Migrancy, masculine identities and AIDS: the psychosocial context of HIV transmission on the South African gold mines

MIGRANCY, MASCULINE IDENTITIES AND AIDS:

THE PSYCHOSOCIAL CONTEXT OF HIV TRANSMISSION ON THE SOUTH AFRICAN GOLD MINES

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Abstract

Levels of HIV infection are particularly high amongst migrant workers in sub-Saharan Africa. This paper presents a case study of one such vulnerable group of migrants - underground workers on the South African gold mines - and highlights the psychosocial context of HIV transmission in the mining setting. On the assumption that social identities serve as an important influence on peoples' sexual behaviour, the study examines the way in which miners construct their social identities within the parameters of their particular living and working conditions. It also identifies some of the key narratives used by miners to make sense of their experience in the realms of health, ill-health, HIV and sexuality. Masculinity emerged as a leading narrative in informants' accounts of their working life, health and sexuality, and the paper examines the way in which the construction of masculine identities renders miners particularly vulnerable to HIV. The implications of these findings for HIV educational interventions are discussed.

Keywords

HIV-transmission; health education; masculinity; identity; migrancy; sexuality.

Introduction

High levels of HIV infection are characteristic of a range of unstable and/or economically disadvantaged social settings in the southern African region. The life situation of migrant workers in a range of contexts renders them particularly vulnerable to HIV (Hunt, 1989). The situation on the South African gold mines is no exception to this general rule. Levels of HIV infection are high amongst mine workers, with heterosexual sex being the main form of transmission of the virus (Jochelson, Mothibeli and Leger, 1991; Williams and Campbell, 1996). The gold mines currently employ about 350 000 male workers, 95% of whom are migrants, some from rural areas within South Africa and others from surrounding countries such as Lesotho, Botswana and Mocambique. The vast majority of these workers are housed in single sex hostels close to their workplaces. In the interests of exploring the psychosocial context of HIV transmission amongst vulnerable migrant communities, this paper examines the social identities of a sample of underground workers on a gold mine in the Johannesburg area, drawing on detailed interviews with 42 workers. Based on the assumption that social identities play a key role in shaping peoples' sexual behaviour, the paper illustrates the way in which this group of miners' identities are shaped and constrained by their living and working conditions. It also identifies some of the key interpretative repertoires used by informants in providing an account of their experiences of health, ill-health, HIV and sexuality.

In the absence of prophylactic drugs or vaccines, HIV interventions on the mines take the form of the treatment of sexually transmitted diseases (which increase the transmission of the virus) and the treatment of diseases such as tuberculosis (which increase mortality and morbidity among HIV positive people) as well as health education programmes which aim to change peoples' sexual behaviour. This paper is informed by a particular interest in the social psychology of health education and behaviour change. Some gold mines are putting great effort into developing a range of innovative and creative HIV-awareness and educational interventions. Others still rely on traditional information-based awareness programmes such as videotapes and lectures, designed to impart information to a passive target audience (Crisp, 1996;

Macheke, 1996). The conceptual underpinning of such information-based educational programmes is the ubiquitous KAP (Knowledge-Attitudes-Practices) model. According to the KAP model, health-related behaviour is determined by an individual's knowledge and attitudes. Thus if people know that AIDS is a deadly disease, and that using condoms will diminish their chances of getting it, they should be more likely to use condoms. Within this framework, information-based education programmes seek to change peoples' *behaviours* through providing them with *information* or *knowledge* about the dangers of particular kinds of behaviour.

Despite the assumption made by the KAP model, research has found that even people with relatively high levels of knowledge about HIV/AIDS often indulge in high-risk sexual behaviours (Campbell and Williams, 1996). Information alone has thus not proved sufficient to bring about consistent changes in behaviour. If factual knowledge is merely one determinant of behaviour, a challenge for those interested in bringing about changes in sexual behaviour is to develop understandings of other co-determinants of high-risk HIV-related behaviours and to develop more innovative attempts to bring about behaviour change (Mechanic, 1990; Kippax and Crawford, 1993; Zwi and Cabral, 1991).

Critics of the KAP approach have warned of the limitations of reducing sexuality to a series of isolated and quantifiable items of behaviour (e.g. whether people use condoms or not; how many sexual encounters a person has per month). They argue that sexuality consists not of isolated items of behaviour, but of a complex of actions, emotions and relationships, "whereby living bodies are incorporated into social relations" (Kippax and Crawford, 1993, p. 257), and which are too complex to be apprehended using quantitative research alone. According to Stockdale, "Sexual behaviour is inextricably linked with the norms characteristic of the social groups with which we identify. These norms shape the boundaries of permissible behaviour and define the limits of deviance." (1995, p. 46) In this paper, it will be argued that explanations of why people engage in high-risk behaviours involve an understanding of their social identities and of the social conditions within which such identities are constructed. Thus for example, investigations of a number of heterosexual settings have suggested that the dynamics of condom use or non-use can not be understood

without taking cognisance of a context in which men see their virility as compromised by using condoms, and women are reluctant to insist . Within such a social setting, simply telling people to use condoms will have little effect, because it ignores the broader social context of masculine and feminine identities which makes the negotiation of condom use a far more complex process than KAP-type models would suggest. It is on the basis of the complex psychosocial dynamics of sexuality that qualitative research has been identified as a top priority in understanding the psychosocial context of HIV transmission in Africa (Ankrah, 1989; Scott and Mercer, 1994).

Methodology: identities, repertoires and behaviours

The theoretical starting point for the research in this paper is the sub-discipline of social psychology, and more particularly Social Identity Theory/ Self-Categorisation Theory (SIT-SCT) in the Tajfel-Turner tradition (Hogg and Abrams, 1988; Tajfel, 1981; Oakes, Haslam and Turner, 1994), which holds that the social self consists of a loose association of *self-categorisations* or *group memberships.* Theorists in the SIT-SCT tradition have tended to focus much of their attention on the psychological processes underlying group formation, focusing on the cognitive and motivational processes involved in identity formation, while paying relatively less attention to the content of specific identities or the role played by day-to-day life situations in the shaping of identities. However, a more recent development of the theory has focused on the way in which such cognitive and motivational processes are structured within dynamically changing social contexts (Campbell, 1995a). It has been suggested that different group memberships are associated with different sets of *recipes for living* and are shaped in the context of particular *life challenges.* Recipes for living consist of (a) sets of behavioural possibilities and constraints; and (b) repertoires of interpretative frameworks through which all behaviour and experience are mediated. In this model, identity is never static, but constantly constructed and reconstructed in response to the *life challenges* posed by the relevant social and material worlds. The concept of life challenges highlights the situation-dependent and context-specific nature of social identities. Identities are a socially negotiated and flexible product, constructed in dynamic interaction with those around us[1].

Miners in the current study categorised themselves in terms of a range of informal *group memberships* including collectivities of underground work-team mates, hostel room-mates, "home-boys" (fellow workers from the same geographical place of origin), as well as rural homestead communities, family groupings and so on. This paper will examine the way in which social identities are shaped in response to the *life challenges* of work, leisure and interpersonal relationships within the particular living and working conditions of the gold mines.

Gender ideology saturates many of the group memberships constituting social identities across a broad range of situations, with gender often serving as an important organising principle in the process of social identity construction (Campbell, 1995b). Against the background of this conceptualisation of identity, one of the key issues that emerged in the present study was the way in which the social construction of masculine identities within the dangerous and socially impoverished context of life on the mines presented mine workers with a particular repertoire of sexual relationships and practices. The argument is developed with reference to data from a recently conducted study into mineworkers' perceptions of health and illness. This study was conducted on a Johannesburg gold mine in early 1995 under the auspices of the Epidemiology Research Unit, and involved semi-structured, open-ended interviews with 42 Zulu, Xhosa and Sotho-speaking underground mineworkers. Interviews were conducted by the author, together with a multi-lingual team of co-interviewers. The interviews were on average three hours long, and aimed to elicit informants' life histories with particular focus on their experiences and perceptions of health, healing, sexuality and HIV/AIDS (see Campbell and Williams, 1995, for a copy of the interview protocol). This life history approach was chosen because it corresponded with the view of social identity as a resource that people draw on in constructing narratives which provide meaning and a sense of continuity in their lives, and which guide their actions. Eliciting such life history narratives should throw light on the social context in which the social and sexual identities which inform sexual behaviour are constructed, and help to draw out the socially negotiated interpretative reportoires which shape and constrain such behaviour.

Miners' perceptions of health and HIV/AIDS

On the mine where the interviews were conducted, management was making strenuous efforts to educate workers about AIDS with educational videotapes, pamphlets and posters. Preventive behaviour was also promoted through free supplies of condoms. While one cannot generalise on the basis of 42 interviews, it was quite clear that amongst the interviewees in the present study, these information-based programmes were having only a limited effect. Each informant reported having seen the mine's educational videotape on HIV/AIDS; each was also aware of the pamphlets and posters, and of the free supply of condoms. Every person said that HIV/AIDS was transmitted during unprotected sex, and that condoms would prevent its transmission. Most people said it was incurable. Beyond these basic facts, however, peoples' knowledge of HIV/AIDS was patchy, and often contradictory. (Macheke and Campbell, 1995, provide a more detailed account of inconsistencies and ambiguities in this group of informants' perceptions of HIV/AIDS.) Many said that while they had heard of HIV/AIDS they remained unsure about its existence because they had never seen anyone suffering from it. Certain informants asserted that the disease did not exist, that it existed in countries to the North but not in South Africa, or that it could be cured by traditional healers. They cited the major symptoms of HIV/AIDS as sores on the body, and when asked to estimate the time lapse between infected sexual contact and appearance of sores, informants often answered in the region of 2 weeks to 2 months. Most significantly, for all their exposure to the educational materials, in our sample of informants, unprotected sex with multiple sexual partners (frequently commercial sex workers) appeared to be the norm rather than the exception.

In the interviews, informants articulated a notion of health that was more holistic than that of the biomedical model that dominates western thinking about HIV/AIDS. They characterised health in terms of a harmonious balance between person and environment. The person was conceived of as an interaction of physical, mental and spiritual/supernatural imperatives. The environment included the living environment, working environment and social environment. They were comfortably located within a plurality of healing systems, moving between these without tension or sense of

contradiction, oscillating between representatives of western biomedicine (hospitals, clinics, pharmacies, private general practitioners) and traditional healers (diviners, herbalists and faith healers) (Abdool-Karrim, Ziqubu-Page and Arendse, 1994).

Informants took the biomedically-biased information they were presented about HIV/AIDS (by people they saw as representatives of the western biomedical establishment), and interpreted it through a filter of health knowledge and experience in which western biomedicine plays only a partial role. This filter led certain of the workers we spoke with to treat the claim that HIV/AIDS was incurable with a certain degree of skepticism:

> Interviewer: Is there anything that the traditional healers or Western doctors can do to help, once one gets AIDS? Informant: Black people can heal AIDS. AIDS is centred around sores and black people are really good when it comes to sores. Interviewer: Can they eliminate it all together? Informant: It is possible that they can eliminate the disease altogether if it is detected in its earlier stages.

If HIV/AIDS education programmes are to be effective, they must take account of a range of local knowledges and beliefs into which target audiences will insert and evaluate the information that the programmes seek to impart. Health education audiences will always engage in an internal debate between the new information presented by the educator (e.g. AIDS is incurable), and their previous information about the topic in question (e.g. AIDS is characterised by sores - and it is well known that traditional healers can deal with such sores even if hospital doctors cannot). Well-planned educational programmes need to predict the way in which old information might seek to block the reception of the new messages they seek to impart. Even more importantly, programmes that aim to change peoples' behaviour need to be informed by understandings of the way in which behaviours are shaped by socially negotiated identities within particular social contexts - issues that are central to the current research.

Based on the conceptualisation of identity outlined above, the analysis of the interviews centred on two issues. The first of these concerned the particular set of working and living conditions that make unprotected sex with multiple partners such a compelling behavioural option - a recipe for living - for this particular group of migrants. The second concerns the interpretative repertoires used by informants in accounting for their experiences of health, healing, sexuality and HIV/AIDS, since it is these repertoires that form the filter through which workers interpret and respond to health educators' attempts to change their behaviours. It will be argued that miner identities are constructed in a way that makes them particularly vulnerable to HIV infection.

Social context of identity formation: working and living conditions on the mines

As has already been emphasised, the process of social identity construction is context-dependent and situation-specific. In the interviews factors such as the general working and living conditions on the mines, the ever-present danger of accidents, and mine workers' perceived lack of control over their health and well-being repeatedly emerged as important features of the world in which mine worker identities were fashioned. *Living and working conditions on the mines* are dangerous and highly stressful (Leon, Davies, Salamon and Davies, 1995; Molapo, 1995). Firstly the majority of mine workers live some distance from their homes and families, in large single sex hostels, with up to 18 people sharing a room. Informants described compound life as dirty and overcrowded, with no space for privacy or quiet. While some facilities exist for wives and families to visit, informants said that these were extremely limited. Opportunities for leisure are few. Some workers spend time in the African townships near to the mines, others avoid them as dangerous places. From the accounts of our informants, drinking and sex appeared to be two of the few diversionary activities easily available on a day to day basis.

Even more stressful than life outside of work however, was the time spent in the mines themselves. While miners' accounts of their working conditions varied widely according to their specific job underground and according to the demands of particular production team leaders (who, some informants commented, sometimes

seemed to be more concerned with productivity than with the well-being of the team) there were many common themes. Many men said that they were expected to engage in physically taxing and dangerous work for up to eight hours with infrequent breaks, sometimes with minimal access to food or water, under conditions of tremendous heat, in air that was frequently stale and dusty, and sometimes with unpleasantly noisy machinery.

In talking about the stresses of daily life on the mines, the issue of rock-falls emerged as the central concern of most of the informants. They reported living in daily *fear of fatal, mutilating or disabling accidents.* This fear is well-based. The South African mining industry has long been characterised by an alarming accident rate. Based on the average fatality and reportable injury rates published by the South African Chamber of Mines for the 10-year period 1984 to 1993, an underground worker has a 2.9% chance of being killed in a work-related accident and a 42% chance of suffering a reportable injury in a 20-year working life (Chamber of Mines, 1993).

> Informant: Everytime you go underground you have to wear a lamp on your head. Once you take on that lamp you know that you are wearing death. Where you are going you are not sure whether you will come back to the surface alive or dead. It is only with luck if you come to the surface still alive because everyday somebody gets injured or dies.
>
> Interviewer: Do you worry about death from accidents, working underground?
> Informant: This thought scares us when something has happened - maybe to a person one knows, or even a person one does not know. You might hear that so-and-so has gone (in an accident) and you think: "Eish! our brothers are passing away", that's all. We cannot know, maybe we are also on the way, and we live in hope - and with the knowledge that it will happen to everyone sooner or later. We live for dying, no one lives forever. Every day people lose their arms and legs and we just live in hope.

Many had witnessed accidents in which friends and co-workers had either been killed or injured, or witnessed the dead or injured being brought above the ground after

accidents, and the stress and distress caused by such incidents cannot be underestimated. The psychologically disabling effects of being subject to life-threatening or shocking incidents are well-documented in the literature on post-traumatic stress, as is the fact that while some individuals are able to make a quick recovery, others suffer the after-effects for varying periods of time after the incident. Members of the latter group were amongst our sample. They reported the classic symptoms of post-traumatic stress disorder following the trauma: social withdrawal, problems in concentrating as well as flashbacks or nightmares in which they relived the shocking incident. Such flashbacks or nightmares sometimes troubled them for months or even years after the accident. Several informants talked about the disturbances at night caused by the screaming of men suffering nightmares, who would then be woken up and comforted by roommates.

Informants referred to accidents in a fatalistic way.

> Informant: The rock can just fall anytime and we try not to think about that. A rock can fall and kill someone while you are working with them, it has happened to me before .... last week someone in my team met his fate that way and we had to pull his corpse from under the stones. Interviewer: Are there any religious measures that people take before starting to work? Informant: No one prays or does such things - because when a rock is going to fall it just falls anytime and there is nothing that can be done about it.

> Interviewer: Is there any form of traditional protection that people seek out - to try to protect themselves against falling rocks? Informant: There are those that seek help from traditional healers for protection, but when the rocks fall, they fall all over, and it does not matter whether you are protected or not - they fall on those with and without the protection.

It is argued that this sense of powerlessness is an important feature of the contextual backdrop in which miners' sexual identities are negotiated. *Self-efficacy* (or the degree to which a person feels that s/he has control over important aspects of his or her life) is an important determinant of health-related behaviour. The greater one's

sense of self-efficacy, the more likely one is to engage in health promoting behaviours (Prieur, 1990). It was not only in relation to accidents that informants referred to a sense of powerlessness. In the interviews, they repeatedly articulated their lack of control in a range of contexts. For example, virtually every interviewee said he hated his job, but that he had no choice given his lack of education, high levels of unemployment and chronic poverty in his rural place of origin.

> Interviewer: Is your job easy or difficult? Informant: The work is heavy but I have endured it because I have no education. It's risky - every time I go down I am not sure if I will come back. But I have no choice. I am forced to do it.

> Interviewer: Would you say that this is a source of pride for these men that they do this dangerous and difficult job? Informant: Facing such struggles is not a source of pride. It is because of frustration and poverty that men do this job.

Many commented on their powerlessness to avoid a range of health problems. Tuberculosis (TB) was one such problem[2]. One 25-year-old man said it was inevitable that if he stayed on the mines for 20 years that he would get TB, no matter how much he tried to avoid it. A 41-year-old man who looked considerably older than his years appeared depressed and apathetic. Telling us about his recurrent bouts of TB he said he was pessimistic that he would ever be in good health again.

> Interviewer: Given the situation you working in, are there any attempts that you make to improve your health? Informant: There is nothing that I try because I don't have that privilege. Where I am living on the mines, I don't have any choice on how to conduct my life, it is imposed on me. Most of my life that I have spent here has not been so fruitful and when I look ahead, I don't see myself having a long life. Interviewer: Why do you say that? Informant: Because of my ill health and I don't spend a year without visiting a hospital. Interviewer: Do you not feel that this negative attitude might encourage you to be lazy about looking after yourself? Informant: I care about my life very deeply but I can really feel that I am suffering with my health - I

> feel that my life won't last for much longer, and that due to my working conditions I am prevented from prolonging it.

While people spoke with feeling about frightening working conditions and poor living conditions, they had little faith in their ability to bring about improvements. Complaints to unions or *indunas* seldom bore fruit. As one man commented wryly in response to a question about channels for complaint:

> Interviewer: Is there any way you can complain about things you do not like? Informant: There are several channels for complaints but we are never considered. So, we just complain for the sake of complaining.

One informant commented that the risk of HIV/AIDS appeared minimal compared to the risks of death underground, and suggested that this was the reason why many mine workers did not bother with condoms.

> Interviewer: Why is it that men think about pleasure first before thinking about their health? Informant: The dangers and risks of the job we are doing are such that no one can afford to be motivated with life - so the only thing that motivates us is pleasure.

Having pointed to features of the social context within which mine workers construct their identities, attention turns to the interpretative repertoires drawn on by mine workers in presenting their health-related life histories. It is argued that such repertoires shape not only peoples' sexual behaviour, but also their responses to HIV-education programmes that attempt to change sexual behaviours.

Health, intimacy and sexuality

Dunbar Moodie has written in detail about the role of masculinity in shaping South African mine workers' general social identities[3]. In the current study, masculinity emerged as a master narrative penetrating informants' accounts of their more specifically health-related experience and behaviours. In this section of the paper,

attention is given to the way in which the social construction of masculine identities on the gold mines makes migrant mine workers especially vulnerable to HIV infection.

Much has been written about the creative and innovative way in which mine workers have responded to the alienation and danger of their working lives, constructing personally meaningful identities despite massive social constraints[4]. Particularly evident in the interviews was the way in which masculine identities had been shaped and crafted by workers as a way of dealing with the fears and struggles of their day-to-day working lives. Men frequently spoke of their terror as new workers the first time they entered the "cage" (lift) that would carry them to their work sites up to three kilometres underground. They recounted how more experienced workers would encourage them by urging them to remember that they were men. A man was someone who had the responsibility of supporting his family and hence had no choice but to put up with the risks and stresses of working underground. A man was someone who was brave enough to withstand the rigours of the job.

> Interviewer: How did they console you when you entered the cage? Informant: They told me that in this situation you must know that now that you are on the mines you are a man and must be able to face anything without fear. Interviewer: Is this theme of being a man common in the mine? Informant: To be called a man serves to encourage and console you time and again .... You will hear people saying "a man is a sheep, he does not cry". I mean this is the way to encourage or console you at most times. Interviewer: Can you explain more about the metaphor of "a man being a sheep"? Informant: .... I can explain it this way: no matter how hard you hit a sheep or slaughter it you will not hear it cry. The animal that can cry is a goat. So, that is a comparison that whatever pain you can inflict on a man you will not see him cry.

Thus the notion of masculinity plays a key role as a coping mechanism whereby men overcome their daily fears of injury and death as well as the exhausting demands of the work. As one informant told us: "We commit ourselves as men because if we don't do it our children will suffer." Another commented:

> You show your manhood by going underground, working in difficult conditions - this shows that you are man enough to accept that if you die you are just dead. Once you go underground you are a man and no longer a child.

Closely intertwined with this notion of masculinity - which brings together the concepts of bravery, fearlessness and persistence in the face of the demands of underground work - is that of a macho sexuality, which was captured in another informant's comment: "There are two things to being a man: going underground, and going after women." Linked to this masculine identity were the repertoires of insatiable sexuality, the need for multiple sexual partners and a manly desire for the pleasure of flesh-to-flesh sexual contact. All these are factors that put mine workers at risk for HIV/AIDS. Ironically the very sense of masculinity that assists men in their day-to-day survival also serves to heighten their exposure to the risks of HIV infection.

> Interviewer: Why do you think that men have sex on their minds? Informant: I think that is the way men were made, that is to always have a desire for a woman. Interviewer: You have a family that you love and support but on the other hand you behave in a way that can make you vulnerable to diseases. Why should men behave like that? Informant: The truth is that "a man is a dog" meaning that he does not get satisfied. That is why we come across such things. Because when a man sees "a dress", meaning a woman, he follows her. Interviewer: Why do people think about pleasure before they think about their life which is at risk? Informant: The truth is that we are pushed by desire to have sex with a certain woman. We do not think about AIDS during that time but about it when we are finished. It is a matter of satisfying your body because of someone beautiful. Basically it is the body that has that desire.

Informants made a strong link between sex and masculinity in relation to their general physical and mental health and well-being. Particularly important for health was what was referred to as the maintenance of a balanced supply of blood in the body. Several people commented that sex played a key role in the regulation of a balanced supply of

blood and sperm, and that regular sex was essential for the maintenance of a man's good health. A range of possible ill-effects of poorly regulated bodily fluids resulting from prolonged celibacy were mentioned. Informants dwelt the most on mental ill-effects: depression, short-temperedness, violence and an inability to think clearly. Less frequently mentioned were such physical ill-effects as pimples and obesity. Behavioural ill-effects included recklessness and impulsive behaviour. A normally prudent and responsible man who had been celibate for too long might, it was claimed, be unable to control his desire for sex when he encountered a commercial sex worker in the street, even if he did not have a condom with him. Lengthy celibacy might also lead a man to consider homosexual relationships which he would not have considered in other circumstances[5]. Unrequited sexual urges might also lead a man to take unnecessary risks in the African townships near the mines, by seeking out women whose friends or brothers might beat him up or steal his money.

The continued practice of dangerous sexual behaviours by mineworkers must also be located within a context that *provides limited social support and scant opportunities for intimacy*. Research in both Europe and America has found a significant correlation between level of social support and safe sex. Thus for example gay men in Norway were far less likely to engage in unprotected sexual intercourse if they live in a supportive social environment. In conditions where they felt lonely and isolated, flesh-to-flesh sexual contact came to symbolise a form of emotional intimacy that may have been lacking in other areas of their lives (Prieur, 1990). Amongst American adolescents, safe sexual behaviour is predicted more by teenagers' perceptions of how much their parents care for them, than by the frequency of health warnings, social class or parents' health status (Mechanic, 1990).

This correlation between social support and risk-taking behaviour provides an interesting framework within which to consider the high levels of unsafe sexual behaviour practised amongst mine workers. Informants spoke at length about the loneliness of being away from their families. They spoke of anxieties that their distant rural wives or girlfriends might be unfaithful; of worries about their children growing up without a father's guidance; of their own guilt about money they might have wasted on drink and commercial sex which they should have sent to their families.

These absent families were never far away in their accounts of their lives and their health. Others spoke with dread of fears that they would die underground, and that their bodies might not be returned to their families for proper funeral rites, a particularly frightening prospect in a context where deceased ancestors may often play a pivotal role in peoples' lives.

While hostel room-mates, underground team-mates, and men from the same home village appeared to constitute support systems in certain contexts, informants were adamant that male friends could not make up for the loss of female partners and children within a homely domestic setting. The youngest of our informants (aged 19), also the most sexually active and least interested in condoms, spoke wistfully of his close relationship with his parents in rural Lesotho, and how much he missed them. The 41-year-old interviewee referred to earlier who had been plagued by recurrent attacks of tuberculosis for five years, ascribed his distance from his wife as one of the main reasons for his poor health.

> Informant: There is no one who can help me here and it is quite impossible for me to know all my needs. If I was nearer to my wife, she would take care of me, look after me.

In response to questions regarding their reluctance to use condoms, informants repeatedly reiterated their desire for flesh-to-flesh contact . When asked specifically about the reasons for this desire, informants referred to pleasure, and also to the fact that this was simply something that men needed: 'a man must have flesh to flesh' was something of a cliché in the interviews. Research findings cited above suggest that another reason for the desire for flesh-to-flesh contact might be the broader social context of general loneliness and reduced opportunities for intimate social relationships. The task of changing mine workers' sexual behaviour, and persuading them to use condoms, for example, cannot be achieved without attention to the broader context of sex and sexuality including the symbolic role of flesh-to-flesh contact in the face of stresses and loneliness.

In the highly patriarchal rural communities from which many mine workers originate, one of the main pillars of masculine identity construction is participation in homestead and family leadership (Dunbar Moodie, 1994). In the particular context of life on the mines, for many migrants, deprived of such key markers of masculinity on a day to day basis, frequent assertion of what are regarded as healthy and manly sexual urges could arguably serve to compensate for reduced opportunities for assertion of masculine identities in other contexts[6].

Hayes (1992) criticises the tendency in much health education literature to regard high-risk health-threatening behaviours in a negative light. He suggests that risk-taking is better conceptualised as a "wager", in which social actors weigh up potential losses and gains of those behavioural options available to them. While mine workers may be aware of the dangers of unprotected sex with multiple partners on the one hand, such behaviour may be beneficial at a range of other levels in the stressful and socially impoverished living and working environments of the gold mines.

Implications for health interventions

In this paper, working within an SIT/SCT framework, attention has been given to the way in which social identities are forged in response to the life challenges of the mining context in a manner that makes mine workers particularly vulnerable to HIV infection. In particular attention has been paid to role played by masculine identities in this process. The contexts and identities that give rise to high-risk sexual behaviours will vary from one social context to the next. Thus the applicability of the empirical material presented in this paper to migrants or other HIV-vulnerable communities in other contexts in sub-Saharan Africa is a matter for empirical investigation. It is our claim however that the paper's broader argument about the role of social identities in the task of shaping peoples' sexual behaviours, as well as promoting health-related behaviour change, has more general applicability.

One of the aims of this paper has been to illustrate the argument that high-risk sexual behaviours (such as unprotected sex with multiple partners) are too complex to be changed by simply providing people with health-related information, as traditional

health education programmes have sought to do. This is because - far from being a matter over which individuals exercise rational control as the KAP framework suggests - sexuality is shaped by a complex process of identity formation nested within the dynamic web of cultural, psychological and social factors.

Against this background, the challenge facing HIV educators is that of designing creative and innovative health education programmes that aim to do more than provide information. One successful example of such a programme is that of the peer education programme developed by Wilson and colleagues in Zimbabwe (Dube and Wilson, 1995), based on the fundamental social psychological principle that people are more likely to change their behaviour if they perceive that their peers are also committed to behavioural change (Lewin, 1958). In the workplace context, peer education is conducted by selected members of the workforce who receive training in basic health-related information, as well as training on how to facilitate discussion and debate in group settings. They are also given free supplies of condoms. Such educators are then sent back into the workforce to raise debates about the issue of HIV as often as possible in informal work and recreational settings in such a way that people are encouraged to debate new health-related information in the light of their old views, opinions and identities.

The success of this programme is consonant with the processes that have been articulated above. In terms of the social identity framework adopted in this paper such programmes succeed in changing sexual behaviour because they provide a context in which members of HIV-vulnerable groups are given space to refashion their social and sexual identities in a collective way. In such contexts people play an active role in debating the possibilities of alternative recipes for living, rather than passively listening to information presented by a relatively impersonal source in the style of more traditional health education programmes. These processes operate at the group rather than the individual level in changing peoples' group-linked sense of previously taken-for-granted behaviour through the collective renegotiation of social and sexual identities. Such programmes provide a context for the transformation of group-linked recipes for living rather than seeking to alter individual behaviours through the provision of information.

In the final instance HIV is a social problem insofar as those with the poorest health experiences the world over are generally those who come from the most disrupted social settings, and are the least constrained or protected by family and community expectations (Mechanic, 1990). HIV in South Africa is no exception to this general rule. The current research strongly supports the claim that the most important aspect of slowing down the spread of STD's and HIV infection would be to alter the broader social and material conditions which encourage high-risk sexual practices (Zwi and Bachmayer, 1990). However, such changes involve on-going long-term struggles. Given the lack of HIV drugs and vaccines, and given the speed at which the epidemic is progressing in South Africa[7], additional short-term strategies are required to deal with HIV, and the challenge for HIV educators remains a strong one.

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[1] This point has been illustrated in in relation to South African mine workers in the accounts by historians Harries and Moodie of the history of homosexual "mine marriages" on the South African gold mines, which were common prior to the 1970's. They argue that such "marriages" played an important role in consolidating a range of masculine, generational and rural identities within the hostile urban context, and they illustrate the interactional and socially negotiated nature of their evolution. The system of "mine marriages" had eroded by the 1970's. (Harries, 1990; Dunbar Moodie, 1983, 1994).

[2] The incidence of tuberculosis on South African gold mines increased from 620 per 100000 workers per year in 1988 to 1070 per 100000 workers per year in 1992. (Packard and Coetzee, 1995).

[3] Dunbar Moodie (1988, 1994) comments that an aggressive and macho masculinity forms a pillar of identity formation amongst large collectivities of working men in a range of contexts and continents, and is certainly not peculiar to southern Africa, or to mine workers.

[4] Sitas (1985) has written of the "defensive combinations" of rural, urban and protest identities that mineworkers have creatively integrated in the task of dealing with the day-to-day stresses and indignities of their lives. Moodie (1994) speaks of the "integrity" and "character" of such coping mechanisms.

[5] While homosexual relationships in the form of "mine marriages" were a common feature of life in the mine hostels until the 1970's these are no longer common. Dunbar Moodie (1994) provides a fascinating historical account of the way in which the popularity of such interactions arose, flourished, and later declined, this process being shaped by the changing face of the social and economic contexts

of peoples' lives on the mines and in the countryside. Our own informants echoed Moodie's findings, saying that homosexual relationships were not as common as they had been in the past.

6 Campbell (1992) argues that there are a range of ways in which men might seek to compensate for the loss of masculinity as more traditional patriarchal family structures (in which men had a great deal of power over women and children) are eroded. In a study of township men in Natal, where family structures are in a state of rapid transformation, she suggests that involvement in political violence (strongly associated with a macho masculinity in her research findings) might be a compensatory mechanism as the opportunities for the assertion of masculine power within the family are increasingly diminished.

[7] To date there are no published epidemiological data regarding HIV rates amongst mine workers. The only nation-wide South African data that currently exist deal with ante-natal clinic attendees. According to Kustner (1994) the doubling time of HIV infection in this group is 13 months.