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Chapter 10

Obstacles to behavioural change to lessen the risk of HIV infection in the African AIDS epidemic: Nigerian research

John C. Caldwell[a], I.O. Orubuloye[b] and Pat Caldwell[a]

[a]*Health Transition Centre, National Centre for Epidemiology and Population Health, Australian National University, Canberra*
[b]*Department of Sociology of the State University, Ado-Ekiti, Nigeria*

Abstract

This paper draws its data from the same 1998-99 study of southern Nigeria as does the previous chapter (Orubuloye and Oguntimehin, Chapter 9), but reports on 1,005 male respondents in all the four study sites. Three of these sites were urban and predominantly Yoruba in southwest Nigeria, while the fourth, in eastern Nigeria, was more rural. One of the urban studies was focused on men at hotels and bars were sex is sold, but the others were of men in the community. The study found that most men believe sex with more than one woman is inevitable and that it is often determined by uncontrollable urges. Most respondents had an adequate knowledge of AIDS, but took risks because they were not dominated by a fear of death. An explanation is offered from *health transition* theory.

We summarized earlier research[1] on the obstacles to sexual behaviour change in the shadow of the AIDS epidemic in a paper with the title 'Underreaction to AIDS in sub-Saharan Africa' (Caldwell, Orubuloye and Caldwell 1992). Later, after specific research on what we had come to feel was an area previously insufficiently stressed, we complemented it with a paper on 'Perceived male sexual needs and male sexual behaviour in southwest Nigeria' (Orubuloye, Caldwell and Caldwell 1997). This chapter reports 1998-99 research in southern Nigeria designed to test the theses advanced in the two earlier papers.

The 1992 paper (Caldwell *et al*. 1992) reported that, although sub-Saharan Africa was characterized by significant levels of sexual relations outside marriage, it also had traditions of shame about discussing sexual matters especially within the family across gender or generational divisions. The shame was pronounced when reporting AIDS infection and this had probably been exacerbated by the condemnation of extramarital sexual relations by missionary Christianity and Islam. AIDS was widely felt to be different from other diseases,

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[1] This research was first a joint program of the State University, Ado-Ekiti, Nigeria, and the Health Transition Centre, Australian National University, funded first by the Australia National University and then the Health Sciences Division of the Rockefeller Foundation. Since 1992 it has formed part of a larger research program on Sexual Behaviour, STDs and HIV/AIDS, which has also included Uganda and Ghana and which has been funded by Swedish technical aid in the form of SAREC and SIDA/SAREC. The principal investigators have been I.O. Orubuloye, James Ntozi, John Anarfi, Kofi Awusabo-Asare, John Caldwell and Pat Caldwell.

certainly associated with sin, and perhaps with the supernatural or witchcraft. Thus, many sufferers felt it to be a matter for traditional diviners rather than modern doctors.

The research identified three areas in which cultural concepts militated against change in sexual behaviour to lessen the risk of AIDS.

The first was the concept of the healthy, fortunate person, outgoing, extroverted and with an adequate sex life. Such persons' chances of HIV infection and death were believed to be small as long as they did not court ill-fortune by having self-doubts or by stultifying their sexual activities.

The second was the concept of destiny, of a proper, often a pre-ordained time, to die, which Fortes (1983) believed to be general, at least in West Africa. If it were the time to die, then changes in sexual behaviour were unlikely to be of any help; if it were not, then one could take risks with impunity.

The third, and perhaps the most important, was the stoical attitude to death. This certainly owed something to the concept of a predestined time to die. It may also have been influenced by traditional beliefs in the continued existence of ancestral spirits and reincarnation, and by imported Christian and Muslim teachings of an afterlife. But foreign Christian missionaries have often been awed by Africans' willingness to accept the timing of death, and were not inclined to put it down to their teaching.

These are remnant beliefs, but they are still influential. The degree to which they have been eroded depends largely on education which has embedded within it strong elements of modern Western culture, especially scientific attitudes which oppose every one of these traditional concepts. Nevertheless, African societies are eclectic and aspects of two cultures often co-exist. An important example in our present context is the concept of two levels of disease causation, the idea that pathogens do transmit disease as modern doctors say but that they will not cause illness or death unless other forces are also acting towards this end. These forces may be focused malevolence as with witchcraft, a loss of the vital force or determination to live, or just that the time to die has come.

Continued research in Nigeria (*cf.* Orubuloye *et al.* 1994 for the earlier research reports) led us to believe that we had omitted an important element of the total picture. Many men reported high-risk sexual activities, especially with prostitutes, not as seeking excitement or sexual pleasure, although pleasure was certainly described, but as being driven by uncontrollable urges which had to be sated. This led to the 1994-95 research reported in Orubuloye *et al*. (1997). This research showed that half of all men and one-third of all women do not believe that a man's sexuality can be confined to one woman. They believe that men are biologically programmed to need sex with more than one woman. This may have been inevitable in societies with by far the highest polygyny levels in the world. The majority of men in the research population had experienced sex outside marriage during the previous year; most wives knew of or guessed these relationships but few complained. Another social institution also encouraged extramarital relationships: in most sub-Saharan African societies, wives practise long periods of postpartum sexual abstinence, traditionally in southwest Nigeria three years and in 1971 still averaging almost two years in the city of Ibadan and two-and-a-half years in rural areas (Caldwell and Caldwell 1977). It is widely assumed that husbands will not sexually abstain for this duration of time, and that wives will neither notice nor complain about their husbands' extramarital sexual activities during this time provided that they are discreet (P. Caldwell and J. Caldwell 1981: 87-88; Orubuloye, Caldwell and Caldwell 1992).

The 1998-99 research program in southern Nigeria

During the early years of the State University, Ado-Ekiti and Australian National University sexual behaviour/STDs/AIDS program in Nigeria, HIV levels were low, probably nationally less than half of one per cent. During the early 1990s that situation began to change. HIV testing in 1995 in Lagos, the Nigerian metropolis with a population probably exceeding 10 million (United Nations 1998: 184), revealed an adult seroprevalence level of 6.7 per cent in the general population and 30.5 per cent among high-risk groups (Health Studies Branch 1998). Elsewhere, in Lagos State outside the city and two cities in the north, Kano and Maiduguri, levels in 1996 were 2.7 per cent in the general population and 60.6 per cent among high-risk groups (Health Studies Branch 1998). Surveillance carried out by the Obafemi Awolowo University Medical School in 1991-95 in the southern Nigerian provincial cities of Ile-Ife, Ilesha and Port Harcourt showed that HIV levels were rising sharply during the end of that period, so that national levels may have been around two per cent by 1995 and 3-4 per cent by 1998 (F. Soyinka, personal communication, 1998). One-sixth of the adult population in these cities were found to have active STD infections. UNAIDS/ WHO (1998) estimated for the end of 1997 a national adult seroprevalance level of 4.1 per cent, with 2,300,000 seropositive persons, 590,000 with symptomatic AIDS, and 530,000 already having died of the disease. Most Nigerians should have had contact with, or known, persons afflicted with the disease. This was, however, far from certain. What was clearer was that the Federal Government had been efficient in getting out its AIDS messages and that these were the major source of knowledge about the epidemic.

The 1998-99 **Resistance to Change in Sexual Behaviour Project**[2] was planned to test the earlier theses and to ascertain the current situation. The research program was carried out from the Department of Sociology of the State University, Ado-Ekiti, located in Ekiti State in the heart of southern Nigeria. There were four research areas, three in southwest Nigeria: Ado-Ekiti, the capital of Ekiti State (population at the 1991 census 150,000); Ibadan, the capital of Oyo State and in the nineteenth century the largest city in sub-Saharan Africa (1991 population 1,080,000); Badagry and Ojoo, western peripheral Local Government Areas of Lagos City (1991 population of the two LGAs 120,000 and 1,035,000); and a rural district of Cross River State in southeast Nigeria, Ugep Local Government Area (1991 population 210,000).

The Ado-Ekiti research differed from that in the other three centres. It focused on those hotels and bars in Ado-Ekiti which offer commercial sex, and interviewed all male customers until the quota was reached. In the other three areas, a household sample survey of adult men was conducted. Ugep, 140 kilometres north of Calabar, is a rural area with unusually high AIDS levels, ten persons with AIDS having been identified by the local hospital in the first six months of 1998 (Obono 1998). It was also the only research site without a predominantly Yoruba population, its major ethnic group being the Yakurr. The target population in each location was 250, but in fact 252 were interviewed in Ado-Ekiti, 268 in Ibadan, 251 in Ugep, and 234 in Lagos. The refusal rate was only one per cent in Ugep, typical of rural areas, five per cent in Ibadan, ten per cent in the bars and hotels of Ado-Ekiti, and 15 per cent in busier and less tolerant Lagos.

The median age of the men ranged from 30 to 35 in the urban areas and was just under 30 in Ugep. Most were not transients and median durations of residence in the centres

[2] The field research was carried out in Southern Nigeria from May 1998 to March 1999, based on State University, Ado-Ekiti, Nigeria. Folakemi Oguntimehin directed the field work at Ado-Ekiti while Oka Obono and Olaide Adeokun directed the fieldwork in Ugep and Lagos respectively. Assistance was also received from Mary Christopher during the fieldwork in Ibadan.

where they were interviewed ranged from 15 to 20 years, except in Ado-Ekiti where the median period of residence was only ten years, testimony to the town's rate of growth since it became a State capital when Ekiti State was created in 1996. The majority of respondents had at least some secondary education, as is now the case for males in most of urban southern Nigeria. Farming was an important occupation only in Ugep. The majority of the respondents were Christian although in Lagos almost one-quarter were Muslim. The majority of the respondents were married, with around 30 per cent of the married men being in polygynous unions, most confined to two wives.

This preliminary analysis will be essentially an overview of obstacles to male sexual behavioural change, focusing on comparison of findings with those reported from the earlier studies. More specific detailed studies will follow, including Orubuloye and Oguntimehin (this volume Chapter 9).

The visibility of the AIDS epidemic

The epidemic is still largely invisible. It can be detected only in its symptomatic stage because very few Nigerians know their serostatus, and even fewer would proclaim that they were HIV-positive. The fairly steep rise in seroprevalence has occurred only in the last five years and has yielded few symptomatic cases as yet. The symptomatic period is probably still, as reported elsewhere in the region, around eight months (Boerma *et al*. 1997; Caldwell 1997), and is probably often not identified as AIDS. Those who believe they have AIDS are likely to hide the fact and their families are likely to hide them. This allowed one-quarter of the men in the hotels and bars of Ado-Ekiti either to deny the existence of the disease on the grounds that it is a foreigner's myth, or to say that it had not come to Nigeria. That proportion fell to 13 per cent in Ibadan and to half that level in Lagos and Ugep where seroprevalence levels are higher. In 1992-93 studies of Nigerian prostitutes, at a time when 15-20 per cent were reported as seropositive, not one in southern Nigerian said that she knew any of her co-workers to have had AIDS (Orubuloye, Caldwell and Caldwell 1994). The sick just disappeared home.

The silence is explained not only by the fact that others might avoid them if they were known to have AIDS but by 'shame'. Asked whether, if diagnosed with the disease, they would tell anyone, 52 per cent of the Ado-Ekiti men said no, and 77 per cent said they would tell either no one or their doctor, and the latter only in an effort to get help. These figures were lower in the general population: 36 and 38 per cent respectively in Ugep, 20 and 27 per cent in Ibadan, and 11 and 34 per cent in Lagos. When asked why they would remain silent, most who asserted that they would not reveal their condition said that it was because of the shame: 90 per cent in Ado-Ekiti, 63 per cent in Ibadan, 59 per cent in Lagos, and 31 per cent in Ugep. Even more significant for the spread of the epidemic, the proportion of men who anticipated that they would tell their wives ranged from 3 to 14 per cent at the various survey sites.

This silence explains the lack of personal acquaintance with AIDS in a society where possibly four per cent of the adult population is seropositive. Outside Lagos, 20-30 per cent of respondents said they knew of someone who had died of AIDS. In the metropolis the figure climbed to 50 per cent. But what was revelatory about the whole nature of the epidemic and the reaction to it was the fact that the great majority of the respondents in the three predominantly Yoruba centres, Ado-Ekiti, Ibadan and Lagos, who could identify a person dying of AIDS cited the same person, Fela, the famous Lagos-based Yoruba musician. There are parallels here with the action of Uganda's most famous contemporary musician who returned to his native country to reveal that he was dying of AIDS. The parallel does not extend far because Fela denied that he was afflicted with AIDS or even that there was such a disease. Nearly all his family hid the cause of his death, but it was confirmed and became a

cause célèbre because his brother, a medical man and earlier Minister for Health, announced it to the press. One of the reasons that the epidemic is not taken more seriously is that people cannot identify the disease with specific deaths: the newspapers occasionally publish statistics but not the fact that fellow townsmen or well-known identities have died of the disease, and relatives are equally reticent.

The silence extends to individual relationships. Although nearly everyone has heard of AIDS, most through reading information provided by the government, discussion is rare. Two-fifths of the respondents in Ado-Ekiti, and a majority in Ibadan, had never discussed the disease with anyone. The proportion fell to one-quarter in Lagos and one-fifth in Ugep where infection levels are higher. Where such discussions have been held they were mostly with other male companions. No more than one-quarter have ever mentioned the disease to their wives, and very few, not even those with adolescent sons and daughters, have spoken of it with their children. Furthermore, most assume such lack of communication would continue if they learnt they were HIV-positive or even sick with AIDS. One in ten would tell their wives, a somewhat higher proportion at least one blood relative, and one in six a friend. Doctors are more likely to be consulted, predominantly modern doctors in the towns but traditional practitioners in rural Ugep.

Sex: its inevitability, joys and perils

The respondents' first sexual experiences most commonly occurred around 15 years of age in Ado-Ekiti and Ugep and a year or two later in Ibadan and Lagos. The number of different sexual partners over a lifetime was typically around ten and in the past year three. Half did not want to reveal how many parallel partners they had at the time of interview, while two partners typified the rest. Two-thirds of the respondents believed that men could not confine themselves to one woman for a lifetime, a figure that rose to 90 per cent among the men frequenting Ado-Ekiti's hotels and bars. These levels fell only slightly when shorter periods were specified, and little more in Ado-Ekiti and Ibadan when the condition was added that we were discussing survival during an AIDS epidemic. Significantly, the latter change was greatest in the two areas most affected by the disease, Ugep and Lagos, where 85 per cent of respondents believed that men should be able to confine themselves to one woman during an epidemic; although many did not believe this to be the present situation. Around one-sixth thought it a good idea at any time to keep peace in the home and avoid marital rifts.

Except in rural Ugep (where the figure was one-quarter), between half and two-thirds said they had experienced commercial sex. Earlier work had shown a reluctance to classify many sexual relations with a transactional component as commercial sex (Orubuloye, Caldwell and Caldwell 1991, 1992), so these figures undoubtedly refer to relations with women who have a great number of partners, many previously unknown to them. Those with such relationships in Ado-Ekiti's hotels and bars averaged six episodes over the previous year, while elsewhere the figure was two.

The reasons given for going to prostitutes agreed with the previous research on male sexual activity. Nearly two-thirds said it was necessary to satisfy an overwhelming urge: a biological necessity. Less than one-quarter explained the action as planned enjoyment. The balance was made up equally, about six per cent in each case, of those who wished to leave their wives free of sex and hence of pregnancy, and those separated temporarily from the wives by one or other of the spouses travelling. The number giving their wives' postpartum sexual abstinence as a reason was smaller than previous research had suggested, but some of the husbands so affected might have described themselves as beset by an irresistible sexual urge. The role of alcohol was less important than is sometimes suggested. Although sexual relations when visiting hotels or bars is part of a broader system of entertainment which

usually includes drink and food, and often music and dancing, fewer than one-fifth said that drunkenness explained their resort to commercial sex.

Between half and two-thirds of the men involved in sex with prostitutes report that this is now conducted with the use of condoms, the figure being high in Ado-Ekiti where there has been an experimental program offering condoms in places of commercial sex, and falling to under half in Ugep where the need is probably greatest. Nearly everyone knows that condoms offer protection against HIV infection, but in about 10 per cent of episodes with prostitutes men feel themselves to be protected because the woman assures them she is using contraceptive jellies or foams. Only about one-quarter of the male respondents believe they are at any risk of AIDS, the majority averring that they are safe because they nearly always use condoms or go only with women they trust not to take risks. This is the case even though one-quarter of the respondents admitted to having been treated for STDs, nearly 75 per cent of this group for gonorrhoea and most of the balance for syphilis.

AIDS as an unusual disease

The great majority of the respondents thought AIDS was something quite different from other diseases. It was strange, hidden, almost without symptoms, and, above all, it struck down people in the prime of life when they were not supposed to die. When asked to name diseases that could in any way be likened to it, the respondents in the Yoruba urban areas, where life expectancy is probably close to 60 years, mostly answered cancer, but in the rural southeast, where life expectancy is probably under 50 years, they said fever and cholera. Two-fifths of the respondents were convinced that AIDS did not have a supernatural aspect, but one-fifth believed it did and another one-fifth were not sure. In rural Ugep a bare majority believed there was no supernatural element. Most were referring to witchcraft or the casting of spells; this is significant in two ways. The first is that the way to protect oneself or to achieve a cure might be to go to a traditional diviner and then follow his instructions, rather than go to a modern doctor. The second is that, if AIDS is caught only when malevolent powers are at work as well as when you are at risk of infection, then 'high-risk' sexual behaviour involves little risk if no one is at the time plotting against you. When asked directly whether AIDS was the product of witchcraft, only 7-12 per cent answered that it was, the proportion being highest among the least educated and more traditional. Among adherents of the imported religions, Christianity and Islam, there is also a spiritual interpretation. Half the respondents believed that AIDS had been sent to scourge those who were sinning. It is a punishment, in the words of the evangelical preachers, for fornication and adultery, and more generally for disobeying the instructions of the holy books.

Knowledge of AIDS

Nearly everyone had heard of AIDS and most had read about it. Those who had done so generally believed the messages, on the grounds that government information about such matters is usually right. The proportion who knew or had known someone with AIDS ranged from three per cent in Ado-Ekiti to 13 per cent in Ibadan, 20 per cent in Ugep and 50 per cent in Lagos, which might be expected from its incidence. Half the persons known to have AIDS were relatives, but often distant ones not living close by. There seemed to be a lack of immediacy about many of the replies, suggesting that respondents had not experienced the direct effect of being associated with painful deaths, and had not attended funerals.

Around one-quarter of the respondents, rising to one-third in Ugep, had been convinced that they were in some danger of HIV infection. They all cited the same grounds for worry: a risky sex life with some high-risk partners and some sex with these partners not

protected by condoms. The majority who believed that they were not at risk stressed their use of condoms with high-risk partners and their trust of other partners. Less than 10 per cent either denied the existence of AIDS or put their faith in cure. There is no doubt that the government AIDS campaign has increased condom awareness. It may have gone too far in the sense that there is very little scepticism about the condom's complete effectiveness.

The message is less effective in portraying AIDS as a deadly, inevitable disease, partly because Nigerian newspapers frequently report 'cures', often discovered by traditional medical practitioners. Only 80 per cent of respondents (lower in Ibadan and Lagos and higher in Ado-Ekiti) thought the disease usually fatal. Many believe it is not so if the proper treatment is identified: over half the respondents in Ado-Ekiti and Ibadan, falling to one-quarter in Ugep and Lagos where the epidemic is worse. Among those who believe in the possibility of a cure, approximately half put their faith in modern medicine and half in traditional medicine. This reliance on traditional medicine is somewhat greater than it is now for most ailments. One reason is that modern medicine has been readier to proclaim its helplessness. But another is, as is true across the continent, that the reproductive organs and processes have always been regarded as so fundamental that they were, and partly remain, a special province for traditional medicine and divination.

Destiny

The 'Underreaction to AIDS' paper placed a considerable emphasis on destiny or predestination, the concept that the timing of death is pre-ordained. It might be closer to the Yoruba position to say deaths are normally to be expected in infancy or old age, but are suspect in the prime of life. Such deaths may have been pre-ordained or they may be caused by malevolent forces. In either case they are difficult to avoid merely by changing one's sexual behaviour.

It is a male's destiny to need more than one woman and to be seized from time to time by irrepressible sexual urges. But the area where destiny is most significant is in the cause of death. Most of the respondents believed that there was an inevitability about both the fact of death and when it occurs. This was especially the case among the men who frequent Ado-Ekiti's hotels and bars. The concept of destiny remains an obstacle to sexual behaviour change.

The fortunate person

There is also a concept of persons in command of their lives, at the height of their powers, forging forward without doubt and creating their own good fortune. This situation may arise from their being healthy and fortunate, but their personality and behaviour can go far towards creating their health and luck.

Around one-quarter of the respondents, rising to one-third in Ado-Ekiti, believed that, irrespective of his sexual behaviour, a healthy man is likely to be protected from getting AIDS. Nearly 20 per cent, rising to almost 40 per cent among Ado-Ekiti's frequenters of hotels and bars, believed those who get AIDS are those who concern themselves with the disease, and worry about being infected. Thus, from this viewpoint, it ironically might well be the truth that those who listen to the AIDS educational messages and take preventive measures are those who thereby undermine their own self-confidence and render infection more likely.

Attitudes to death

Perhaps the most important finding of the study was a surprisingly robust attitude towards death. There is an acceptance of the fact of death and a willingness to accommodate its timing which is striking and which may tell us more about lack of sexual behaviour change than any other finding. The same observation has been made anecdotally in East and Southern Africa to explain the limited behavioural change during the epidemic (Caldwell *et al.*1992).

Only one-fifth of all respondents said that they were afraid of death. Of the rest, over half explained their position by saying that it was not yet time for them to die. Some spoke of destiny and of a destined time for their deaths but most knew from their own health and spirit that their time had not yet come.

One reason advanced for this stance is that the society is very religious. Nearly everyone goes to either church or mosque, and preachers talk endlessly of the afterlife and the joys to come. There is a widespread assumption that everyone believes in this afterlife and is comforted by the conviction, indeed that religion itself might be a bulwark against behavioural change. Yet this is hardly a correct picture of southern Nigerian society. A large minority of all respondents said that they did not believe in an afterlife, and only one-quarter said that it was their belief in survival after death that accounted for their lack of fear of AIDS or their continuing risky sexual behaviour.

It is difficult to account for this scepticism. Traditional Yoruba religion did not believe in an afterlife in the Christian or Muslim sense. The male ancestral spirits lingered as long as the proper rites were performed and they were remembered, but they were destined to fade away and join a kind of group mind of ancestors where they could neither think nor act as individuals. There were cults, notably *Sango*, which sought to maintain that individuality, but they did not incorporate the majority of the population. There was a belief in the rebirth of the dead in the form of their own descendants, a concept that is far from extinct, but the reborn carried with them no memory of their previous life. Perhaps the scepticism is part of a broader questioning of sworn truths and institutions, especially the imported colonial ones. Most southern Nigerians have at least partly broken with the imported missionary churches with their fixed creeds and adhere to Nigerian evangelical churches which have as many interpretations of the Scriptures as there are preachers, although probably all hold that there is an afterlife. But the fluidity of religion may mean that many in the congregation place a greater stress on this life than the next. In any case, the congregations are increasingly female, and the absence of many of the males may be evidence of a degree of disbelief.

The scepticism about an afterlife may be further testimony that the majority of men believe that it is life, not death, which is important, and that life is here to be lived and enjoyed and not overshadowed by fear of death or by a life controlled and constricted by efforts to forestall death. It is not a philosophy likely to bring about rapid sexual behaviour change even in an AIDS epidemic.

The future

An AIDS epidemic seems to be developing in Nigeria, although there is no evidence as yet that it will reach the levels of the East and Southern Africa epidemics. The evidence for the progress of the epidemic in Nigeria rests on scattered testing and the paucity of hard data is astonishing. Few Nigerians have had close contact with AIDS deaths. Part of the reason is that the HIV levels began to climb only from 1994 or 1995 and adult prevalence is still not above three or four per cent. The recency of the rise means that most deaths resulting from the higher HIV levels have not yet taken place. In addition, shame and fear of causing alarm or hostility among friends and neighbours leads to individuals not telling their relatives, and

families closing in on themselves when symptoms develop or even when deaths take place. Very few Nigerians have been buried with the mourners knowing for certain that the cause of death was AIDS.

Change is coming but not fast enough to be a major factor in turning back an AIDS epidemic. There is a rise with education level in every measure in the study of likely faster reaction to the epidemic, the awareness of the dangers of unprotected sex especially with high-risk partners, the possibility of men being satisfied by a companionate relationship with one woman, the incurability of the disease and the inability of modern medicine to cope with it.

There has been one kind of behavioural change. Condoms, which were almost universally abhorred in West Africa only a decade ago, are now reported as being frequently used in high-risk sexual activity. Until recently, women regarded themselves as being endangered by condoms and men as having their pleasure reduced. More frequent use has probably made women less fearful. The men who report sudden and overpowering urges may be those who least feel the drawbacks of the condom. Government and NGO programs are more successfully providing condoms.

The conversion to a belief in condoms carries dangers in itself. Many of the respondents believed that, provided they were so protected, there was no risk at all in commercial sex. There are three dangers in such an approach. The first is that many of the condoms are old and too long stored in tropical conditions, some are torn, and many are used more than once. The second risk is that most of the men do not use the condoms consistently. The prostitute has no supply, her customer is drunk, or events move so quickly that the condom is forgotten. The third and most serious problem is that most men underestimate how high-risk some of their partners are. If a man knows a young woman well, often eats and drinks with her at a bar, and finds her sweet and seemingly innocent, he is likely to underestimate the number of her other partners and not to insist on a condom.

Many men said that such a degree of care was unwarranted because it did not fully protect them, because they could not use condoms within marriage and might well be infected by their wives. It is hard to estimate how much of this reaction is misogyny, how much is a reaction to the warnings to wives that they are in danger of being infected by their husbands, and how much is true. What is true is that many Yoruba wives seek additional support, economic and even emotional, for themselves and their children from shorter or longer term relations with men other than their husbands and sexual relations are part of this. Obviously in an AIDS epidemic there are risks.

What the research has shown is that there are resistances to male sexual behaviour change to reduce the risk of AIDS which takes the form of restricting sexual relations to marriage, having fewer additional women friends, or ceasing to frequent bars and hotels. One reason is deep belief that males require other sexual outlets and are frequently overcome by uncontrollable sexual urges. Women, as well as men, have long believed that males are programmed this way. Other reasons include long periods of postpartum sexual abstinence on the part of wives, and frequent separation of spouses in a society in which many of the women are traders.

The greatest barrier to behavioural change is probably the attitude to death. There is a bravery about death and a belief that it will come when it does. This is partly the product of living in a high-mortality society, which was until the last few decades a very high mortality society. Malaria was rife. Traffic accidents are still the cause of many sudden and unexpected deaths. But the main reason for a certain nonchalance about death is the belief that it will come in its due time, an attitude that for many has an element of predestination. Perhaps such beliefs were necessary in warrior societies. Many also feel that the very steps needed to avoid

danger, having a less outgoing life and worrying about risk and death, may increase the chance of sickness and death, particularly from HIV/AIDS.

It is possible to place the findings about a surprising disregard of death into a broader perspective of health transition theory (Caldwell 1999). That theory posits that traditional societies placed less emphasis on death being the supreme disaster than does modern society, and also less emphasis on its being each individual's duty to intervene to prevent such a disaster, at least in the case of persons for whom any responsibility could be felt (Simons 1989). The relative lack of concern about death was largely a function of high mortality and the lack of effective interventions to change the situation. The lack of individual responsibility was a necessary condition for keeping the agrarian extended family production and reproduction system working (*cf.* Caldwell and Caldwell 1992). If a daughter-in-law claimed an overriding right to give priority to looking after herself and her children, the authority structure of the extended family would be eroded and its production would decline (Caldwell, Reddy and Caldwell 1993).

In Europe this situation changed slowly as living standards rose, as non-agricultural production and urban residence undermined the logic of the agrarian family, and as the rise of capitalism placed emphasis on individual decision-making and actions. In Sweden, where we have the longest series of vital rates, in the century between 1780 and 1880 life expectancy rose by 30 per cent and age-specific death rates declined by a similar amount in every age group under 50 years (Keyfitz and Flieger 1968; P. Caldwell 1996). Part of the explanation was vaccination, but little was explained in those years by purification of water. Probably most of the fall in death rates was caused by attitudinal and behavioural changes with regard to death and attempts to prevent it.

Most populations in developing countries have experienced a much shorter time since the decline of family production to achieve these changes, and hence there is less fear of death. In many ways this is admirable, but it is a drawback in fighting disease, especially AIDS. Attitudes and behaviour will change under pressure of the coming into existence of the global economy. Change will probably be even faster because the imported Western educational system has embedded within it the Western experience. Third World parental education has already pushed down child mortality steeply and has created much larger differentials between the children of the educated and the uneducated than was the earlier experience in the West; see Preston and Haines (1991), and Caldwell (1991) interpreting their findings. Now we know that Third World education reduces individuals' own mortality as well as their children's (Duffy and Menken 1999). This has mostly happened because Western education induces co-operation with modern scientific medicine. It will also teach a greater fear of death, but that takes longer.

A decade ago it appeared to us that HIV infection would not decline until there was induced into the affected populations a greater fear of AIDS deaths. This is happening in Uganda and more broadly in East Africa. It has been furthered by attending funerals and by suspecting the cause of death. It could have happened much faster if there had been less secrecy and if greater numbers of persons, especially prominent ones, had revealed they were dying of AIDS. Now we believe that what is necessary is a greater fear of all deaths. Extended education will help in teaching a greater fear of death. Perhaps government and NGO programs could take on this specific task and accelerate the process. Nevertheless, it should be noted that the higher levels of mortality induced by the AIDS epidemic may turn back the clock and make some sections of society more cavalier about the risk of death.

How, then, should the AIDS programs proceed? Clearly, the willingness to accept condoms should be exploited by making it easier for young women in bars and hotels, and their clients, to get them. Inevitably, however, the educational effort will have to place most stress on changing sexual behaviour. The thrust will have to be towards adult men and

towards a change in the way of life. Unfortunately, it may be helped in due course, as it apparently has been in Uganda, by greater acquaintance with premature death, within the family and through the frequent attendance at funerals (*cf.* on change, Konde-Lule 1995; Kilian *et al.* 1999).

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