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Risk Behaviors and Vulnerability to HIV Infection among Tanzanian Youth

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Focussing on increased vulnerability of the Tanzanian youth to HIV infection, the paper discusses some of the contexts within which such risk-taking occurs, and demonstrates that the risk of acquiring HIV infection is just one among many others to which they are exposed.

Key words: Tanzania; youth high-risk behaviors; policy; HIV infections

Introduction

Several traditional socialization institutions for children entering adulthood in Tanzania have either been weakened by the rapidity of social and economic change or have lost their relevance entirely. Given the decline of traditional institutions that support young people in the process of becoming adults, it is important that consideration be given to formulation of policies that will focus on youth, who are vulnerable to health problems, such as HIV infections, as a result of high-risk behaviors. We define youth as persons of ages 10 to 24 years, adolescents as young boys and girls aged 10 to 17 years, and teenagers as youth aged 13 to 19 years. It is important to take note of these different categories of youth since the period of adolescence is characterized by distinct behavioral changes. The concept of youth is difficult to operationalize in many African settings, including Tanzania, for a variety of reasons relating to cultural customs, the rapidity at which social change has occurred in the country, and the impact this has had on the socialization of children and youth.

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Age as a concept is often socially constructed. When the concept of youth is examined across communities, several contradictions are evident in the combined use of chronological age and social constructs of youth. Within most ethnic groups, while conception in a 16-year-old wife is received with joy and support, a 16-year-old schoolgirl's pregnancy is received with recriminations and threats of withdrawal of any support.

The concept of age often has different meanings depending on the context and rituals that connote stages of growth and development in the 123 different ethnic groups of Tanzania. Age categories can even be defined differently for males and females within the same age group. For example, Talle (1994) notes three socially constructed age categories among Maasai males. While cattle herding boys range from 6 to 13 years, transition from this age group to "warriors" (morani), from around puberty to the age of about 30 years, is a change marked by initiation ceremonies and distinct role changes. Females, on the other hand, are on the sidelines of the age-set organization among the Maasai, and are distinguished predominantly according to their childbearing roles. They are young girls up to clitoridectomy and marriage, which allows them to move to the next status level of married women with young children, and finally their highest status level of older women with circumcised children, often beyond child-bearing.

While the Maasai have maintained some of their gender socialization institutions, in other ethnic groups, social structures that were in place and played important roles in the socialization of youth have been difficult to sustain in the face of change. For example, Leshabari et al. (1996a) noted the lack of parental control over the behaviors of male youth among the Wanyakyusa in southern Tanzania, where the traditional age-set organization of village structures had been weakened by social change. The Wanyakyusa had a distinctive social organization based on age-villages, where the village comprised men of roughly the same age together with their wives and younger children. Male children would begin to assert their independence by constructing their own sleeping quarters at the age of about 10 years, and would soon move out from the parental village to establish a new village comprised of their own age-set (Gulliver 1958). Though such social organization has changed over the past four generations, the conceptualization of a pubescent male as being mature enough to make sensible decisions has persisted in a setting where young people have minimal support institutions in place.

Within government agencies that deal with youth-related issues, contradictions are also evident in the conceptualization of youth. Considerable overlap exists in the definition of minors with respect to school age, and age at marriage, employment and adoption (Leshabari and Kaaya 1994). In the judiciary system, for example, no clear distinction exists in the disposal of young adolescent offenders and older youth. Within the education system, the age at which children can be admitted to elementary (primary) school varies from seven to twelve years; thus primary school students range in age from seven to nineteen (BEST 1993). Within this age range are young girls and boys who, in some communities, are expected to be married, even though the law prohibits marriage for primary or secondary school students. Anecdotal accounts indicate that school-age girls drop out of school to become married, and that though this reason for school drop-out is rarely documented, such marriages are sanctioned by traditional marriage laws in some ethnic groups.

In the health care system a focus on the health status of children under five years is reflected in the structure of services. General pediatric wards are equipped to manage children below five years, and whether a child can use a cot or not determines whether the child will be admitted in a pediatric or adult ward. Very often children above eight years receive medical care in settings for adults with similar medical problems, due in part to lack of resources. These conceptual contradictions do not allow for sufficient focus on the specific health problems and needs of adolescents and youth. Indeed, it is next to impossible to get morbidity and mortality statistics for the youth population. Most of the national health data is summarized to demonstrate morbidity and mortality among children (0-5 years) and others aged six years and above (Leshabari and Kaaya 1994).

Population growth and internal migration, particularly from rural to urban areas, result in failure to adequately address issues related to service provision for the youth population. According to the most recent national census conducted in 1988, the youth (aged 10-24 years) constitute about a third of the total population, as was the case during the 1978 Census (Bureau of Statistics 1992; Bureau of Statistics 1982). In absolute numbers, the youth population in 1988 was more than two times its size in 1967 and had increased by nearly 45 percent since 1978. The increase was much larger in urban areas than in rural areas as summarized in Table 1 below.

Table 1 *Number of Times Youth Population Increased Between 1967 and 1988, by Age, Sex and Area of Residence*

Age Group (Years)	Rural			Urban			Total
	Male	Female	Total	Male	Female	Total	
10-14	2.1	2.3	2.2	9.8	11.4	10.6	2.5
15-19	2.1	1.9	2.0	7.2	8.6	7.9	2.4
20-24	1.9	1.6	1.7	5.7	7.2	6.4	2.1
Total	2.0	2.0	2.0	7.3	8.8	8.0	2.3

Source : Leshabari and Kaaya 1994

While the rural youth population doubled between 1967 and 1988, the urban youth population in 1988 was eight times that of 1967. Interesting patterns were observed when age, sex and area of residence were used to examine this increase. While the rural female youth population doubled within the twenty-year period, the urban female youth population multiplied nearly nine times. Similarly, the rural male youth doubled while their urban population grew seven-fold during the same period. Teenagers accounted for much of the observed expansion in the urban population. Available census data show that while the proportion of rural youth increased by less than 43 percent between 1967 and 1978, that of urban youth increased by over 300 percent. The rural/urban and gender discrepancy in the growth of the youth population suggests rural to urban migration of youth, particularly females.

To understand the dynamics behind rural to urban migration, it is important to understand how educational and other service institutions have coped with young people. Following independence in 1960, attempts to increase the local relevance of the education system and improve access in neglected areas prompted two policies with far-reaching consequences: education for self-reliance and universal primary education. Education for self-reliance, introduced in 1967, intended to make each phase of the education system — primary, secondary, college and university — a completed stage that allowed young persons to adapt skills learned in school to their local home environment and ensure gainful employment. In 1977, primary school education was made compulsory (Ministry of Education 1980), but the initial employment objective was not adequately achieved. Nonetheless, evidence suggests that parents and youth alike expect that education will be a means towards employment and perhaps white collar jobs (Leshabari et al. 1996a; Leshabari, Kaaya and Kawau 1996b; Talle et al. 1995).

The sudden increase in school-going children was not met with concomitant growth in the numbers of teachers and other education resources, leading to a lowering of education quality throughout the country. While the primary schools produce about 300,000 graduates every year, there are post-primary school education positions for only 7-10 percent (Leshabari and Kaaya 1994; Talle et al. 1995). Komba (1995) noted a recent decline in primary school enrollment and said that only 20 percent of primary school graduates scored an average of 50 percent or above in their final certificate examinations.

For young people out of school, employment opportunities are increasingly limited by the lack of sufficient development in the industrial sector, the impractical nature of skills developed in primary school, and the lack of opportunity for further education/training. According to a recently published youth policy document, 60 percent of unemployed individuals in the country are youth below 24 years (Ministry of Labor and Youth Development 1996). Informal sector income-generating activities such as petty trade and small scale self-operated enterprises (for those who are lucky) appear to be the most feasible options. The poor socio-economic conditions in the country have forced both urban and rural youth to do whatever possible to survive. Although the range of petty trade activities performed by youth and the profits earned vary widely, a large proportion are reported to barely survive, and are found to live in squalid, disease-ridden quarters, particularly in urban areas (Ishumi 1984). Another commonality among both urban and rural youth is their high mobility. Urban migrants are often prone to health risk behaviors due to lack of sufficient knowledge and social skills to survive in their new environment, and the lack of practical skills to enter effectively into the market economy.

There is little youth/adolescent risk behavior research in Tanzania, and the awareness that youth are more likely than adults to engage in risk-taking behaviors is still in its infancy in many parts of Sub-Saharan Africa. Increasingly, young people of the continent are faced with decisions regarding risky behavior. They are confronted with easy access to addictive substances and lethal weapons, the potentially lethal consequences of unprotected sexual activity, and economic and cultural pressures for school drop-outs in the face of competitive job markets that often require higher education to be able to earn a decent salary. In trying to describe risk-taking behaviors with a focus on increased vulnerability to HIV infection, we will describe some of the contexts within which such risk-taking occurs. Other risk behaviors will also be described in an attempt to demonstrate that the risk of acquiring HIV infection is just one of many risks to which Tanzanian youth are exposed.

Some types of youth risk behaviors differ according to gender and whether the youth are rural or urban inhabitants. In general, male youths are more likely to participate in risk behaviors with immediate dangerous and even life-threatening consequences than girls. For example, the Maasai morani of Northern Tanzania are traditionally expected to initiate and participate in cattle-raiding activities, which may cost them their lives (Talle 1994).

Such culture-specific demonstrations of masculinity may be found in many other tribal groups, and appear to occur to a greater extent in rural areas. On the other hand, anecdotal accounts of reckless driving and hanging onto the outside of moving public buses — even when there is room to sit inside the bus — are common equivalents of rural risk behaviors among urban male youth. Many such youths have seen peers seriously injured or killed in accidents due to hanging outside moving vehicles. Although such risk behavior has not been systematically studied, if data on injuries is used as a proxy measure, there are indications that intentional and non-intentional injuries will be a future area of concern in the country. Findings from a morbidity and mortality survey covering one urban locality and two rural communities indicate high mortality from injuries. Mortality following injuries (intentional and non-intentional) ranked between the second and third most common causes of death among both rural and urban males aged 15 to 59 years, compared to a rank of eighth among women in one rural and one urban locality (AMMP 1997).

Among female youth, risk behaviors often do not have such immediate adverse consequences, but they are equally alarming from a health perspective. Focus group discussions held with school youth in northern Tanzania indicated that school drop-outs among female students may be attributed to running away from home to seek jobs in urban settings as far as Mombasa in neighboring Kenya (Leshabari, Kaaya and Kawau 1996b). More often than not, such work would involve caring for children in households at very low wages, or the more risky business of working as a barmaid. Such behavior was also reported among female youths who had completed primary school. These girls are lured by the promise of a job and leave with a one-way ticket, only to find themselves stranded in an urban setting and vulnerable to exploitation.

In the following account, the focus will be on sexual and substance use behaviors, and the links between such behaviors and economic factors. Where information exists, attempts will be made to compare prevalence of these behaviors among male and female youth, as well as urban and rural youth.

Risks Related to Sexual Behavior

The extent to which both male and female youth expose themselves to the risk of HIV infection is not known. However, available data drawn from small surveys in urban areas suggest that depending on age and gender, between 17 and 61 percent of youth are sexually active (Leshabari 1988; Kapiga, Hunter and Nachtigal 1992:375-380; Leshabari and Kaaya 1994; Seha, Klepp and Ndeki 1994: 524-534; Lwihula, Nyamuryekung'e and Hamelmann 1996; Lwihula 1997). These observations are supported by national data from the National AIDS Control Project, which demonstrated a cumulative AIDS case rate of 281 per 100,000 females aged 20-24 years, and 140 per 100,000 males of a similar age (NACP 1994). This suggests that infection with HIV occurred during the teenage period of their lives. The HIV prevalence rates among teenage male blood donors (15-19 years) increased from 0 percent in 1987 to 3.3 percent in 1990, while that among teenage girls increased from 0 percent to nearly 7.5 percent in the same time period. This phenomenon has already been observed in other countries in Sub-Saharan Africa where women are infected earlier and more often than men (Fleming 1994: 309-320).

The reasons for the differences in HIV transmission rates by sex are yet to be explained. However, the pattern observed appears to suggest that the circumstances surrounding transmission of HIV among female youth are different from those of males. Available survey data show some difference in the proportion of self-reported sexual activity among single male and female youths. While 19.4 percent (N=1, 331) of females aged 15 to 24 years reported at least one sexual partner in the twelve months prior to interview, the corresponding proportion for males within the same age group was only 13.7 percent (N=482). Female youth are also exposed to older partners more likely to be infected with HIV than younger partners (Talle 1988: 92-103; Mbunda 1991; Leshabari and Kaaya 1994).

The "sugar-daddy" phenomenon, where older, more sexually experienced men network sexually with young girls, is alleged to be fairly common in towns and cities in East and Central Africa (Schoepf 1992: 259-286; Kaijage 1992: 73-85). Although these relationships between older men and relatively younger girls have been attributed to economic gains on the part of the women, it is also true that, historically, sexual relationships in many cultural groups tended to occur between older men and young girls (Leshabari and Kaaya 1994). This age gap has persisted despite socio-cultural changes that have decreased the influence of institutions that once regulated and sanctioned such relationships, which often culminated in polygamous unions. A survey of 200 single young women 14 to 19 years old admitted to a tertiary care facility with abortion complications noted that more than one-third had conceived with partners above 35 years of age; many of these partners were not perceived to be well-off financially, and hence, did not fit the standard "sugar-daddy" definition (Leshabari et al. 1994: 195-210). This further suggests young girls may be involved in sexual relationships with older partners due to persistence of cultural gender-related power and/or authority differentials which, in the absence of societal controls, leave young girls vulnerable to sexual exploitation.

Results of in-depth interviews and focus group discussions conducted in both urban and rural settings in Tanzania (Leshabari et al. 1996a; Leshabari, Kaaya and Kawau 1996b) revealed that behaviors conducive to sexually transmitted diseases (STDs) and HIV transmission exist in both male and female youths. In-depth interview data from southern Tanzania (Leshabari et al. 1994) indicated that petty trade activities as well as changes in parental roles decreased parental socialization and supervision. These changes were reported to have increased opportunities for young people to indulge in sexual activity. However, ethnographic studies conducted elsewhere in the country indicate that pre-marital sexual activity among youth may not be a new phenomenon (Haram 1995: 31-48; Setel 1995), despite accounts of high cultural sexual morality in some societies in the past (Leshabari et al. 1996a; Mbunda 1991). Concerns regarding the sexual behavior of present-day youth may be due to changes in the contexts within which such behavior occurs. Some studies indicate that "modernization" in rural areas has resulted in unsupervised social gatherings at dusk that are not restricted to adults (Leshabari et al. 1996a; Lwihula et al. 1993). These include drinking sessions after market days, and within villages, discos, film and video shows, as well as traditional ceremonies such as initiation, harvest dances and traditional dance *ngoma* competitions. New moral values are intertwined with old values regarding sexual behavior. The new values appear to be linked to material gain and individual decisions rather than the older and more group/society-oriented values such as respect, dignity and acceptability, as exemplified by a statement from a female elder in southern Tanzania:

> Nowadays the secrecy governing the whole process of sexual advances between men and women has disappeared. Even taboos are no longer adhered to. What you see today is a bunch of young men and women going after each other in broad daylight, ridiculing each other in public (by doing so) ... Some young women use their bodies as income generating machines, sleeping with whoever is ready to pay them (Leshabari et al. 1996a).

Haram (1995: 31-48) also noted from ethnographic data in northern Tanzania that "whether one indulges in pre-marital or extra-marital sex is not the real question. What seems to be crucial is how it is done. . . if you want to 'steal' sex (a term referring to illicit relationships) it must be done with dignity and respect".

Gender-related double standards also exist in cultural views on youth sexual behavior in many Tanzanian societies where males are expected to be sexually aggressive, while females are required to be docile, chaste and virginal at marriage (Mbunda 1991). Mbunda notes that in many cultural groups mothers expressed concern when a male child did not exhibit indications of future sexual prowess. These cultural double standards are reflected in the dynamics of relationships with the opposite sex in the current youth population. Youth focus group discussions in southern and northern Tanzania indicated that among peers, it was considered socially acceptable for boys to have several sexual partners, while sexually active girls were perceived to be behaving badly (Leshabari et al. 1996a; Leshabari, Kaaya and Kawau 1996b). Despite these cultural expectations, economic realities in many households often result in parents turning a blind eye to sexual activity. This was demonstrated in a case study reported by Haram (1995),

where a mother provided implicit sanctioning of a relationship between her teenage daughter and a married man so long as the daughter was able to contribute toward food in the house. Such practices often result in young people receiving mixed messages regarding appropriate sexual behavior. This has implications in both rural and urban areas on the types of sexual-behavior-related risks youth are prepared to take, either to demonstrate socially sanctioned sexual prowess among males or nurturing ability among females.

The decreased relevance of traditional institutions governing "rites of passage" has resulted in a socialization vacuum during the period of growing sexual awareness among young people. School-going youth in northern Tanzania reported in focus group discussions that menstruation or wet dreams just happen; they had no information on the meanings behind such developments (Leshabari, Kaaya and Kawau 1996b). Though peers and the mass media were major primary sources of such information, the youth preferred to be informed on issues related to their sexuality by teachers, health workers and parents. Knowledge items on biological maturity and fertility control were tested in this population of mean age 14.9 years; only 7.8 percent of males and 6.6 percent of females scored above 50 percent on the scale (reliability coefficient of 0.79). Similarly low levels of knowledge about sexual development and reproductive health among school youth have been reported by Lwihula, Nyamuryekung'e and Hamelmann (1996). Although adequate information is not the only prerequisite for healthy choices in one's behavior, it is an important determinant that appears to be missing in the youth population of Tanzania.

It is quite possible that the need to survive may influence risk-taking behaviors among youths, though this has not been systematically studied. The types of income-generating activities that youth indulge in often take them away from the security and what remains of social control governing sexual behavior within their home villages. Informal sector economic activities are the main means of survival for many young people, including peddling various commodities or working in the commercial sex trade.

The ethos of survival is implied in much of the data reported on sexual activity among youth, particularly females. Specific sexual health risk behaviors have been noted among female youth who migrate from rural to peri-urban localities in search of a better life. Young girls, particularly at peri-urban truck stops, are vulnerable to unprotected sexual activity. An ethnographic survey conducted along truck stops between Dar es Salaam and Tunduma on the Zambian border (O'Connor, Leshabari and Lwihula 1992) noted that many barmaids employed in bars and guest houses in peri-urban truck-stops along the major truck routes in Tanzania entered employment as teenagers. The low pay of barmaids is accompanied by an implicit expectation among bar and guest house owners that girls in their employment would supplement their income through tips from customers.

O'Connor observed that female youth solicit sexual partners among truck drivers or their assistants, presumably for economic reasons. At the time the study was conducted, the amount of money earned by the commercial sex workers was sometimes higher than the salaries of the majority of employed Tanzanians, making it difficult for them to consider alternative employment. Among mobile commercial sex workers along the truck routes, financial benefits accruing from sex networking outweighed fears of infection by a wide margin, although many were aware of risks of STDs and HIV. The authors further noted that multi-partnered sexual networking was common in this population, and it was difficult to differentiate barmaids from "free-lance commercial sex workers," given the fluidity of life as a commercial sex worker. The nature of this sexual networking poses special risks of transmitting sexually transmitted diseases, including HIV infection. The high mobility of this group of youth has particular implications for the spread of HIV infection in Tanzania. This is particularly so given the observations that petty traders — often young men from both rural and urban areas — also convene at truck-stops to buy and sell commodities, and form part of the cohort of partners for barmaids and commercial sex workers.

In the sub-culture of barmaids and commercial sex workers, STDs were known only by local names, and some believed they could only be treated by traditional healers, although no studies have been done to substantiate the extent of STD treatment solely by traditional healers. In-depth household interview data in the Kyela district (Leshabari et al. 1996a) indicated that even when STDs were treated at allopathic health services, herbal purgatives were also used

to remove the eggs ("mayai") of organisms which caused the STD in order to effect complete cure.

Risks Related to Drug Use

Over the past decade or so, youth are increasingly involved in the use of narcotics and both licit and illicit spirits. Narcotics such as heroin and to a lesser extent cocaine are now available on the streets of urban centers. Data from surveys among urban school youth indicate that between 6 and 20 percent reported experimenting with drugs, the most common being alcohol, heroin, and stimulants (Kaaya et al. 1992: 21-24; Kilonzo et al. 1995). Drug seizure statistics also indicate involvement of the youth population in a growing drug trade in the country. While data indicate only 35 Tanzanian nationals arrested abroad on drug trafficking charges a decade ago, over the past 10 years, this figure has risen to 10,000, the majority being between 15 and 30 years old (Mbatia 1996). There is evidence that many youths trafficking drugs do so in the context of a search for "greener pastures" outside the country, and there appears to be a close link between drug use and trade in drugs.

Male youth appear to be more vulnerable to risks associated with substance use than females, and surprisingly, drug abuse appears to be more common in rural than urban areas. While 1.3 percent of urban male youth (age 16-24 years) reported daily use of alcohol, the figure for rural male youth was 8.2 percent. The corresponding proportions for urban and rural female youth were 0.7 percent and 2.5 percent respectively (AMMP 1997). Urban heavy drinkers were noted to be at a 1.5 times higher risk of mortality than non-drinkers, though there was a lack of such association in the wider survey sample (urban and rural sample combined). This lack of association between heavy drinking and mortality was attributed to the high prevalence of infectious diseases in the wider community sample (AMMP 1997).

There has been considerable interest of late in rates of tobacco product use in Tanzania. The association between tobacco and morbidity and mortality has been well established. In countries where smoking is highly prevalent, the habit accounts for 90 percent of lung cancers, while over 80 percent of chronic bronchitis and 20 to 25 percent of coronary heart diseases and stroke could be attributable to tobacco use (Sangiwa et al. 1992). Tobacco is grown in Tanzania; in 1988, the government revenue from tobacco, including excise tax, corporation tax and dividends, amounted to 32 million US dollars (Sangiwa et al. 1992). Current trends toward a free market economy and privatization of the tobacco industry — the majority of shares were previously government owned — have led to tobacco product marketing that targets youth. Recent survey data indicate that tobacco, like alcohol use, appears to be more common in rural than urban areas (AMMP 1997). In the youth population (16-24 years), prevalence use rates among rural males were 27.6 percent, compared to 9.2 percent among urban males, while the corresponding figures for rural and urban females were 2.6 percent and 0.2 percent. Most of the tobacco use was in the form of cigarette smoking, and though the majority reported smoking less than 10 cigarettes a day, economic considerations rather than a wish to smoke less account for this low number (AMMP 1997).

Little is known about young people's awareness of the risks associated with substance use and abuse. However, there are indications that a large proportion are unaware of the health hazards arising from use of drugs, particularly narcotics (Kaaya et al. 1992: 21-24). Recent anecdotal accounts and hospital data indicate an area of new concern regarding injected drug use among female heroin users, both for the users and their sexual partners, given the high HIV sero-prevalence rates in the country.

Drug and alcohol use behaviors have been closely linked to increased vulnerability to unprotected sexual activity (Leshabari et al. 1996a). Increase in the frequency of alcohol use by youth was reported in rural youth focus group discussion data from southern and north-eastern Tanzania (Leshabari et al. 1996a; Leshabari, Kaaya and Kawau 1996b). In both studies, the settings in which alcohol was used were reported to be conducive to unprotected sexual activity. In-depth interviews with adults listed the following factors that increased youth vulnerability to HIV infection: alcohol use, promiscuous behavior, and movement from one area to another during local market days (Leshabari et al. 1996a).

There is evidence that the need to survive plays a major role in sustaining risk behaviors associated with the use of alcohol, nicotine, and illicit substances such as cannabis and heroin. These links are indirect and direct, and operate at both individual and national levels. Some indirect links

include social interactions in bars along truck stops, or drinking associated with trade activities at local markets. More direct links are evident in young people's involvement in the illicit drug trade. At a wider national level, government revenue accrues from trade involving licit substances like tobacco. This implied link with national economic survival highlights the need to critically balance revenue accrued from such trade against the health costs of alcohol and nicotine use on the nation.

Conclusion : Policy Implications of Youth Risk Behaviors

Despite the conditions observed above, it is only fairly recently that a policy for youth development has been introduced in the country. However, in spite of the risks related to sexual behavior, no youth-specific program exists within the National AIDS Control Program, though several non-government organizations dealing with HIV/AIDS are increasingly focusing on youth (Mbunda 1996). Given the multi-dimensional needs of youth, specific programs need to be centrally coordinated to maximize available resources. An understanding of youth risk behavior is useful in developing policies and programs sensitive to current needs. However, in order for this to occur, several conceptual problems need to be dealt with at national level.

Available literature reflects considerable confusion as to which specific population sub-group the term "youth" refers to. Conceptual diversity on this point has serious implications not only in research but also in program development and service delivery, where it becomes difficult, for example, to decide who is eligible for contraceptive information and services. There is a strong need to narrow down these conceptual problems so that databases from different disciplines can be used to plan activities and programs that target youth within the 10 to 24 years age range.

The adverse economic conditions in the country have caused serious socio-economic problems at the household level that need to be addressed. Tanzania is a very poor country; nearly 70 percent of the population live on subsistence agricultural economies in rural areas (Bureau of Statistics 1992). The level of poverty inspires rural youth to migrate to towns and cities. It is unlikely that the industrial and commercial sectors could absorb even half of the 300,000 youths who annually pour into the unemployment pool from the compulsory primary school system, let alone providing jobs for the large numbers of immigrants from rural areas. The informal economic sector appears to be growing with an impetus of its own, but unfortunately does not provide a healthy environment within which youth can be employed.

Since risk-taking behaviors among youth are related to and aggravated by unemployment and other socio-economic difficulties, the government needs to develop short and long-term policies that will attract the youth to participate in agricultural activities and thus remain in rural areas. Involving the youth in production activities in rural areas is a more realistic long-term strategy for reducing existing risk behaviors and facilitating viable economic development using available resources in the country. Recent government support of programs aimed at urban youth working within the informal sector is a constructive move, though this may encourage further exodus of youth from rural areas if not balanced with equally viable and sustainable measures that will ensure rural areas are economically attractive for youth.

The data presented indicate a need for a multi-sectoral approach when dealing with risk reduction in the youth population. There is an urgent need for communities, non-governmental organizations, and the education, health and youth development sectors to work together in order to maximize available resources. In order to focus more appropriately on youth risk behaviors, more information is required on the behaviors constituting health risks among youth in the Tanzanian setting and their determinants. The broad focus on environmental and socio-cultural determinants of risk behaviors in this article does not do sufficient justice to the determinants of such behaviors at a more individual level. The types of determinants presented are those that will take a long time to address, as they are linked to socio-economic development in the country.

Little is known about youth sub-cultures in different settings of the country and how these influence sexual and other health risk behaviors. Western-based studies indicate that some individuals are more likely to engage in risky behaviors because of intrinsic physiologically-based propensities towards impulsivity and/or requirements for high levels of stimulation (Kagan 1988; Lerner et al. 1986: 91-114). Given the powerful interplay between biological and

environmental determinants of risk-taking among youth, it can be said, even with the little data available, that psycho-education alone will be insufficient in decreasing risk-taking behavior in a setting such as Tanzania, where youth are living in high risk environments.

In order to inform service programs that address the issue of sexual behavior risks in this population, there is a need to increase intervention research. Such research is needed to provide information for the development of effective policies and social management skills, including provision of accessible services for youth, as well as addressing what Levitt and others (1991: 349-378) have termed personal meanings given by youth to different sexual risk behaviors. The authors conceptualize personal meanings as the primary filter through which specific new skills, experiences, and information related to risk-taking behaviors pass. Young people must understand health education messages beyond the conceptual level; risk information must give youth the ability to anticipate the personalized consequences of sexual activity in a real-life situation. In other words, research needs to address how intervention and preventive programs can allow for synthesis of information and management techniques so that young people are able to attach emotional significance to risky behaviors and thus make healthier decisions.

Finally there is need for researchers, policy makers, and service providers to acknowledge that unprotected sexual intercourse is just one among an array of risk behaviors to which youth are vulnerable, which has only come to light as a result of the AIDS epidemic. Control measures aimed at reducing youth susceptibility to HIV infection should take into account that messages which emphasize fear of death due to AIDS will have variable impact on the youth population depending on the meanings each youth ascribes to risk. Health educators need to be aware that their conceptual meanings of risk may differ drastically from those of the youth the messages hope to target. Intervention strategies that take into account risk behaviors as a whole will be more cost-effective: they will confer skills that will reduce not only sexual activity risks but also other health-related risks such as alcohol use.

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