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Socio-Cultural Norms and Acceptability of HIV/AIDS Prevention Strategies in the Simanjiro District of Tanzania

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Tanzania is home to 32 million people of whom an estimated 200,000 are Maasai. The Maasai are a proud and tenacious people that have clung tightly to their distinctive culture as the world has evolved around them. Their survival now comes into question as the Human Immunodeficiency Virus (HIV)/ Acquired Immunodeficiency Syndrome (AIDS) epidemic ravages the country. This study seeks to identify HIV prevention strategies that are compatible within the Maasai cultural context as a method to help bridge the HIV/AIDS knowledge and behavior change gap. Key elements include: involvement of influential key figures, a comprehensive and highly interactive HIV prevention program focused on making current behaviors less risky, and promoting a formal education for Maasai youth. These elements have the ability to influence healthier behaviors in a manner that allows the Maasai to preserve their unique culture.

Introduction

Tanzania and HIV/AIDS

Tanzania is home to 32 million people of whom an estimated 200,000 are Maasai. The Maasai are a unique and tenacious people that have clung

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tightly to their culture as the world has evolved around them. Their survival now comes into question as the Human Immunodeficiency Virus (HIV)/Acquired Immunodeficiency Syndrome (AIDS) epidemic ravages the country.

Despite targeted HIV/AIDS awareness programs, Tanzania's HIV/AIDS epidemic has spread rapidly. Current estimates by Joint United Nations Programme on HIV/AIDS (UNAIDS) for Tanzania indicate that 1.3 million adults and children are living with HIV/AIDS, 1.1 million children have been orphaned by AIDS, 385 people died per day in 1999 of HIV/AIDS, and the nationwide adult prevalence rate is 8 percent (UNAIDS 2000). Major urban settings such as Dar Es Salaam have an HIV prevalence of 14 percent to 18 percent at sentinel sites of pregnant women. These areas also reported an HIV prevalence rate of 50 percent among sex workers in 1993 (UNAIDS 2000).

HIV/AIDS in Tanzania is primarily transmitted heterosexually and 50 percent of the HIV infected are women. The HIV/AIDS epidemic is increasing Tanzania's excess mortality and morbidity rates. In addition, AIDS takes a severe emotional, social, and economic toll; the most skilled and productive age group is also the most affected, placing a high economic burden on families, communities, and the development of the country.

Currently most AIDS prevention programs in Africa are based on social values that value virginity for young people and monogamy and mutual fidelity for married persons. However, such prevention programs may not be suitable for all ethnic groups (Gausset 2001). National AIDS campaigns such as Tanzania's 'Fleet of Hope' based on the ABCs (Abstinence, Be faithful, Condoms) offer choices for individuals who are and are not sexually active. Nevertheless, certain values are imposed when AIDS prevention messages emphasize abstinence and faithfulness over condom use. Cultures that accept the aforementioned social values may find success with such AIDS prevention strategies because they are acceptable within the cultural context of the target population (Gausset 2001). Conversely, cultures that do not share such values may have a more difficult time adopting strategies that go against their way of life. The Maasai both question outside influences and traditionally operate with a very different set of values in which virtues such as virginity or fidelity are unimportant (Hodgson 1999).

Maasai culture

To better grasp the HIV/AIDS prevention challenges in this setting, it is important to understand some aspects of the Maasai culture, which dominates Simanjiro. The Maasai are nomadic pastoralists who survive on a livestock economy (Fratkin 1999). Historically, the Maasai have faced many struggles including: loss of herding land to private and government enterprise, forced shifts to agricultural production, rapid migration to urban and mining areas among younger generations, and loss of family members and livestock to increasing droughts, famine, and disease (Fratkin 1999, Nangoro 1999). For centuries, colonists and *Swahili* (non-Maasai East-Africans, as characterized by the Maasai) have attempted to impose their own agendas, values, and way of life upon the Maasai. Not surprisingly, the Maasai now distrust the intentions of outsiders who try to change their culture.

Despite these forces, the Maasai exhibit strong resilience and proudly embrace their distinctive culture, which places high value on cattle wealth, number of children, number of wives, clear gender roles, land resources, and a complex age-group organization system.

The quantity of cattle owned determines wealth in Maasai culture. Expanding a homestead's livestock assets enables a man to marry more wives, produce and support more children, and increase his clout in the community (Hodgson 1999). Men and women have distinct roles with the shared common goal of increasing homestead wealth. Men own and manage the land and cattle resources and take responsibility for herding cattle. A woman is responsible for small trade, milking the cows, caring for young and sick livestock, and providing the daily food for her family (Hodgson 1999).

Age and gender status traditions govern Maasai culture and ethics. For example, it is forbidden for men to sleep with daughters of age-mates; however, it is acceptable to sleep with granddaughters of age-mates (Hodgson 1999). The acceptable roles, responsibilities, and behavior of Maasai men depend on the age group they are in as they travel through life, from boys to warriors to junior elders to elders. Once boys are circumcised, they become *ilmurran* (warriors) and remain ilmurran for a 14-year period, roughly from 14 to 28 years of age. It is an extremely communal time emphasizing solidarity with age-mates. They sing, dance, drink milk, and sleep in the presence of other male age-mates. As ilmurran, men can take part in sexual activity with prepubescent *intoyie* (uncircumcised girls).

Warriors share all possessions, including girlfriends (Saitoti 1986). They are responsible for protecting their communities and livestock through physical means. Once they enter junior elder status, the goals are more individualistic. They are expected to marry, produce children, and increase their livestock wealth. Being an elder brings respect and more political power within the culture; it is a time to use wisdom, rather than physical means, to solve community problems (Hodgson 1999). Females are categorized differently: they are girls, and once circumcised, become women and eligible for marriage. Once married, females belong to the age group of their husband.

Study population

This study took place in the Simanjiro district within the Arusha region of Tanzania. The Simanjiro district covers 18,000 square miles and has a population of 122,000 people. It is predominantly a remote and rural area, but also has pockets of gemstone mining communities, as well as urban concerns such as high volumes of migrant and sex workers.

The Maasai live in parts of both Kenya and Tanzania. They are the most populous cultural group in Simanjiro; however, specific cultural census figures are not available and there is a distinct absence of information regarding the rural Simanjiro population and current HIV/AIDS figures. However, a study exploring HIV/AIDS among Kenyan Maasai in 1992 found a low HIV prevalence (2 percent) compared to other populations (3 percent to 30 percent) (Valadez 1999). Researchers speculated that limiting sexual contact to only Maasai might have initially been a protective factor in the prevention of HIV infection. Nevertheless, given the acceptability of extramarital and premarital sex among Maasai, the study also speculated that HIV infection would increase sharply once the epidemic hit the community (Valadez 1999).

This appears to be the case now. Although no prevalence figures are available for Simanjiro specifically, in its home region of Arusha, the number of HIV/AIDS cases has risen rapidly. The number of reported HIV cases in Arusha climbed from 10 in 1986 (less than 1 percent) to 3,948 in 1999 (19 percent) (NACP 2000). Additionally, despite over 90 percent of Tanzanians knowing what AIDS was and how to prevent it in 1994, knowledge alone did not lead to significant safe sex behavior change (Tanzania DHS 1994). Findings in other Sub-Saharan African countries

substantiate the gap between HIV/AIDS knowledge and behavior change (Ray 1998, Ezzell 2000).

Recognizing the need to assess the Simanjiro Massai population for HIV/AIDS prevention needs and appropriate strategies, the Uhai Centre, a small non-profit focused on AIDS prevention and care in Arusha, initiated and collaborated on this study. The objectives of this study were to:

1. Assess HIV/AIDS knowledge, attitudes, and practices (KAP) within the Maasai population of Simanjiro.
2. Examine the relationship between socio-cultural factors (sexual values and practices, gender inequity, migration, education) and vulnerability to HIV/AIDS.
3. Identify prevention strategies that may be acceptable within the cultural context of the target population.

This paper presents quantitative and qualitative analysis of HIV/AIDS related beliefs and behaviors and seeks to identify HIV prevention strategies that are compatible with Maasai socio-cultural norms as a method to help bridge the HIV/AIDS knowledge and behavior change gap.

Quantitative Survey Results

Demographics

Table one presents general demographic characteristics of the Maasai and, for comparison, the non-Maasai populations. Maasai women had a higher marriage rate than non-Maasai. Nearly all of the Maasai women and half of the Maasai men had never gone to school, whereas relatively few non-Maasai had never gone to school. Of the Maasai who had gone to school, it was predominantly primary school; very few had some secondary education. Christianity was much more common among Maasai females than males. Additionally, a sizable number of Maasai males reported having no identified religion.

Table 1:
Demographic Characteristics of Maasai Study Group and Non-Maasai

	N =170 (75%) **Maasai**		N = 58 (25%) **Non-Maasai**	
	N=87 (51%) **M**	N=83 (49%) **F**	N=29 (50%) **M**	N=29 (50%) **F**
Age				
15 - 24 years old	24 (28)	30 (36)	12 (41)	17 (59)
25 - 34 years old	41 (47)	29 (35)	10 (35)	6 (21)
35 - 49 years old	22 (25)	24 (29)	7 (24)	6 (21)
Marital status				
Single	30 (35)	10 (12)	12 (41)	11 (38)
Married	57 (65)	73 (88)	17 (59)	18 (62)
Education				
Never gone to school	43 (49)	71 (86)	5 (17)	4 (14)
Primary school	42 (48)	11 (13)	22 (77)	21 (72)
Secondary school (form 4 maximum)	2 (3)	1 (1)	1 (3)	4 (14)
Form 5 and higher education	0	0	1 (3)	0
Religion				
Christian	50 (58)	73 (88)	18 (62)	21 (72)
Muslim	1 (1)	0	9 (31)	6 (21)

HIV/AIDS knowledge, attitude, and practices

Table two presents knowledge, perception of stigma, and behaviors related to HIV/AIDS among the Maasai study population. Nearly all had heard of HIV/AIDS and most knew it was not curable and recognized that a healthy looking person can have HIV/AIDS. However, just half of the men and substantially less of the women knew HIV/AIDS was preventable and very few were able to identify more than one prevention technique. More than a third had the misconception that mosquitoes can transmit the disease.

Regarding stigma, about one-third would tell someone if they had HIV/AIDS. However, significantly more men than women indicated it would be safe for them to care for someone with the disease (chi-squared p. <.01). One-third of males and fewer females stated that they have known someone with HIV/AIDS.

Less than a quarter of men and women reported people in the area as changing sexual behavior because of HIV/AIDS. However, about two-thirds of both men and women reported changing their own sexual behavior to prevent HIV/AIDS.

Knowledge of condoms was high among men yet significantly lower for women (chi-squared p.<.01). Less than a quarter of men and very few

women had ever used condoms. Nevertheless, a large number would consider using a condom.

Table 2:
Selected HIV Knowledge, Attitude, and Practice Characteristics Among Maasai

	N =170 Maasai	
Note: Figures based on 'yes' responses	N=87 (51) **M**	N=83 (49) **F**
Knowledge:		
Ever heard of HIV/AIDS	85 (98)	83 (100)
Is HIV/AIDS preventable	45 (53)	32 (39)
Could cite more than one prevention technique	27 (31)	15 (18)
Is it possible for healthy looking person to have HIV/AIDS	67 (80)	65 (78)
Can AIDS be cured	5 (6)	5 (6)
HIV/AIDS is transmitted by:		
Mosquitoes	29 (34)	31 (37)
Sexual intercourse	82 (98)	77 (93)
Attitudes Related to Stigma:		
Would you tell anyone if you thought or knew you had HIV/AIDS	33 (39)	27 (34)
If member of your family is suffering from HIV/AIDS would it be safe for you to care for him/her at home	64 (77)*	48 (59)*
Know someone who has/died of HIV/AIDS	26 (31)	15 (18)
HIV/AIDS Risk Perception:		
Do you think others here are making changes in their sexual behavior because of HIV/AIDS	21 (25)	15 (18)
Have you changed your behavior to prevent getting HIV/AIDS	56 (67)	53 (64)
Condom Knowledge and Practice:		
Knowledge of condoms	81 (96)*	64 (78)*
Ever used a condom	20 (24)	10 (14)
Would consider using condom	55 (67)	43 (59)
*p.<.01		

Sexual values

Table three presents data on current acceptable relationship and sexual practices among the Maasai. Over 90 percent of men and women agreed that it was okay for women as well as men to have extramarital partners. A small number said a man could be satisfied with one wife and no other partners.

Gender inequity

Factors associated with gender inequity are also presented in Table three. Nearly all agreed that women were unable to protect themselves from getting a Sexually Transmitted Disease (STD) if their husband had a STD. In terms of economic power, about 80 percent indicated that compared to five or ten years ago, women were more able to keep the money they earn from small enterprises such as selling milk, but nearly all reported that women were unable to sell livestock, which is the main commodity.

Table 3: Sexual Values and Gender Inequity Among Maasai

	N=170Maasai	
	males	**females**
Note: figures are 'yes' responses		
Is it okay **for men** to have sexual relations outside of marriage	82 (97)	78 (94)
Is it okay **for women** to have sexual relations outside of marriage	80 (94)	75 (91)
Can a man be satisfied with one wife and no other sexual affairs	13 (15)	15 (18)
Can a woman protect herself from a STD if husband has STD	4 (5)	2 (2)
Compared to five or 10 years ago, are women more able to: Run a small business and keep the income (i.e. selling milk, handicrafts)	72 (83)	66 (80)
Sell (and keep the money) or give away livestock (primary income)	2 (2)	4 (5)

Perceived cultural and social norm changes over the past decade

The Maasai were asked about changes in norms over the past decade and responded with either *less, the same, or more.* Forty-eight percent of men and 64 percent of women reported less *esoto* (evening dance gathering for youth involving sexual play). Not quite half of men and women reported more old men marrying young women.

Men and women agreed that men were doing more non-pastoral work and going to cities and mining areas more. Over 70 percent said men were generally gone one month or longer at a time. In addition, over 90 percent reported men drinking alcohol more and 97 percent said it was a problem in Simanjiro. Over two-thirds perceived more women engaged in sex for money or gifts. When asked if people discuss the risk of HIV/AIDS with partners, about 40 percent said people do not talk about it at all. More than

96 percent reported the rate of circumcision was the same or higher and over 80 percent reported polygamy as the same or more common.

Associations

Tables four, five, and six illustrate certain associations found between Maasai demographic and behavioral factors and HIV/AIDS knowledge, beliefs, and behaviors. Study participants with some schooling were much more likely to know AIDS was preventable, to feel safe caring for a person with AIDS, and to have ever used a condom. Maasai who knew someone who with HIV/AIDS were also much more likely to tell someone if they knew they had HIV/AIDS, and were also more likely to have ever used a condom. There was a significant association between residing in a mining area and certain behaviors, including substantially less esoto practice, reduced stigma, and less condom use.

Table 4: Associations Between Having Ever Gone to School and HIV Related Knowledge, Beliefs, and Behaviors Among Maasai Men and Women

Those that have ever been to school were:	n	Odds Ratio	95% C. I.
4.4 times more likely to know AIDS was preventable	39	4.45	2.17 - 9.11
2.5 times more likely to feel safe caring for someone with HIV/AIDS	42	2.55	1.08 - 6.03
2.5 times more likely to have ever used a condom	16	2.55	1.13 - 5.73

Table 5: Associations Between Knowing Someone with HIV/AIDS and HIV Related Knowledge, Beliefs, and Behaviors Among Maasai Men and Women

Those that know someone with HIV/AIDS were:	n	Odds Ratio	95% C.I.
4 times more likely to tell someone if they thought or knew they had HIV/AIDS	24	3.97	1.84 – 8.56
2.4 times more likely to have ever used a condom	12	2.38	1.01 – 5.61

Table 6: Associations Between Residing in a Mining Area and HIV Related Knowledge, Beliefs, and Behaviors Among Maasai Men and Women

Those that reside in mining areas were:	n	Odds Ratio	95% C.I.
14 times more likely to report less *esoto*	39	14.11	1.79 - 110.7
2.3 times more likely to tell someone if they thought or knew they had HIV/AIDS	23	2.34	1.14 - 4.83
5.6 times more likely to feel safe caring for someone with HIV/AIDS	41	5.63	1.85 — 17.13
2.2 times more likely to know someone has or has died of HIV/AIDS	17	2.15	1.00 — 4.66
.34 times less likely to have ever used a condom	5	.34	.12 — .96

Key Informant & Qualitative Survey Results

Relationship and Sexual Practices

Most informants reported men having between 1 and 10 wives, with 3 or 4 considered normal. As one defined it: "*Many have one wife, this is very poor. Three wives is not so much wealth. Six wives is many. Ten wives is very many, rich* (K#5, M, age 45)." Informants and respondents concurred that it was okay for both men and women to have partners outside of marriage, although women do so in secret.

Girls reportedly begin sexual activity as young as the age of 10; typically becoming first involved during esoto. Informants described the ritual of esoto as an evening gathering for youth only, specifically for intoyie and ilmurran. They share milk, sing, dance, and eventually the evening leads to sexual activity.

Girls attend esoto before circumcision (circumcision takes places generally between the ages of 12 and 14). Girls enter womanhood after circumcision and are eligible for marriage. Informants reported that virginity was not desirable and can lead to fines imposed on a wife's family. Boys do not begin sexual activity until after circumcision (early to late teens) when they become warriors, at which point they can attend esoto. "*Girls begin sex at about 10 years, so long as she go to esoto, we keep an eye on how she is growing - having hips to attract man.* (K#5, M, age 45)."

Informants indicated that Maasai rituals are largely unchanged; however, they mentioned that esoto has become a little less common. Nonetheless, there was a strong sentiment that HIV/AIDS was not the reason why it was being practiced less. Business opportunities in urban and mining areas were noted as the primary reason for its decline as well as the rise in influence of the church and education. Informants and survey comments revealed that youth tend to see the practice of esoto as meaningless and choose themselves not to participate.

Protection from HIV/AIDS

Informants consistently said few people recognized HIV/AIDS as a problem in Simanjiro and that the community was doing nothing to protect itself from the disease. AIDS awareness seminars began in the area recently, but were reportedly infrequent and were not held in the remote areas. A clinic in the area distributes condoms for free and a key informant from the clinic stated, "*The non-Maasai come here asking for condoms. We dispense to men mainly for STDs and AIDS. Very few women come, but they use for family planning.* (K#8, F, age 40)."

Maintaining Maasai culture while preventing HIV/AIDS

Key informants conceded that if the Maasai could return to the old ways of not mixing with other tribes they would be okay, but they also overwhelmingly acknowledged that this was not possible. Many reported that they knew condoms were a method to keep the culture and prevent AIDS. *"Tell them to use condoms, because if you tell them not to have sex, they don't respect you* (S#158)."

Behaviors change to prevent HIV/AIDS

Informant interviews and survey responses yielded a number of specific ideas as to changes that would help protect the Maasai from HIV/AIDS: create awareness; combine the efforts of the village chair, *laigwani* (age group leader for men), *laibon* (spiritual leader), politicians, religious leaders and team of educators; convey that HIV/AIDS is a problem among Maasai; show people who are sick with AIDS; emphasize condom use; promote fidelity; and provide constant HIV/AIDS awareness.

Problems promoting condom use

According to informants, a lack of condom awareness persists in the community. Although people have heard of condoms, they have never seen or been instructed on condom use. *"Lack of instructions contribute to Maasai refusal to use condoms* (K#6, F, age 32)." *"Hear it on the radio, but no instructions* (K#7, M, age 55)." Many also mentioned issues relating to negative attitudes towards using condoms, for instance: "*Ilmurran don't understand prevention. Ilmurran wouldn't agree to condoms, they would beat you with stick. Men who wear condoms don't tell the girl* (S#74)."

Gender Inequity in Sexual Practices

Informants clearly indicated that the ability to refuse or to negotiate safe sex largely depends on the type of relationship a woman is in. In spousal relations, women have no sexual power and cannot make demands or negotiate safe sex with their husbands. However, informants also stated that Maasai men were receptive to condom use when with non-Maasai partners. The only times a woman can successfully refuse sex or negotiate safe sex were if they were propositioned by an age-mate of her spouse's or while seeing a non-Maasai man.

A few informants offered hope regarding women's ability to negotiate safe sex: *"It is possible because no one wants to die, there just hasn't been any efforts to teaching them how and when* (K#7, M, age 55)." *"Women need practical advice on how to bring it up* (K#1, M, age 46)."

Condoms were associated with prostitution and a lack of trust in a partner. As a result, women remain fearful to bring condoms up because of the negative stigma and anger the proposition may invoke.

The drinking problem

Drinking was a substantial concern in the area. Individuals described it as a problem because men sell livestock to buy alcohol, leaving the family without resources. Respondents frequently stated that after drinking men can become quite violent and beat their wives. Often women go home to their parents after being beaten; meanwhile their children remained unattended at home. It was also clear that men were the drinkers, not women. It is shameful and unacceptable for Maasai women to drink, and only the very old women have social approval to drink. It was also noted that drinking leads to riskier behavior: "*Drinking is a big problem, men beat their wives and children and sleep with women with no precautions* (S#227)."

Current events and news

News was primarily heard through the *lomon* (traditional Maasai way of greeting and information sharing through conversation). Secondary to lomon was radio, meetings, and seminars. Standard HIV/AIDS messages were heard predominantly through seminars. Informants felt the messages created fear, but not behavior change in the community.

Treatment for HIV/AIDS

Informants and survey respondents reported that the health clinic or hospital was the first place people would seek care for HIV/AIDS. Yet, it was also noted that from a young age, every Maasai learns to self-treat illnesses with various herbs and roots from the land. Depending on clinic distance or fees and the seriousness of an illness, people may attempt traditional modes first and then pursue a health clinic.

Traditional cure for HIV/AIDS

Nearly all respondents and informants knew there was no cure for HIV/AIDS. However, the few who reported otherwise, acknowledged traditional methods to cure HIV/AIDS: for women a second circumcision and for men *olpul* (traditional Maasai feasting camp for men). Both of these methods are used to treat a number of illnesses among the Maasai.

Influential people among the Maasai

Males

Several key informants mentioned that mothers had the most influence over sons up until they were circumcised and become men. Once men, fathers and laigwani, age-group leaders, become the most influential. "*Mothers teach boys about manhood. Before circumcision mother is greatest influence, after that the father is more* (K#2, M, age 49)." "*Most likely to be listened to on HIV/AIDS is the laigwani of their age group, the laigwani will call a meeting and say we must do this and they will follow* (K#4, F, age 38)." Above all, the laigwani of each age group in a community is noted as the most influential among men of all ages. Additionally, respected and wise men were also noted as influential

Females

Among intoyie, girls who were not yet circumcised, the most influential were either women who had recently been circumcised and who were just slightly older than the intoyie, and mothers of intoyie. However, for adult women it was female leaders who were selected by women such as the chairs of women's groups, and older, intelligent adult women. Although old women were respected in the community, they were not considered influential to girls or adult women.

Male and female

The laibon, a spiritual healer, was also noted as very important in community problem-solving and decision-making issues. Each community has its own laibon, however there is one laibon designated as the most powerful and influential in Simanjiro. This particular laibon was an interview respondent and firmly believed in the traditional Maasai cures for AIDS and said there was no way to prevent AIDS.

Study Limitations

This study has several limitations. Subjects appeared more comfortable and forthright answering questions about community behaviors versus their own personal behaviors, which should be kept in mind when reviewing study results. Survey questions that dealt with level of HIV/AIDS risk seemed particularly difficult for respondents to comprehend and answer. Teenage respondents, particularly uneducated females, tended to be very inhibited with their answers. The Maasai sample size was small and the area covered was large and remote; this may affect how representative the study findings are for the area. The sample size was also not large

enough to look closely at sub-samples or to conduct multivariate analysis. The Maasai do not typically keep track of their age; as a result, study subjects gave age approximations. Lastly, this study population represents Simanjiro Maasai and may not be representative of all Maasai.

Discussion

Both the quantitative and qualitative results in this study of the Maasai in Simanjiro revealed a deep lack of HIV understanding, negative stigma against those with the disease, little behavior change, and little practical condom knowledge. Nevertheless, there was an encouraging willingness to consider behavior change. Having a formal education and knowing someone with HIV/AIDS appeared to heavily influence reduced stigma and behavior change that involved safer sex practices such as condom use. There were few perceived changes in Maasai socio-cultural norms related to sexual practices and gender inequity that would help protect them from HIV/AIDS and there were notable increases in migration, non-pastoralism, and drinking that led to increased HIV/AIDS risk. The Maasai offered important information regarding how to utilize their influential leaders and community members to bring HIV knowledge and safer practices to the Maasai.

The Maasai study population's lack of ability to identify multiple HIV/AIDS prevention methods may be explained by both the lack of educational interventions in the remote area and a general feeling of inability to prevent AIDS given the social norms. Quantitative study findings illustrated a link between knowing someone with HIV/AIDS and reduced stigma. For instance, in mining areas where HIV/AIDS was more pervasive, individuals were more likely to know someone affected and subsequently reported less stigma. However, in the rural areas where the disease was less widespread, there was more stigma.

HIV infection is not a visible condition; it can remain invisible for a long time before AIDS symptoms appear. As a result, the rural communities may not grasp it as a present threat, yet they remain fearful of the pandemic reaching them. Quantitative findings also demonstrated a link between knowing someone with HIV/AIDS and behavior change such as condom use. However, when education was controlled for, the association between knowing someone with HIV/AIDS and condom use disappeared (chi-squared p. =.04 drops to p. =.09). Therefore, having a formal education may be more of a predictor of condom use than knowing someone with HIV/AIDS. The value of education was evident: those in this study who had been to school, even just primary school, reported a

deeper understanding of HIV/AIDS, less stigma, and safer sex practices.

Perceived changes in social norms linked to HIV/AIDS vulnerability in this study included sexual values and practices, gender inequity including negotiation skills, migration, and formal education.

Changes in sexual values and practices

The only substantial change in culturally based sexual practices was a reduction in esoto. However, an extensive number of respondents stated that individuals who forego the practice have replaced it with business opportunities in urban and mining areas. As a result, these individuals find themselves, once again, in risky settings that are home to sex workers and other highly infected individuals. Individuals who participated less in esoto because of the influence of education and the church have reduced their vulnerability to AIDS by abstaining or limiting sexual activities.

Circumcision practices have not changed and continue to play an important role in the transition to adulthood in Maasai life. HIV prevention efforts are more likely to make an impact if strategies are aimed at reducing HIV/AIDS vulnerability by making blood contacts safer rather than focusing on eliminating female circumcision.

Polygamy, marriages between old men and young women, premarital sex, and extramarital affairs are enduring practices in Maasai culture and do not appear to be becoming less common. Polygamy is ingrained in the Maasai way of life and is an important part of maintaining and expanding one's homestead. Extra-marital affairs are widespread and study subjects overwhelmingly commented that the only difference between men and women having affairs is that women have them in secret. Virginity or fidelity continue to be unimportant in Maasai culture; moreover they are undesirable. In essence, given the social acceptance of multiple partners, people are consequently more vulnerable to HIV/AIDS because of high levels of exposure incidence.

Many respondents, particularly women, reported being Christian yet also stated that extramarital affairs were acceptable. This may reflect how much stronger Maasai beliefs and values are over Christian beliefs and values.

Migration

Gone are the days where Maasai could insulate themselves from others and subsequent diseases: migration is a reality in Simanjiro. Men are gone for long periods of time in urban settings and experiencing increased liberties. Many have reacted by keeping more girlfriends, mixing with non-Maasai,

and by drinking excessively (Zaal 1999). When they return home for visits, they bring money as expected but also unexpected diseases such as HIV/AIDS and other STDs acquired in towns. In addition, alcohol consumption is a growing problem; it diminishes sexual inhibitions and hinders the ability to adequately evaluate risks, thereby leading individuals to make poor decisions such as having unprotected sex without thinking about the consequences (Bianchi 2000).

Education

Up until the last two decades, Maasai shunned academic schooling; if a child was in school, he was not learning the herding skills essential to the Maasai way of life (Hodgson 1999, Saitoti 1986). School was a place to learn about outside ideas that were incompatible with Maasai values (Saitoti 1986). This has been changing as Maasai realize that investing in the education of youth may bring the political and economic leadership necessary to retain land and rights. Encouraging results from this study indicated that as a long-term tool, formal education might have the potential to create healthy and less risky behaviors in the population. However, changes take time, and currently most Maasai in Simanjiro, particularly girls, have never been to school.

Being unable to read and write or even understand the national language, Kiswahili, severely limits access to accurate HIV/AIDS messages and makes it difficult to comprehend an abstract disease that cannot be seen or cured. It is crucial that practical, meaningful, and acceptable HIV prevention strategies be conducted in Kimaasai.

Gender inequity & negotiation skills

It is evident that women continue to lack economic, political, and social power in Maasai culture. They are more able to sell small commodities like milk than they were before, but cattle are central to the economy and women cannot own or sell them. It is also overwhelmingly clear that Maasai women do not have the skills, ability, or social permission to discuss or initiate safe sex practices with spouses and, as a result, they cannot protect themselves from HIV/AIDS or other STDs. The combination of pre-arranged marriages and strong age group norms among the Maasai also heighten women's vulnerability to HIV/AIDS. Men marry women younger than themselves (but not daughters of age-mates). The age gap between a couple ranges from approximately 10 years for men's first marriages to 30 to 40 years for men's last or later marriages. Given the lack of choice in marriage, the youthful age of women at the time of

marriage, and the large age gap between husbands and junior wives, it is understandable that teenage wives would seek passion in extramarital relationships with men closer in age. Conversely, there were senior wives who expressed great concern about how they could protect themselves from HIV/AIDS when they knew their husband's junior wives had many sexual partners.

Like many cultures, the Maasai reported having a difficult time discussing sex with partners. Combined with the fact women cannot refuse or demand safe sex practices, it is clear that there is a large communication barrier to overcome. However, key informant findings and other studies offer hope. Informants revealed that women are unable to negotiate safe sex because they have never been taught how, and believe that once these women are taught the skills they will use them. Other studies validate this idea (Gausset 2001, Ezzell 2000). When women are taught negotiation skills through interactive methods such as role plays, songs, live dramas, radio dramas, and when provided with scripts or verbiage, they are more confident and able to bring up sensitive topics in a non-threatening manner (AIDSCAP 1997, Gausset 2001).

Recommendations for Maasai HIV/AIDS prevention programs

The importance of integrating support from the Maasai power and political structure with a comprehensive AIDS program cannot be overstated. It is apparent from other countries such as Uganda, Senegal, and Thailand that political or national support and a national strategy are essential to successfully attacking AIDS epidemics (UNAIDS 1999, Otieno 2000). The Maasai continue to structure life under traditional economic, political, and social systems (Hodgson 1999, Nangoro 1999, Fratkin 1999). Key informants identified the value of collaborating with influential leaders and using the top-down approach from within Maasai culture as a way to get Maasai to recognize HIV/AIDS as a real threat to the population and to motivate them combat HIV/AIDS in the community. Voices from the outside simply do not carry the same weight as their own people and leaders. It is important to begin with leaders such as the top laibon and other key figures in Simanjiro. These individuals can convey the seriousness of HIV/AIDS to their people and they have a wealth of knowledge and insight to offer program design efforts.

Since sexual values and practices are not changing in ways that embrace abstinence or fidelity, it is important to focus HIV prevention efforts on methods which emphasize making current behaviors less risky rather than those which seek to impose outside values. Otherwise, well-meaning

efforts will continue to alienate the Maasai by showing disregard and disrespect for their way of life. Condoms, negotiation skills, and sterile blades are, realistically, the only preventive methods that do not impose external values, and allow the Maasai to maintain their way of life in a safer manner. Furthermore, in the wake of HIV/AIDS, many Maasai recognized that their tribe is at risk of extinction and expressed a desire to practice safer behaviors such as condom use to help save their people. Negotiation skills are equally important to prevention efforts to assure that men and women can realistically negotiate condom use.

After the XIII International AIDS Conference, Dr. G.H. Brundtland, Director-General of the World Health Organization (WHO) said:

> We are certain that condoms work, particularly among those who change partners often. Experience suggests that it is easier to make sexual contacts safer rather than stop the contacts occurring at all. Men's reluctance to use them should not be used by governments and NGOs as an excuse for not promoting them. It is simple. Every man and woman should have access to - and know the importance of – condoms (Brundtland 2000).

This study population made it very clear that although they have heard of condoms, they lack knowledge of and instructions on condom use and importance. Numerous respondents who said they were willing to use a condom commented they would be more likely to try one if someone provided them with instructions. Since most have never been to school, academic and obscure instructions are likely to fail, while practical and interactive instructions (e.g., condom on banana) have the potential to make an impact.

It would be important to explore and address obstacles to condom use prior to an intensive condom campaign in Simanjiro. Condoms often have a negative social stigma because they are associated with prostitutes and lack of trust in partners. They need to be seen as a tool for everyone to protect families from a disease which places everyone at risk. Getting men to initiate or use condoms can be a big obstacle, but given men's power in relationships it is essential that efforts also focus on improving their attitudes and willingness to use condoms. Often there are reports of poor quality condoms in developing countries and this too needs to be explored.

There are also a number of realistic barriers to condoms use: people need to be able to access condoms easily, confidentially, and they need to be able to dispose of them. There are few latrines, or other disposal sites,

in rural Simanjiro. Condoms prevent infection and subsequent death, but they also prevent conception and in a culture where the number of children signifies status, this conflict needs to be addressed.

Although Maasai social values and social structures differ greatly from non-Maasai populations, they offer many avenues for effective and acceptable HIV prevention strategies. Finding those strategies begins with involving local people to find solutions, an end to which this study hopes to have contributed. Qualitative findings revealed an absence of widespread HIV/AIDS prevention interventions in the district and numerous respondents expressed a desire for intervention. Thus, the present time is ideal for HIV/AIDS prevention programs to collaborate with the Maasai community and to consider utilizing the following HIV prevention strategy recommendations:

- Involve Maasai leaders and influential figures in all aspects of program design and implementation.
- Recognize that abstinence and fidelity are neither practiced nor valued in Maasai culture; rather than fight a losing battle, focus efforts on making current behaviors less risky.
- Decrease HIV risk in circumcision practices by making blood contacts safer by emphasizing the importance and method of blade sterilization for each circumcised person.
- Conduct frequent HIV/AIDS awareness and prevention activities, with constant reminders; participants felt strongly that one-time seminars were not enough.
- Teach the "ABCs" during awareness raising, but prevention and behavior change efforts need to emphasize "C"(condoms) with specific messages and demonstrations.
- Explore and confront barriers to condom use in the community.
- Employ practical, meaningful, and acceptable HIV prevention strategies in Kimaasai to overcome lack of education and language barriers.
- Rely heavily on interactive mediums such as role plays, dramas, and radio dramas that increase negotiation skills between men and women in a non-threatening manner.
- Address the link between migration, drinking, and heightened HIV risk, not only to men but also to all family members during HIV awareness training.
- Exemplify willing Maasai affected by AIDS in awareness videos or take influential leaders to visit and talk with ill Maasai, so that they can

convey what they learned and saw to their people. Once personal tragedies concerning HIV/AIDS are noticeable within the Maasai, the motivation to save their people will influence change.

- Utilize mothers; pre-puberty is an opportune time for mothers to teach children about HIV/AIDS and behaving safely.
- Work towards long-term solutions:
  - Promote formal education for young Maasai boys and girls.
  - Sponsor children with educational scholarships to enable more Maasai children to go to school.

Among the Maasai, the public health interventions that are the most likely to succeed and bridge the HIV knowledge and behavior change gap are those that are compatible with the cultural context of the population. The Maasai place a high value on preserving their unique culture and HIV programs need to be respectful and non-threatening to their way of life in order to make an impact. Key elements to influencing healthier behaviors include: strong community ownership of prevention strategies, involvement of community leaders, implementing a comprehensive and highly interactive HIV prevention program focused on making current behaviors less risky, and promoting a formal education.

Appendix

Study Methodology

This was a cross-sectional descriptive study targeted at men and women aged 15 to 49 residing in the Simanjiro District. Simanjiro is predominantly Maasai; however, all residents in the area were included in the data collection of 228 individual survey interviews (170 Maasai, 58 non-Maasai) and nine key informant interviews during July 2001.

A random and representative sample of the target population of 122,000 was recruited for the survey utilizing the probability proportional to size (PPS) standard 30 cluster sampling method (Henderson 1982). Eight interviews were conducted per cluster (four men, four women). Two research teams completed comprehensive protocol and interviewing training including a pretest of the instrument in the field.

Nine qualitative key informant interviews were completed prior to the individual surveys. The questions were open-ended and focused on socio-cultural practices, community power structure, and perception of HIV/AIDS in the area. Informant selection was based on competence rather than on being representative. A village leader helped identify informants

capable of conveying in-depth, accurate knowledge of the culture and community. Informed consent was obtained.

The primary data collection instrument was a 30-minute individual survey. The survey integrated standard HIV/AIDS knowledge, attitude, and practice (KAP) questions (based on those in Tanzania's Demographic Health Survey) with socio-cultural beliefs and changes over time (adapted from Maasai anthropology readings). Participants were randomly selected and provided informed consent. All were asked quantitative questions and every third participant was asked additional qualitative questions. Survey quantitative data were analyzed using the Statistical Package for the Social Sciences (SPSS) software. Demographic characteristics were calculated for the entire study sample first described; data were further analyzed for the Maasai respondents only. Odds ratios were calculated to determine the degree of association between demographic variables and level of HIV/AIDS KAP information. Chi-squared were calculated to look at gender differences and HIV/AIDS KAP data.

Qualitative data consisted of key informant interviews and written responses from every third individual interview. Data were entered in Excel software by question number and subsequently grouped and coded by like content. Data were analyzed to identify themes among HIV/AIDS prevention related issues.

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