21]). Male Maasai outmigrants tend to be employed as watchmen (hereafter, *askari*) partly because of how they are perceived by non-Maasai – as fearless and warrior-like. It is estimated that 90% of Maasai migrants to Dar Es Salaam end up working as security guards[22] (Kaunga, 2002[23]). Maasai form a highly visible minority in urban areas – not least because of the tendency to continue wearing traditional clothing – bright red cloths combined with elaborately braided and decorated long hair (for the warriors). Some out-migration for work in the rapidly expanding precious and semi-precious stones mining sector has also been documented. The impact on seroprevalence of constantly shifting mining communities working in an extremely dangerous environment for which there are extremely large financial rewards for a very few have been noted (Clift et al[24], 2003).

Sexuality

It is acknowledged that the Maasai are not a homogenous group, and that different authors will produce slightly different accounts of Maasai social structure. This section will describe the main life stages for Maasai men and will be limited to an overview of the major phases and will not refer to the well-documented rituals associated with them, nor to their regional variations (Spencer, 1988; Spear and Waller, 1993).

Maasai society is both gerontocratic and patriarchal in its structure, and is viewed by many authors as detrimental to women, forcing them into subjugation to men throughout their life - wives to husbands and mothers to sons (Llewelyn-Davies, 1978; Talle, 1987; Spencer, 1988). Kipuri, herself a Maasai describes such interpretations as "reductive", and containing "major flaws" (1989:67), constrained by an economically deterministic viewpoint. Instead, she summarises the structural elements of Maasai social organisation as "mutual dependence" and "mutual obligations" (1989:97) between men and women.

Any consideration of social roles among the Maasai must place at its core the "age set" system. An age set is composed of a group of male contemporaries, united by their communal circumcision. An age set provides a man with a further network of social and political allies, supplementary to that provided by his immediate family. Because the formation of the newest age set relies upon the relinquishing of power by the age set immediately preceding it, there is an in-built lifelong tension and opposition between the two adjacent sets. This results in affinities and allegiances being sought with the age set once removed.

Approximately every 15 years, each section produces a new age set. Upon circumcision, a boy becomes a *murran* (warrior), and the previous age set *murran* become elders. The precise timing of the decision to form a new age set depends on the strength of opposition from the existing youngest age set relative to the emerging

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[21] Homewood, Coast & Thompson "In-migramnts and exclusion in east African rangelands: accessm tenure and conflict"

[22] The remainder work within the tourist industry, selling traditional medicines, hairdressing

[23] Kaunga, J. Ole (2002) The living and working conditions of urban-based indigenous peoples: the case of the Maasai of Tanzania" Indigenous Affairs Vol 3-4 pp.9-15

[24] Clift, S. et al (2003) "Variations of HIV and STIS prevalence within communities neighbouring new goldmines in Tanzania: importance for intervention design" Sex Transm Infect 79:307-312

age set. Over a period of time, all of the boys (who have usually reached puberty) are circumcised and incorporated into the newest age set. Because of the length of time between age set formations, members of an age set can vary quite substantially in age. It is possible for a particularly young boy to be incorporated into the age set if his father is elderly and has no circumcised sons. Within each age set of *murran* there are junior and senior warriors with differing norms for dress, behaviour and responsibilities.

Circumcised young men are unable to occupy the same house as their fathers, and are expected to be sexually active, despite the normative prohibition on their marrying. There are strict rules forbidding a *murran* having sexual relations with a married woman. This is because she will inevitably be the wife of a man in a superior age set, and for the *murran* to have sex with an elder's wife could be seen as a threat to the gerontocratic organisation of Maasai society. Sexual relations between married women and *murran* do take place, for the anthropological evidence is overwhelming (Talle, 1987; Mitzlaff, 1994; Llewelyn-Davies, 1978).

The acceptable sexual partners of the *murran* are young, pre-pubescent, unmarried girls (*entito*) but these early sexual partners rarely form the basis of future marriage partners. The Maasai have a widely held belief that semen helps a girl to develop physically. Murran are considered the epitome of healthiness, therefore their sperm is best for pre-pubescent girls. Whilst *entito* are described as "choosing" their own partners, it should be noted that coercion, both covert and overt, is condoned. For example, a good-looking or popular *murran* will be chosen by several *entito*, and it is therefore possible for him to begin to develop his own network of influence and power by asking his partners to have sex with his less popular or good-looking *murran* friends. *Murran* often employ the services of old women (*endingi*) to "persuade" an *entito* to become their partner, and these old women can exert a lot of pressure on the *entito*.

Ideally, a man should marry once he has become an elder. The strictest rule relating to marriage partners is that the husband may not be of the same age-set as the wife's father. The "ideal wife" is the daughter of a man who is two age sets older than the prospective husband. Spencer suggests that this model of behaviour "draws attention to the power that is retained by the elders by delaying the marriages of younger men...creating a surplus of marriageable girls as brides for the elders themselves, enhancing their chances of polygyny" (1993:141). Polygyny is widely practised, and remains an ideal for many Maasai men. Data collected by the author in Maasailand estimate that nearly half (46%) of all currently married men are in polygynous unions, and the average number of wives per polygynist is 2.8. Median spousal age difference ranged from 10 years for first wives to 32 years for fifth- and higher-ranking wives. Formal marriage dissolution is very rare among the Maasai, with only 0.1% of men reported as divorced[25] or separated. Short-term marriage disruption is common, however it is rare for this separation to become permanent[26].

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[25] There is no directly translated word in Maa for divorce, the metaphor "to cause the death of a marriage" is used instead.

[26] The reasons for this are threefold. Firstly, the wife's parents may have to pay back all or part of the brideprice. Secondly, given the strong affinal relationship that develops between the two families (wife's and husband's), such a break-up has ramifications far greater than the individual couple.

The aim of the following tables is not to be reductive in a structural-functional sense. Individual agency operates throughout the lifecycle, but it cannot be represented here. Rather, these tables draw together some key aspects of Maasai male sexuality over the lifecycle.

Figure 1: *Murran* (Unmarried "warriors")

Behavioural and objective	
Sexual partnerships	**Sexual acts**
Sexual initiator for *entito* - possibly imposed by *endingo* Clandestine partner of married woman Use of CSW if travelling to urban areas for livestock trading	With *entito* - sperm integral to the sex
Physiological or cultural and subjective	
Sexual meanings	**Sexual drives**
With *entito* - to confer physical and social development With married woman - an act of defiance across age sets - lover to a young woman married to much older man	As the epitome of physical development, *murran* are expected to have very high sex drives

Figure 2: Male elders

Behavioural and objective	
Sexual partnerships	**Sexual acts**
Polygamy highly prized, with more wives (and children) equating to greater wealth - Acquisition of new wives continues throughout lifetime - High spousal age difference Extra-marital lover is expected Sexual access of age mates to wives (negotiable)	Theoretical post-partum abstinence, used as an explanation for the rationale of polygamy
Physiological or cultural and subjective	
Sexual meanings	**Sexual drives**
Procreation - possible for a man to ask an age mate to impregnate a wife	A husband's duty to "provide" his wives with as many children as is appropriate

Children are highly valued, and are one element of wealth and power for men, together with livestock and the number of wives. Fertility is high, with TFR estimated at 6.4 children per Maasai woman (Coast, 2000). Short birth intervals are condemned at the community level, a common feature in almost all African

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Thirdly, unless the wife was still breastfeeding a child, she would be unable to take her children with her permanently, as children belong to the patriline.

populations. For example, if a woman conceives whilst still breastfeeding the preceding child, then both she and her husband will be liable to both criticism and a livestock fine (Pers. Ob.; Sindiga, 1987; Llewelyn-Davies, 1978).

Many ethnographies refer to the importance of *social* rather than *biological* paternity of Maasai children. The sexual access of age-mates to each other's wives has been noted by several authors (Jacobs, 1973; Llewelyn-Davies, 1978; Talle, 1994). Indeed, Talle goes on to suggest, "a husband may urge a wife to be impregnated by a certain age-mate of his, whom he admires either for his oratory skills, bravery or certain physical qualities" (1994:283). A comparison may be made with Kreager's work on the Nuer, pastoralists from southern Sudan. Kreager states, "the critical matter is the child's *pater* (i.e.: his or her legal father), not *genitor*" (1982:244).

Whilst male fertility *per se* is relatively unimportant, sexual activity (pre-, extra- and marital) is very important. From the time that a Maasai male has become a *murran*, he is expected to have a high level of sexual activity, and *murran* embody the height of male sexual prowess. Extra-marital sex is a very "open secret" in Maasai society, providing rules relating to acceptable sexual partners are observed, together with a degree of discretion.

HIV levels, knowledge and attitudes

Maasai men and women have low levels of HIV/AIDS knowledge (Coast, 2002; Kulzer, 2001). The contested language used to describe HIV by Maasai has been noted in several locations (Coast, 2002; May, 2002, 2003[27]). The role of perceptions relating to the morbidity status (in this case seroprevalence) should not be ignored. Talle, for example, notes "locally based rumours of pastoralists being less exposed to HIV transmission, as they are considered to be "fresh from the bush"" (1999: 122), noting that "the bush" is generally associated with freedom from disease.

A large sexual network is a major risk factor in HIV transmission. Morley (1991) reports the results from 132 Maasai[28] men, questioned on their rate of sexual partner change for the previous three years (1985-1987), averaging 11.8 different sexual partners per year. Talle collected data relating to sexual practices from approximately 100 male and female respondents, concluding "Maasai of both sexes, married and unmarried, are involved in sexual relationships with several partners simultaneously" (1995:76). The role of polygyny in facilitating HIV transmission between spouses and co-wives should not be ignored. Beyond the intra-marriage potential for HIV transmission, the increased likelihood of extra-marital sex by a young woman married to a much older husband is another contributory factor. Pre-pubescent sexual debut for females with strong social sanctions for non-participation must also be considered.

The presence of an untreated STD is a major co-factor in HIV transmission. STDs are a major cause of morbidity among the Maasai population, with pre-pubescent girls (aged from 8 years) frequently presenting with symptoms. There are no published

[27] May, A. (2003) "Maasai migrations: Implications for HIV/AIDS and social change in Tanzania" Unpublished manuscript pp.32. May, A. (2002) Unexpected migrations: Urban labor migration of rural youth and Maasai pastoralists in Tanzania Unpublished PhD Dept. of Anthropology, university of Colorado at Boulder

[28] The published report simply refers to "tribes", but personal communication from one of the authors confirms that the ethnic group concerned was Maasai.

data on STD prevalence, and hospital-based data on STDs cannot be used to estimate levels of STD among the general population because of very high levels of self-treatment using either over-the-counter generic drugs or traditional medicine. There is little social stigma attached to having a symptomatic STD among the Maasai, although attempts at anonymous partner tracing and treatment have proved futile[29]. The result is high levels of untreated STDs, incomplete treatment, and high levels of re-infection.

To date, there is only one published report on the HIV serostatus of the Maasai[30] in Tanzania. No cases of seropositivity were found, although 79% of the sample had a STD at the time of the enquiry (Lopez-Corral *et al*, 1992). An epidemiological study of seroprevalence among Maasai is currently being undertaken[31], but the data have not yet been published, although it is estimated that prevalence rates among women attending for antenatal treatment are 5-6%. Seroprevalence levels in neighbouring Kenyan Maasailand are rising rapidly. For example, in neighbouring Kajiado District in Kenya, rates of 18% seroprevalence have been cited. The relatively high proportion of HIV+ Kenyan Maasai who have reportedly tested positive at Tanzanian clinics (Pers. Comm. with clinic staff) is testament to the geographic mobility of the population.

A prevalence rate of 6% among the general population in mid-2002 against a background of increased risk, and the S-shape of an epidemic curve, show that HIV prevalence is increasing rapidly among the study population, and will continue to do so for several years. The perceived absence of AIDS-related deaths (which will always lag behind HIV incidence) contributes to the low visibility of the disease in the district at the moment. Some AIDS deaths have been recorded at the district hospitals, although levels of personal knowledge of people affected by the disease remain very low (Coast, 2002). High individual fertility means that mother to child transmission (MTCT) will be an important element of the future transmission of the disease.

Contraceptive knowledge, attitudes and practice

There is a generally held view among both non-Maasai and educated Maasai that rural Maasai are extremely traditional and conservative. Indeed, the use of the adjective "conservative" to describe the Maasai is common[32]. The various conceptualisations of Maasai have tended to rely on images and preconceptions relating to Maasai men, both in historical and contemporary accounts (Hodgson, 1999). Ideas of Maasai traditionalism and conservatism are closely bound together with images of the Maasai male alternately as a fierce warrior or recalcitrant pastoralist.

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[29] Pers. Comm. Dr Zurre, Flying Medical Service, Tanzania

[30] Two further sources are included for completeness. Owuor's (1994) report is drawn from the Daily Nation (March 31st 1994) newspaper, and its provenance cannot be verified. It reports seropositivity levels of 1% for a group of 308 Maasai women in northern Tanzania. Talle (1995) reports "blood screening of pregnant women at some mother and child health (MCH) clinics does show that HIV is present in their communities, but up to now on a relatively small scale (personal communication with local health care personnel)" (1995:78).

[31] Anonymous testing of blood of women attending antenatal clinics provided by Wasso Hospital, Endulen Hospital and the Flying Medical Service started Sept 2002.

[32] For example "The Maasai are not labelled Kenya's most conservative tribe for nothing" (Rugene and Newbery, 1998:76)

The result, in terms of contraceptive service provision, has been an "overlooking" of Maasai, relative to many other ethnic groups. Service providers tend not to view Maasai as capable of initiating or "accepting" the use of contraceptive services, and many non-Maasai service providers express fear at working among Maasai[33]. No ethnographies to date have referred to the use of contraceptives by Maasai men or women. Hollos and Larsen suggest that the Maasai "are known to have only a negligible use of contraception" (1997:366), although they provide no data to support this statement.

Methodology

A wide range of methodological approaches was used, reflecting the diversity of information necessary to answer the research questions. This cross-disciplinary approach can be described as using the approaches and tools of anthropological demography (Basu & Aaby, 1998). Detailed data relating to migrant populations are often poorly served by national demographic data collection exercises such as censuses, not least because of the difficulties involved in defining "migration" and "migrants". Migration is widely acknowledged to be the most difficult component of demography to conceptualise, measure and analyse (Anarfi, 1992). The current study combines quantitative

- single round household survey (n=132 rural households)
- detailed migration histories (n=96 rural-urban migrants)

and qualitative

- in-depth interviews (n=96 rural-urban migrants, n=51 rural residents)
- focus groups (n=8, rural location)

data sources. Only Maasai men were included in the individual interviews, questionnaires and focus groups. By focusing only on men this research is able to focus in-depth on behaviour and attitudes among men. However, HIV sexual risk behaviour directly involves 2 people – men and women in a heterosexually driven epidemic – and the exclusion of women from the current research is an acknowledged shortcoming. This research should be viewed as a case study, reflecting processes operating within the broader regional context, and contributing to their interpretation.

In order to test whether the risk-taking behaviour of migrants does differ from that of non-migrants it is necessary to collect detailed information on sexual practice and behaviour. Using Demographic and Health Survey (DHS) and Global Programme on AIDS (GPA) questionnaires as models, individuals were be asked about HIV risk-associated behaviour, including use of commercial sex workers (CSWs), condom use and STD infection and treatment. By comparing the responses to these questions, it will be possible to test differences in risk-taking behaviour, including whether migrants begin risk-taking following migration and exposure to new behavioural norms in the receiving society. It has been shown, for example, that levels of CSWs increase with the size of the urban centre, including peri-urban and market trading centres (Carael, 1997). The questionnaire was restricted to heterosexual sexual behaviour, in keeping with strong cultural norms relating to same sex relationships that could jeopardise an interview, and hence completion/refusal rates.

[33] Detailed interviews conducted with Marie Stopes staff working at 3 clinics in Maasailand (Coast, 2003)

The overall research design makes some attempt to include a comparison situation (rural-urban migrants versus rural residents) and behavioural outcome (sexual behaviour in the preceding 12 months) rather than focusing solely on knowledge and attitudes outcomes. The cross-sectional design of this research produces a baseline description of the frequency and distribution of behaviours relevant to HIV epidemic, and acknowledged that it provides "only a static picture of attitudes and behaviour" (Boulton, 19xx:2). For change to be measured, a prospective cohort design would be preferable.

The questionnaire terminology was pre-tested, and all questionnaires were administered in KiMaasai by Maasai so as to reduce issues of translation problems. Each interview was tape-recorded, allowing for a more "conversational" style of interview to develop, and for enumerators to reflect on interviews after they were completed. The author was not present at interviews, as the presence of a non-Maasai woman was considered to have potentially jeopardised interview quality and response rates. Rapport is best achieved when words familiar to the respondent are used, and using Maasai enumerators reassured respondents and reduced potential misunderstandings. Any enumerator-administered data collection relies on respondents' own reports of their activities, and attention must be given to the accuracy of reports of behaviours that are extremely intimate and heavily value laden. Issues of validity are of concern, not least because self-reports of sexual behaviour are almost impossible to validate. All of the questionnaires were administered in KiMaasai by Maasai interviewers, and the interviews were tape recorded. Tape recording the interviews allowed for greater interviewer to develop a conversational style of interview and for lengthy open-ended responses to be transcribed after the interview.

Results

Detailed migration and sexual behaviour questionnaires were administered to a total of 147 respondents (51 in rural area, 96 in urban area), all of whom defined themselves as Maasai. The urban residents were sampled purposively from locations around Arusha. Maasai rural-urban migrants who work as *askaris* tend to congregate at clearly defined locations during the daytime. Here, they swap news and pass on messages, described by one respondent as a "look out" for Maasai men coming to the urban area, allowing for news to be passed between the rural and urban areas. By identifying these gathering places, the enumerators were able to recruit Maasai rural-urban migrants to the survey. A completion rate of 94% was obtained. The rural respondents were chosen for interview based upon residence of a village (Engare Naibor), and a 0% refusal rate was achieved. The village was selected as being "representative" of rural Maasailand, with basic level primary education and healthcare facilities. There were no significant differences[34] in the urban and rural samples socio-demographic characteristics, including: marital status; educational level; age distribution; or, religion (Table 1).

Table 1: Distribution of socio-economic characteristics of survey respondents (n=147)

	Urban (n=96)	Rural (51)

[34] Tested using Chi Square at 95% significance level.

Age		
- **<25**	31.6	15.7
- **25-35**	43.2	45.1
- **>35**	25.3	39.2
Education		
- **None**	69.8	56.9
- **Some**	30.2	43.1
Religion		
- **Formal**[35]	27.1	21.6
- **Traditional**	72.9	78.4
Languages spoken		
- **KiMaasai**	100	100
- **KiSwahili**	61.5	47.1
- **English**	2.1	5.9
Employment[36]		
- **Livestock herding**	16	94
- **Cultivation**	1	88
- **A*skari***	95	2
- **Hairdresser**	1	0
- **Gardener**	1	0
- **Livestock trader**	3	12
- **Traditional medicine dealer**	7	4
- **Government employee**	0	8
- **Tourism**	2	0
- **Gemstone trader**	0	6

For migrants working as *askaris,* monthly wages range from TZS15,000[37] to TZS78,000 per month, with an average monthly wage of TZS25,000. Accommodation was provided with the employment for 15% of respondents, and arrangements for sleeping are made on an *ad hoc* basis for the remaining migrants, often in unfinished buildings on building sites. Terms and conditions of askaris work are tough, normally involving no days off during the months worked. Askaris find cover from the pool of newly arriving migrants, should they need to travel back periodically to the rural area. 49% of respondents had been in the urban area for less than one year, and 73% less than two years. Men migrated predominantly from the surrounding Arusha region, the longest distance to rural home was estimated at 250km.

Table 2: Distribution of demographic characteristics of survey respondents

	Urban (n=96)	**Rural (51)**
Age		
- **<25**	31.6	15.7
- **25-35**	43.2	45.1
- **>35**	25.3	39.2
Median age at first sex[38] **(years)**	18	19

[35] Lutheran, Roman Catholic
[36] Totals add up to more than 100% to allow for multiple employment / occupation responses
[37] Approximately US$xx per month to US$xx per month
[38] 4 respondents reported that they had never had sex (2 urban, 2 rural)

Total partners over lifetime		
- **<25**	3.7	2.8
- **25-35**	7.8	4.6
- **>35**	14.0	8.3
All men		
Marital status		
- **%Never-married**	49.0	54.9
- **%Monogamous**	38.5	33.3
- **%Polygamous**	12.5	11.8
Unmarried men		
- **% Engaged to be married**	31.9	57.1
- **Reasons for current non-marriage**		
o **Booked girl too young**	14.9	33.3
o **Cost**	57.4	33.3
o **He is too young**	27.7	33.3
Married men		
- **% Number of wives**		
o **1**	75.5	73.9
o **2**	20.4	21.7
o **3**	2.0	4.3
o **>3**	2.0	0
- **Mean spousal age difference (years)**		
o **Wife #1**	8.0	12.9
o **Wife #2**	15.3	18.0
o **Wife #3**	27.0	27.0
- **% Intention to take another wife**		
o **Yes**	30.6	60.9
o **No**	57.1	34.8
o **Perhaps**	12.2	4.3
- **% Ever use of contraception[39]**		
o **Abstinence**	96	96
o **Condom**	4	0
o **Oral contraceptive**	0	4

Nuptiality

There was no significant difference in mean age at first marriage between currently married rural residents (28.1 years) and rural-urban migrants (26.1 years). Spousal age difference increases with wife rank, with mean spousal age difference increasing from 9.6 years for first wives to 16.2 years for second wives to 27 years for third wives. There was no significant difference in either the prevalence (p[40]) of polygyny or intensity (w[41]) of polygyny (after Timaeus and Reynar, 1998) between rural residents (p=0.25, w=2.17) and rural-urban migrants (p=0.26, w=2.17). However, there was a significant difference ($p < 0.050$) in the intention to take another wife, with rural residents significantly more likely to report that they plan to take a further wife than current rural-urban migrants. The main reason cited for taking another wife was to help the existing wife/ wives when they are pregnant or sick (urban = 80%; rural

[39] Question only addressed to currently married men

[40] Prevalence of polygyny - *p:* Proportion of men in polygynous marriages

[41] Intensity of polygyny - w: Average number of wives per polygynist

=71%). Other reasons included the need to have more children and that it is an aspiration to have more than one wife in order to be a socially powerful man.

There was a similarly significant difference in whether an unmarried man reported that he is engaged to be married, with rural men significantly ($p < 0.050$) likely to report that he is likely to be engaged to be married than an urban migrant. The reasons stated for current non-marriage do not vary significantly between urban and rural respondents, although the percentage of urban unmarried men reporting cost to be the major barrier to marriage (57.4%) is considerably higher than that reported by rural unmarried men (33.3%).

Differences in knowledge between rural-urban migrants and rural residents

Knowledge of HIV was consistently high in both rural and urban locations, with 98% of respondents reporting knowledge. However, as the discussion on contested language surrounding HIV for the Maasai will demonstrate[42], simple knowledge "Yes or No" of the disease does not translate into detailed, correct knowledge about its transmission. All those respondents who responded positively that they knew of HIV were asked to list all of the ways that an individual could prevent infection with the disease - no prompts were given.

Table 3: Percentage distribution of ways to avoid HIV infection, by current place of residence

	Urban	**Rural**
Abstinence***	22.1	65.7
Use a condom	24.7	22.9
Avoid CSW***	55.8	14.3
Monogamy	23.4	37.1
Reduce number of partners*	29.9	8.6
Avoid blood transfusions	2.6	0
Use local medicine	13.0	8.6
Avoid sharing razors	3.9	0

Sig. Tested using ChiSq *** p=0.000 * p < 0.05

Three responses were significantly different between rural residents and rural-urban migrants: abstinence; avoidance of prostitutes; and, reduce the number of sexual partners. In urban areas the most common response was to avoid using CSWs (55.8% respondents), followed by a reduction in the number of partners (29.9% respondents). In rural areas abstinence (65.7%) was most commonly spontaneously mentioned, followed by monogamy. It should be noted that one quarter of those men responding that monogamy was a route to avoid HIV infection were themselves polygynously married at the time of the interview. The high unprompted responses referring to CSWs among current urban residents most probably reflects higher knowledge and exposure to CSWs, who are virtually absent in the rural area[43].

Knowledge about whether HIV could be cured was significantly different ($p < 0.050$), with rural-urban migrants significantly more likely to know that there was no cure for

[42] Based on focus group discussions

[43] In terms of a "visible" CSW economy – although this is not to deny the probable existence of less formalised transactional sex in the rural areas.

the disease. More detailed questioning about an individual's perception of their own risk vis a vis catching the disease did not reveal any significant differences between current place of residence. Respondents (unprompted) were asked to list all of the sources they could remember having heard about HIV from, regardless what the content of that information was. Significant (p=.000) differences were noted for TV and radio (urban residents significantly more likely to mention) and friends/relatives (rural residents significantly more likely to mention). The virtual absence of reference to written materials (including posters) is probably not only a reflection of low levels of literacy among Maasai in general, but also the absence of HIV materials in languages other than English and KiSwahili.

A series of detailed questions on condom knowledge were asked, from "Do you know what a condom is?" to "Have you ever seen a condom" to "Where have you seen a condom?" to "Can you describe to me in detail how condom works?". Whilst there was no significant difference between rural resident and rural-urban migrants in terms of knowing what a condom was ("Yes/ No" response), there was a significant (p=0.038) difference between whether the respondent had ever seen a condom, with rural-urban migrants more likely to report having seen a condom than rural residents. Given the very low penetration of social marketing campaigns (primarily for *Salama* brand condoms) into rural areas in general and Maasai areas in particular, it is unsurprising that rural residents are significantly less likely to report ever having seen a condom. For those respondents who reported that they had seen a condom, they were asked to describe *how* they had seen a condom. It is interesting to note that the majority of respondents reported that they had not actually seen the condom, rather they had seen the condom packet on sale in shops, and had little idea about what it contained. Only one respondent reported enough curiosity to have bought a packet, and filled a condom with water to see what happened! Overall, levels of detailed knowledge about condoms are extremely low, even when people state that they know about condoms, or have seen one. For example, 69% of urban respondents had heard about condoms but when probed were unable to provide detailed information about how they worked (47% in rural areas). Even having seen a condom was still a poor indicator of detailed knowledge about their functioning, with 48% of urban respondents having seen condoms, but unable to describe how they worked.

Within rural areas, there was a significant (p=0.008) difference between married and unmarried men in terms of the reported ways of avoiding HIV infection, with married men significantly more likely to report monogamy. The significance (p=0.028) of reporting monogamy as a way of avoiding HIV infection was much higher for men with some education relative to men with no education, regardless of current marital status. Sources of HIV information also varied significantly by marital status within the rural sample, with married men significantly more likely to report having heard information on a radio (p=0.050) or at a community meeting (p=0.010). Although radio ownership data were not collected, it is probable that a married man is more likely to own radio. Further, because of the highly gerontocratic organisation of Maasai society, a married man (by definition an elder) is much more likely to attend community meetings than an unmarried man. Levels of condom knowledge were significantly (p=0.040) higher among married men than unmarried men, although more detailed condom knowledge was not significantly different – suggesting that attendance at community meetings may result in hearing about condoms, but that condoms and their use are not practically demonstrated. Detailed questioning in the

rural area about what HIV education efforts had been made, revealed that "lip service" was paid to the issue of HIV information, but that there had not been any systematic or specialised education. Rather, traditional community leaders had been charged by local government with telling the community about HIV, but without any training or backup. The impact of education on detailed condom knowledge was, however, significant, with educated men significantly more likely to have seen a condom (p=0.022) and be able to accurately describe how to use a condom (p=0.027) than their non-educated counterparts.

Among urban respondents, the only significant difference between married and unmarried men was that unmarried men were highly significantly (p=0.003) more likely to have ever considered their own risk vis a vis catching HIV, but this did not translate into a significant difference in reporting a behaviour change as a result of HIV knowledge relative to married men. Other indicators of HIV and condom knowledge did not differ significantly between married and unmarried men. Educated urban residents were significantly more likely to have seen a condom (p=0.001) and to be able to accurately describe how to use one (p=0.039) than non-educated urban residents.

Differences in behaviour

Differences in reported sexual behaviour were investigated between rural residents and rural-urban migrants. There was a significant difference in reported levels of total sex partners (including wives) for rural (M=2.08, SD=1.885) and urban men (M=1.41, SD=1.433, t(81)=-2.227, p=029). There was no significant difference in the reporting of extra-marital sex between married rural-urban migrants and rural residents, with approximately one third of currently married men reporting extra-marital sex in the preceding 12 months (urban=33%, rural=30%). In both urban and rural settings the percentage of polygynously married men who report extra-marital sex in the preceding 12 months is lower than that reported for monogamously married men, but the difference is not significant between the two marriage types (Table 4).

Table 4: percentage of currently married men reporting extra-marital sex in the preceding 12 months by type of marriage and location.

	Urban	**Rural**
Polygynous	25	17
Monogamous	35	35

41% of unmarried rural-urban migrants reported no sex in the 12 months preceding the interview, and the difference between rural and urban respondents in whether sex in the previous 12 months was reported was significant. There was also a significant difference in reported levels of sex partners for unmarried rural (M=2.04, SD=2.063) and rural-urban men (M=0.94, SD=1.451, t(43)=-2.478, p=.017).

Table 5: Percentage distribution of information relating to reported sex partners in the preceding 12 months, all unmarried respondents, by place of current residence.

	Urban	**Rural**
Description of sex partner(s)		
- casual partner	21	48

- **girlfriend**	72	48
- **fiancée**	5	4
- **CSW**	2	0
Location of partner		
- **Rural home**	95	100
- **Elsewhere**	5	0
Giving of payment/ gifts		
- **Always**	2	0
- **Often**	2	0
- **Never**	96	100
Condom use		
- **Always**	3	1
- **Most of the time**	1	1
- **Rarely**	1	0
- **Never**	95	98
Other partners?		
- **Others for money**	1	0
- **Steady partner/husband**	28	27
- **Casual**	43	44
- **Probably but not sure**	17	27
- **No**	11	2
How many other partners?		
0	18	1
1	18	27
2	13	35
3	21	27
>3	4	1
Do not know	26	9

For unmarried men, regardless of rural or urban residence, sexual partners are overwhelmingly located in the rural area. 95% of unmarried current urban residents report that sex partners over the past year were in their rural home area. The giving of gifts/ money was very rare, as was condom use, in both locations. Only one respondent reported having sex with a CSW in the preceding year, and he was a rural-urban migrant. Whilst unusual, the details of this individual case do warrant highlighting, especially his verbatim response to questioning about perceptions of risk regarding HIV "I was in real shock when a friend told me about this disease ukimwi because when I went with this women to the guesthouse in the afternoon I did not know about this disease. I am now very scared because I think I am in [at] risk of this disease". He did not know about VCT or where to go for VCT.

Rural-urban unmarried migrants were significantly more likely to report that their current sex partners back in the rural area did not have any other partners in the preceding twelve months. However, the majority of respondents, whether rural or urban, expected that their sex partners did have other partners. Similarly, rural-urban migrants were more likely to describe their current partner as a "girlfriend" rather than a "casual partner", suggesting either a lack of knowledge about sex partners who were geographically distant, or a correctly reported belief that the relationship was more established than "casual".

Most unmarried respondents, both urban and rural report never use of condoms. Those 6 individuals reporting ”always” or “most of the time” condom use are interesting to examine in slightly deeper depth. All of the partners with whom condoms were used always or most of the time were themselves educated – and Maasai – making them relatively unusual for Maasai women. It is therefore possible to conjecture that condom use in these few cases is linked to either negotiation between the couple or, the educated female partner demanding condom use (either to avoid pregnancy or to avoid HIV infection). In two cases, where unmarried respondents reported condom use, but had two concurrent partners, condoms were reported as being used with both of the partners.

When questioned, 61% of respondents reported that they had changed their own behaviour since hearing about HIV, with no significant difference between urban and rural respondents. Given that levels of knowledge about how to reduce infection risks are relatively low, and there are significant differences between urban and rural residents in terms of *what* they report as routes to reduce infection (urban report avoid CSWs and rural report abstinence), it is pertinent to examine whether there is indirect evidence of behaviour change. The only route to validating this information is to compare reported behaviour with articulated behaviour change.

There is no significant difference in the reporting of extra-marital sex for currently married men relative to whether they report behaviour change as a result of knowing about HIV. 30% of currently married men reporting a behaviour change also report an extra-marital sex partner in the preceding 12 months, regardless of location. For unmarried men, however, there is a significant ($p=.016$) difference in whether they reported having sex in the preceding 12 months according to reported change in behaviour due to knowing about HIV. Closer examination of verbatim responses indicates a clear articulation among rural-urban unmarried migrants to avoid sex in towns – and this is reflected in data on the location of current sex partners (95% in rural home area). The majority of the responses clearly state the need to avoid sex in the urban area in order to prevent HIV infection.

“Where I have a girlfriend back home, there is no AIDS, so I don't sleep around with women in town”
(Rural-urban migrant, unmarried, 28 years old, working as an *askari* for 19 months)

“I don’t have sex outside of my tribe, and our women are not in town”
(Rural-urban migrant, unmarried, 22 years old, working as an *askari* for 12 months)

Education can once again be seen to have an influence in rural areas, with educated men significantly ($p=0.050$) more likely to report that they had changed their sexual behaviour since knowing about HIV, with 73% of educated men reporting behaviour change compared with 41% of non-educated men. It was not possible to test for differences in reported behaviour for educated rural men because once marital status was taken into account, sample sizes became too small for statistical significance. Education was not significant in the relationship with reported behaviour change for rural-urban migrants.

A total of 7 respondents (6 rural-urban migrants, 1 rural resident) had ever been for VCT. Detailed questioning revealed that in only one of these cases had the decision

to test been taken "voluntarily" and with the intention of discovering his own status. The remaining 6 cases had all been tested in order to be able to donate blood to a relative.

Within marriage, levels of modern contraceptive use or discussion of modern contraception was extremely low (Table 6). All men reporting a currently breastfeeding wife reported non-resumption of sex with that wife, in keeping with strongly socially sanctioned behaviour.

Table 6: percentage distribution of marital sex and contraceptive behaviour

	Urban	Rural
Sex with breastfeeding wife?		
- **wife #1**	0	0
- **wife #2**	0	0
- **wife #3**	0	0
Want more children with		
- **wife #1**	86	96
- **wife #2**	91	100
- **wife #3**	100	100
- **wife #4?**	100	100
Ever avoided pregnancy?		
- **wife #1**	47	91
- **wife #2**	42	83
- **wife #3**	100	100
- **wife #4**	0	n/a
Currently avoiding pregnancy?		
- **wife #1**	45	83
- **wife #2**	33	67
- **wife #3**	100	100
- **wife #4**	0	n/a
Current method		
- **wife #1**		
o **abstinence**	86	95
o **condom**	9	0
o **pill**	5	5
- **wife #2**		
o **abstinence**	100	100
o **condom**	0	0
o **pill**	0	0
- **wife #3**		
o **abstinence**	100	n/a
o **condom**	0	
o **pill**	0	
Ideal mean spacing between children (months)	43	48

Ever- and current- avoidance of pregnancy for wife #1 is highly significant (p=0.001) according to place of residence, with rural resident men more likely to report having tried to avoid pregnancy compared with rural-urban migrants. The explanation for this differential might lie partly in that there is spousal separation as the husband is in the urban area and the wife is in the rural area, precluding the need to avoid

pregnancy, if it is desired. Abstinence is widely reported as the method used to avoid pregnancy. Only among first wives (who might be in currently monogamous marriages[44]) are there reports of use of more modern contraceptive methods.

Discussion

This study set out to answer four main research questions. Firstly, does the marital behaviour of rural-urban migrants differ from rural residents? Secondly, does the sexual behaviour of rural-urban migrants differ from rural resident? Thirdly, how do the sexual experience and behaviour of migrants differ from non-migrants? Finally, do rural-urban migrants have higher levels of HIV knowledge than rural residents?

Marital behaviour

Marriage among Maasai, and the aspiration to marry for men, is universal. Whilst polygynous marriages are still regarded as an ideal among many Maasai men, there are increasing numbers professing to want to remain in a monogamous marriage. It is important to note, however, that entry into marriage (or a further marriage) is not an entirely individual decision, and men desiring to remain monogamously married can be pressurised, particularly by his father, to take another wife. Levels of reported polygyny in this study are consistent with those estimated elsewhere in Tanzanian Maasailand (Coast, 2000; von Mitzlaff, 1988)

May (2002) suggests that young Maasai men are forced to migrate in order to acquire the necessary wealth to be able to afford the livestock to marry. Whilst 57% of unmarried rural-urban migrants cited cost as the main reason for not yet being married, there was no significant different in the percentage reporting cost as the main reason in rural areas. However, unprompted, some respondents did explain that the reason for coming to town was explicitly to earn enough in order to be able to marry. Rural unmarried men are significantly more likely to be engaged to be married than rural-urban migrants, perhaps providing some indirect evidence that rural-urban migrants are forced to acquire wealth urban areas in order to be able to begin the process of marriage.

Differences in knowledge?

There is much confusion among Maasai about just what this "new disease" is – not least because of issues surrounding the vocabulary. The KiSwahili for HIV is *ukimwi*. The KiMaasai for HIV is *biitia*. Many Maasai believe that HIV is, in fact, an infection of the genitals, *enamuratoni*. For KiSwahili-speaking Maasai, the use of the word *ukimwi* appears relatively unproblematic. However, the use of the term *biitia* (literally: to shrink) is highly contested. Many illnesses and diseases among the Maasai are attributed to or described as "shrinking", and many focus group participants suggested that the *biitia* being talked about was simply another disease belonging to this aetiological group. Such issues of semantics are profoundly important for the development of relevant and appropriate IEC materials. In Namibia, Vogel's (2001) research among the Kxoe (2001) highlighted a need for a specialist linguist to develop IEC materials.

Issues of definition notwithstanding, apparent levels of HIV knowledge are high, with 98% of respondents reporting that they had heard of the disease. Detailed knowledge

[44] All currently monogamous marriages might eventually become polygynous marriages.

is, however, much more limited. Rural-urban migrants had significantly higher knowledge of whether HIV could be cured, were more likely to have gained information from either TV or radio, and were more likely to have seen a condom.

Within urban areas, levels and sources of knowledge were significantly differentiated according to marital status, with married men more likely to have heard about HIV at community meetings, and to know about condoms. The impact of education was noted in both urban and rural locations, with educated men significantly better able to describe *how* a condom worked in some detail.

Differences in sexual behaviour?

Reporting of sexual behaviour to an enumerator will always be fraught with issues of whether the reports are valid. For example, single men consistently report higher numbers of sexual partners than women (Dare & Cleland, 1994; Nnko et al, 2002; Reid[45], 1999). Is there evidence of such "swaggering males" (after Nnko *et al*) in this dataset? How do the data reported here compare with extant data from other research? The only data with which comparisons might be made are Morley's (1991) data, which report high levels of sexual networking – average of 11.8 sexual partners per year – for unmarried Maasai men. The current study reports considerably lower sexual partners, with a mean of 2.0 partners for currently unmarried rural men. Is there under-reporting of sexual partners in the current study, due to some form of interview or courtesy bias? Most evidence suggests that single men in fact over-report sexual partners (at least relative to single women), so is there any reason why the Maasai men in this study would under-report sexual partners? Or is it reasonable to assume reasonable validity of the data? Enumerator training and interview conduct, combined with interviews carried out privately with Maasai enumerators in KiMaasai, meant that every effort was made to allow for valid reporting of sexual behaviour. The levels of reported sexual partners by unmarried men is in keeping with lifetime levels of reported sexual partners for older men, suggesting that the data are reasonably robust. For both urban and rural residents, extra-marital sex is reported by approximately one third of men, with higher extra-marital sex reported by monogamously married men.

Overall, men in rural areas are reporting significantly more sex partners than rural-urban migrants. What is perhaps most prominent about the reporting of sexual behaviour by rural-urban migrants is the lack of sex whilst in urban areas. Over forty percent of unmarried rural-urban migrants reported no sex in the preceding twelve months, with total sex partners significantly different between urban and rural men. Just 5% of the preceding 12 months' sexual partners were reported as having occurred in town. May's ethnographic study of rural-urban Maasai migrants reported just 2 out of 47 interviewees referring to sex in town (Dar Es Salaam), although no data are provided on the reference time period, providing support for the low levels of sexual activity in town reported by this study. Maasai rural-urban migrants – both married and unmarried – are not having sex in town. There is an explicit link between sex in town (not necessarily just with prostitutes, but with *town women* in general), and the risks of HIV infection. The reverse side of this perception is that HIV is *only* a disease of urban areas, and is not present in rural Maasailand in general:

[45] Reid, E. (1999) Placing women at the centre of the Analysis UNDP: HIV and development Programme No. 6

"I'm not womanising – at least not in town – home [rural] is different! [Laughs]"
Rural-urban migrant, 21 years old, *askari* for 13 months

It is difficult to trace the linkage between perception of risk (with reference to sexual behaviour) and reported sexual behaviour, and the linkages remain unclear (Akwara et al, 2003). The perception of "risky sex" – itself a complex construction involving both individual- and community-level factors – is being clearly defined by rural-urban migrants. Essentially, risky sex equals sex in town, and by avoiding sex in town most urban-rural migrants perceive themselves to be making a rational and logical decision to prevent the risk of infection. The majority of respondents construct risk at the societal level – town or ethnic group – and not at the individual level. It is generally acknowledged that motivations for sex are complicated, unclear and may not be thought through in advance. The data here suggest that, for rural-urban migrants at least, some very clear decisions are being made about whether or not to have sex in town. A small minority of respondents articulated that they could still be at risk if someone else were to infect their rural partners, even if they themselves abstained from sex in town.

It is a truism that knowledge does not cause in behaviour change. From an epidemiological perspective, the statistical risk of HIV transmission is well-established, and the risk factors are clear when reduced to their proximate determinants. Sherr (2003) points out that statistical risk is not the same as psychological risk, and certainly do not "translate into personal risk assessment, which are more likely to be viewed dichotomously – "exposed or not exposed; infected or not infected; positive or negative". Or, in the current case, town versus rural or Maasai versus non-Maasai.

VCT, a mainstay of national and international HIV interventions, is barely known by the study population. Six out of seven respondents reporting VCT had only done so because of compulsion in order to donate blood.

Condoms

Absent from most of the research and practice about condom use as a HIV risk-reduction strategy is a consideration of the sexuality of the people – generally, heterosexual adults – at whom most of the condom intervention programmes are targeted. As a barrier method, either for the prevention of HIV or as a contraceptive, or both, condoms involve the "removal" of sperm from the sexual act. The cultural significance of sperm for procreation, is dealt with elsewhere (for example, Mill & Anarfi, 2002; Bond & Dover, 1997; Feldman-Savelsberg, 1995; Piot, 1995; Taylor, 1990). For Maasai, good sex, in addition to procreation, involves the "giving" of sperm from men to women, for the benefit of women. Sperm is perceived as essential to the social and physiological development of young girls. Thus, condom use is a threat to cultural persistence – both in terms of fertility (and descendants) and social reproduction.

The "otherness" of HIV and consequent condom use manifests itself in a variety of ways. For example, the highly ritualised nature of Maasai male circumcision results in a strongly held belief that condoms are unsuitable for penises that have undergone a Maasai circumcision. Attempts by outreach teams from local hospitals to demonstrate

the use of condoms using wooden model penises foundered because the models had not been correctly "circumcised". The Primary Health Care team subsequently had the wooden penis model "circumcised" by a local carpenter. The frequent references to condoms being a "Swahili" (non-Maasai) device underline the ethnic "otherness" of condoms in a Maasai context.

A bridge population?

Maasai men, both married and unmarried, are increasingly seeking paid employment in urban centres. From an epidemiological perspective, migrant populations are often perceived to act as "bridge populations", forming a link between high and low prevalence groups (Morris[46], 1997). Focus group discussions in rural areas about returnee rural-urban migrants articulate this perception very strongly

> "if it [HIV] does come we just believe it will be the *askaris* in town who will have brought it and the real problem is that these guys go to town, they eat good food and they look healthy, so women like them. These guys come nice looking and the girls will run after them and if it's not them who bring the diseases I don't see how else the disease can get into Maasailand"
>
> Rural FGD#5, 18 years old, male, unmarried

The rural-urban migrants are self-defining as not wanting to become a "bridge population", but resident rural population have to some extent already categorised returnee migrants as "bridge population". In some areas, for example, there have been calls for the compulsory testing of returnee migrants if they want to marry a rural Maasai woman (Ole Moono).

[46] Morris,, M. (1997) "Sexual networks and HIV" AIDS 11(Suppl. A) S209-S216