Beyond knowledge and behavior change: The social-structural context of HIV/AIDS risk perceptions and protective behavior among young urban slum inhabitants in Nigeria

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Abstract

Despite widespread knowledge of the consequences of HIV/AIDS, and of preventive measures to avoid infection, risky sexual practices are rampant among young urban slum inhabitants in Ibadan Nigeria. This study therefore investigated the connection between knowledge of HIV/AIDS, risk perception and constraints to protective behavior. Both quantitative and qualitative data were obtained from 1600 participants aged 15-24 years in two local government areas of Ibadan metropolis using multi-stage sampling techniques.

The findings reveal inadequate knowledge about general sexual and reproductive health issues especially regarding other sexually transmitted infections. With reference to sexual behavior, 65% of respondents were sexually active within the last 3 months; 48% had unprotected sex with two or more partners in the last 30 days; 29% of boys and 38% of girls reported engaging in sexual activities for economic-related reasons within the same period. Although respondents had high risk perceptions, protective behavior was poor among sexually active participants; only half of boys and one-third of girls reported ever using condoms and 29% reported using condoms in the last 3 months. Infection with an STI was reported by 27% of boys and 10% of girls and as much as 49% of participants reported knowing a young person infected with an STI. In addition, health seeking behavior was hampered by socio-economic, structural and environmental factors.

The sexual health and the challenges of HIV/AIDS confronting young urban slum inhabitants is mediated by socio-cultural, economic, structural and environmental factors, which require other strategies beyond the existing information, education and behavior modification programs. There is a need to focus on socioeconomic and structural-environmental factors that continue to facilitate the spread of HIV and other sexual health problems amongst this population. Strategies for delivering effective interventions therefore need to consider the peculiar circumstances of young urban dwellers in order to be effective in reducing their vulnerability. A number of strategies for improving the sexual health of young urban slum residents are proposed.
Introduction

Nigeria is situated on the West Coast of Africa between 4 and 14° north latitude and between 2 and 15° east longitude. It shares borders to the north with Republic of Chad and Niger Republic, to the west with Republic of Benin, to the east with the Republic of Cameroon and to the south with the Gulf of Guinea. It occupies approximately 923,768 total square kilometers (910,768 of land and 13,000 of water), stretching from the Gulf of Guinea on the Atlantic coast in the south to the fringes of the Sahara Desert in the north (CIA: The World Fact Book). Politically, Nigeria is a federal republic made up of 36 states and a federal capital territory, which are further divided into 774 administrative units (local government areas) for the purpose bringing governance closer to the grassroots.

Figure 1: Map of Nigeria

The total population of Nigeria as reported in the 1991 census was 88,992,220 (NPC, 1991), although other estimates, using a growth rate of 2.37% per annum put the overall population of Nigeria in 2005 at 128,775,988 after taking into account the excess mortality from AIDS. (CIA: The World Fact Book). Nigeria has a youthful population structure with those under the age of 24 making up about 60% of the overall population (UNAIDS 2004).

Young people’s sexual behavior and HIV/AIDS in Nigeria: A situation analysis

By 2025, the number of young people aged 10-24 years in Nigeria is expected to reach 57 million (Population Reference Bureau 2000). Available evidence suggests that the number of young people aged 10-24 years who commenced premarital sexual relations has increased in the past few years. For example, the Nigerian Demographic and Health Survey shows that 16% of girls become sexually active by age 15; increasing to 50% by the time they are aged 18. Among boys, 40% commence sexual activities by age 18 and by age 24 almost all boys are sexually active (Nigerian Demographic and Health Surveys 2003). This survey also reports that young people in Nigeria have almost universal basic knowledge of HIV/AIDS regarding the major routes of transmission, and of the protective effects of abstinence and condoms. Despite the knowledge of protective measures, young people rarely subscribe to them (Peltzer and Oladimeji, 2004; Olaseha et al., 2004; Smith 2003; Arowojolu et al. 2002; Amazigo et al. 1997; Edem and Harvey, 1995), thus resulting in an escalation of negative sexual health outcomes (Otoide et al. 2001; Okonofua et al. 1999; Brabin et al., 1995).

The sexual and reproductive behavior of this large number of people thus continues to raise serious concerns in view of the implications for the HIV/AIDS epidemic. Studies by MacPhail and Campbell (2001) and Kapiga and Lugalla (2002) have shown that many young people who commence sexual relations do
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not take preventive measures to avoid infection, thereby exposing themselves to the risk of infection with HIV. Due to the fact that protective behavior is poor among Nigerian adolescents (Onoh, et al., 2004; Nigerian Demographic and Health Surveys 2003; Arowojolu et al. 2002; Otoide et al., 2001), it is important to investigate the apparent disconnection between knowledge of risk and actual behavior. Many young people do not consider their behavior or that of their sexual partner to be risky, and this lack of risk perception is more challenging when the negative outcomes are not immediately obvious (Thompson and Tashakkori, 1993). Moreover, risk perception may be based on insufficient information. Kiragu and Zabin (1995) reported that young people's sexual activities are based on insufficient knowledge and misconceptions rather than on a rational consideration of the consequences, and young people may not have enough understanding to know how to protect themselves and even if they do, they may not have the capacity to act on the knowledge of prevention in view of several cultural and economic constraints.

It is, perhaps, for these reasons that increasing numbers of Nigerian adolescents are being infected with HIV. The UNAIDS (2004) report that young people, and increasingly girls, account for most cases of new HIV/AIDS infections in Nigeria and given the prevalence rate of HIV infection, Nigeria is already in the league of countries with the highest absolute numbers of infected people in the world. Results of the 2003 sentinel survey data indicate that currently, more than three and half million Nigerians, aged between 15-49 years are living with HIV; two-thirds of these are women. UNAIDS (2002) data shows that prevalence rates were highest among young people; (6.3% for those aged 25-29; 6% for those aged 20-24 and 5.9% for those aged 15-19 years). National HIV sentinel sero-prevalence data are obtained from pregnant women visiting ante-natal clinics, but these do not provide a good estimate of general or group-specific prevalence rates (Panchaud et al. 2002) in view of the low proportion of women that utilize antenatal care and many sexually active adolescents who do not utilize antenatal services. Moreover, there is evidence to suggest that infection rates are higher than what is currently estimated even among women visiting antenatal clinics (Sagay et al. 2005), among young people in both the urban and rural areas and those who are socio-economically disadvantaged (UNAIDS 2004). This implies that more attention must be focused on addressing the factors that predispose individuals to risk and enhance prevention activities among groups at risk.

The rising rates of HIV infection among adolescents has led to a deluge of intervention activities that focus on increasing awareness, and access to information and services, and encouraging changes in behavior that facilitate the spread of infections among those who are sexually active. In Nigeria, such programs include various Family Life Education and Service Delivery programs, telephone counseling services, the use of drama to provide information, education and counseling and the peer education or youth education approach.

The theoretical basis underlining these programs (health belief model, social cognitive theory, social inoculation theory, AIDS Risk Reduction Model and Stages of Change Model) assume that health related behavior is determined by individuals' perceptions of susceptibility to infections, the benefits of behavior change and constraints to change. People are assumed to rationally weigh their options and take action once they have adequate information and perceive that change will benefit them. The relevance and applicability of these models in the African context is still being debated (see for example, Odutolu 2005; Green 2003) considering that in many societies, individuals' capacities to initiate health related behavior are constrained by imbalances in power relations, poverty, gender inequality and socialization processes that are often outside the control of individuals. Indeed, as Sweat and Denison (1995) noted, individual behavior is regulated by the social, cultural political and policy contexts, which affect their ability to initiate and sustain health enhancing behaviors. Prevention activities must therefore consider and operate at the super-structural, structural, environmental and individual levels to yield meaningful results.

Thus far, the impact of existing interventions manifest in the widespread awareness of the AIDS epidemic among the general populace. Among young people in particular, there is evidence that many, especially those out of school and living in poor urban neighborhoods, still lack adequate information and the necessary skills to enact and sustain healthy behaviors (Federal Ministry of Health 2002; Association for Reproductive and Family Health 2001; Adedimeji and Jagha 1999). These studies show that many young
people recognize that they are at risk for various reproductive health problems but they are constrained in adopting appropriate preventive measures in view of socio-cultural, economic and environmental factors which makes it difficult to apply their knowledge of preventive measures.

Previous interventions are limited in impact because they fail to recognize important differences among young people regarding their knowledge, attitudes and practices as well as the socio-economic, educational, biological and cultural circumstances which shape their needs and which in turn affect their abilities to equally benefit from program strategies. The situation is graver for those living in slum dwellings and whose opportunities to safeguard their sexual health are particularly limited in view of conditions of economic deprivation. Brockerhoff and Brennan (1998) reported that the urban poor are more disadvantaged in terms of health and educational status than their rural counterparts while the research of Zulu et al. (2002) similarly indicate that the health disadvantages of the urban poor extends to sexual health, with women who live in slums beginning sexual intercourse earlier and having more sexual partners than their non-slum counterparts. Identifying group-specific risk factors, particularly behavioral, environmental, economic and psychosocial may provide a comprehensive picture of the phenomenon and determine the most effective way to address young peoples’ sexual health needs.

Young people in urban slums are a priority group for HIV/AIDS prevention activities for several reasons: the deteriorating living conditions in urban slums, the connection between poverty and HIV (Whiteside 2001) and the urban character of the HIV/AIDS epidemic (DesGrees 1999). Zulu, et al. (2002), Ulin (1992) and Carael and Allen (1995) provided evidence suggesting that deteriorating economic and living conditions in urban areas may constrain women and especially adolescent girls to engage in behaviors that make them susceptible to HIV/AIDS infection. Similar studies (Odutolu et al. 2003; Farmer 1999; Schoepf 1996) showed that low socio-economic status, unemployment, idleness and gender inequality explain women’s involvement in risky sexual behavior such as commercial sex work. These studies show that extreme conditions of poverty and deprivation in urban slum communities may compel residents, especially adolescents, to engage in risk taking behaviors for economic survival. In spite of the established link between economic deprivation and risk behaviors, no systematic investigation has been conducted to establish how conditions of deprivation in urban slums in Nigeria influence sexual activities, HIV risk perception and protective behavior among young people.

While the reported number of young people infected with HIV/AIDS in Nigeria is rapidly increasing, a good opportunity still exists to prevent the epidemic from exploding to unmanageable proportions provided there is a willingness to mitigate its spread. Therefore, adequate information about the determinants of sexual and reproductive behavior of young people is critical (Konde-Lule, 1995). The importance of having adequate information to enable effective planning and implementation of programs and policies is highlighted by the grim picture painted in the report of the National Intelligence Council (2002) “The Next Wave of HIV/AIDS”, which suggests that HIV prevalence rate in Nigeria may increase to between 18 and 26 percent by 2010, with the absolute number of infected people reaching 10-15 million. This implies that if the current trend is not checked, the country will have the largest absolute numbers of people living with HIV/AIDS in Africa within a few years. This study therefore aims to address these concerns. The goal is to investigate the knowledge of adolescents in slum communities regarding STIs/HIV/AIDS, risk perceptions and protective behavior and to suggest strategies for addressing the gaps that may exist.

**Urbanization in Nigeria**

The proportion of Nigerians living in urban areas has been growing steadily over the years. Statistics from the United Nations Population Division (2003) showed that by the year 2000, 45% of Nigerians were residing in urban areas, increasing from 10% in 1952 (Onibokun and Kumuyi, 1996). This proportion is further projected to increase to 55.5% by 2015 (United Nations, 2003).

Several factors are responsible for the rapid urbanization in Nigeria. These include increasing population, political developments manifesting in the creation of new states, capital cities and local government areas, increase in land use, improved transportation, communication technology, economic developments and
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The neglect of rural areas (Hauser, 1965; Onibokun and Kumuyi, 1996; Adedimeji, 2002). The most notable of these factors is the neglect of rural areas, and the undue emphasis on a pattern of urban development by the various governments, since the colonial period, when a deliberate policy of urban development was pursued. Rather than improve social infrastructure in the rural communities, settlements were established along major transportation routes and provided with the necessary infrastructure that facilitated their social and economic development. Consequently, cities became attractive, attracting large number of rural migrants who were mainly young people in their 20s and early 30s, seeking to harness economic and other opportunities that the newly emerging cities had to offer. The economic downturn, following the oil boom in the early 1980s further increased the rate of rural-urban migration.

Although, the last 30 years have witnessed enormous increases in the population of people living in urban centers in Nigeria, the social and economic infrastructural facilities available in many cities became inadequate to meet the needs of the ever increasing population; moreover, existing infrastructures lacked maintenance. Given this situation, social, structural and environmental facilities quickly break down, creating enormous challenges for the management of cities and their huge population. These challenges; unemployment, poverty, poor physical planning, poor housing, absence of basic social services and environmental degradation, portend several implications for quality of life and well being of city dwellers. Consequently, many urban residents were forced to live in sub-standard conditions characterized by slum dwellings with attendant social problems.

The Slum communities of Ibadan
Historical accounts traced the establishment of Ibadan to the 19th century, precisely in 1829, when warriors mainly from Ife and old Oyo and other immigrants came to settle on the present site in search of security from the various inter-tribal wars that characterised the period.

Lloyd and colleagues (1967) noted that before 1970, Ibadan was the largest city in sub-Saharan Africa, although, rapid urbanization and increasing population in other parts of Nigeria and elsewhere on the continent have since overtaken the position of Ibadan as the largest city in the region. As with many other cities in Nigeria, the exact population of Ibadan is unknown\(^1\), but available evidence suggests that the population of the city has grown steadily from 100,000 in 1829 (Imoagene, 1976) to 1,228,663 in 1991 (National Population Commission 1991 Census figures). Current estimates of the population of the city, however, put it at between 2 and 5 million inhabitants (NISER, 1997; Ayeni, 1994; Onibokun 1987).

In precolonial times, the growth of Ibadan into a large city is due to two major factors: the open door immigration policy maintained by Oloyole, its military leader; and its strategic geographical location on a forest site with several surrounding hills which offered economic and defense opportunities. The security and economic prospects of the city thus encouraged several groups of people from other Yoruba towns to migrate and settle in the area. The large population facilitated economic activities and Ibadan quickly became a central market for the exchange of goods between traders from other Yoruba towns (Fourchard, 2003).

Other developments during the colonial and post-colonial period also contributed to the growth of Ibadan and strengthened its position as an important city in Nigeria. Notable among these are the increase in agricultural activities; the expansion of the rail and road network connecting Lagos with other parts of Nigeria which facilitated exchange of goods and services among people in the southern and northern parts of Nigeria; and its designation as the administrative headquarters of the Western provinces in 1939 and subsequently, as the capital of the Western Region of Nigeria in 1952 and Oyo State in 1976. This new status increased government activities in the city and encouraged the siting of many government projects including the first tertiary educational institution in Nigeria in 1948, i.e University College, which later became the University of Ibadan, and the University College Hospital as well as several medium

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\(^1\) Census figures in Nigeria are often embroiled in controversies because they are used by the federal government to allocate resources to each state based on its population.

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Large scale non-traditional manufacturing industries were not prominent features of economic activities in Ibadan until the late 1970s when the Nigerian Breweries, Coca-Cola Bottling Company, Sunnal Foods, Feed Mills, Eagle Flour Mills, British American Tobacco, Nigerian Gas Cylinder Manufacturing, Glass works, West African Batteries, Engineering works, amongst others were established in the city. Before then economic activities consisted mostly of traditional industries and few non-traditional manufacturing establishments. For example, Mabogunje (1968) reported that by 1963 there were only 47 industries employing over 10 people in Ibadan. The situation did not improve much in the period between 1960 and 1980 when Oketoki (1979) noted that several small scale industrial activities dominated the manufacturing sector in Ibadan by 1979. This situation however changed in 1986 when the introduction of economic policies that encouraged import substitution led to the establishment of several small scale industries that increased economic and employment opportunities in the informal sector (Akerele, 1997) such as weaving, dying, wood work, pottery, soap making, metal work and black-smithing. Other economic activities undertaken by the inhabitants of the city are trading in agricultural goods, light consumer goods, car cleaning, road side auto mechanics and artisans, among others. However, the economic crisis from the late 1980s considerably affected economic activities in the city and led to a deterioration of general social infrastructure.

Mabogunje (1962; 1968) classified the residential pattern in Ibadan into 3 distinct categories: the core areas, the intermediate areas and the periphery. Building on this classification and given the extent of development since then, four residential patterns, based on housing and population densities, types of infrastructural development and environmental and sanitary conditions, have evolved². These are:

(i) The Traditional areas
These include places like Beere, Olorun-Sogo, Oje, Oke-Irefin, Esu-Awele, Elekuro, Agbon-gbon, Bode, Yemetu, Aladorin, Dugbe, Oke-Padre, Oja-Oba, Mapo, Isale-Ijebu, Odinjo, Oluwo, Oke –Afa, Baba-Sale, Atipe, Orita-Merin, Idi-Arere, and Gege amongst others that constitute the core of the city (large parts of the old city). They are characterized by high population density, lack of physical planning, dilapidated buildings, poor sanitation, inadequate health facilities, low literacy and informal socioeconomic activities.

(ii) The non-traditional areas
These include areas like Challenge, Molete, Oke-Ado, Oke Bola, Mokola, Eleyele, Sango, Agbowo, Sabo, Apata-Ganga, and such other areas mainly inhabited by migrants from other Yoruba towns and other ethnic groups (or those who relocated from the traditional areas). Population here is of lower density than those of the traditional areas; physical layout and housing patterns reflect some degree of improved planning than what obtains in traditional areas and provision of social amenities like pipe-borne water is limited or non-existent.

(iii) The Government Reserved Areas (GRAs)
The GRAs include old and new Bodija Housing Estates, Oluyole Housing Estate, Akobo Government Reserved Area, University of Ibadan, Ibadan Polytechnic, Jericho, Iyaganku Government Reserved Area, and Owode Housing Estate/Government Reserved Area. These areas, inhabited mostly by the elite, are well laid out in terms of physical planning and housing patterns. Neighborhoods and streets are clearly demarcated and paved to ease human and vehicular traffic. The population density is low and essential social services like pipe-borne water and electricity are provided.

(iv) The emerging [outskirts] areas

² Other studies, for example, Onibokun and Kumuyi (2003) identified 7 distinct residential patterns: the core area, the older suburb, the newer eastern suburb, the newer western suburb, the post-1952 suburb, the government-reserved areas (GRAs), and the government-planned residential estates (at Bodija and Oluyole).

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The emerging areas consist of unplanned and semi-planned areas of late residential development established mainly as a result of two factors: new major roads constructed in and around the city (the Lagos-Ibadan expressway, Ibadan-Ife road and the Ibadan Ring Road), and the pressure on land resources in the other three areas of the city. Such areas include Alakia, Ojoo, Sasa, Iwo road, Moniya, Muslim, Academy, Olomi, and Olorunsogo, amongst others.

Ibadan metropolis was formerly administered by the Ibadan Municipal Government, however, with the creation of new states and local governments in 1991, the metropolis was divided into sixteen separate local government areas (LGAs). Eleven of these are located within the greater Ibadan metropolis while five are situated within the city. The LGAs within the city include: North Central, Northeast, Northwest, Southeast and Southwest, with Bodija, Agodi-Gate, Onireke, Mapo and Oluyole as the headquarters of the newly created local government areas.

A major feature of many parts of Ibadan is the high number of slum areas which resulted from the lack of physical planning that characterized the development of the traditional areas, and the inadequate planning/break down in social infrastructural facilities that characterized most parts of the emerging areas of the metropolis. Fourchard (2003) identified 3 types of slums within the metropolis: (i) those located in the traditional core areas of the city, covering the entire portion of the inner city; (ii) those that emerged around the borders of the planned residential/Government Reserved Areas, including Bodija market and Sango slums; and (iii) those that emerged towards the northern, eastern and western fringes of the city following the construction/expansion of the road network in and around the city, including Sasa, Ojoo, Monatan, Olorunsogo, Academy, etc. (Fourchard, 2003:7).

For the purpose of this study, respondents were drawn from the urban slums in the traditional core areas of the city. The development of these inner city slums, which span two of the five local government areas: Ibadan Northeast and Ibadan Southeast, is traced to the 19th century when large compounds for extended families were the preferred residential pattern within the city. Mabogunje (1968) reported that half of the city constituted by this core area was occupied by slum dwellings characterized by no identifiable sanitation facilities, housing in mud, physical deterioration and the highest population density. Among the residents, the differences in their wealth, education, acquired skills, social customs, and attitudes emphasized the social distance between them and new migrants who settled in the intermediate and planned areas of the city (Mabogunje, 1968:202-233).
This scenario still sufficiently describes the situation of the traditional slum communities at the time of the study. They are characterized by absence of urban residential planning, clearly marked streets, high levels of poverty, low literacy levels, high population density because of the polygynous nature of many households, poor housing, low socioeconomic activities and lack of social and infrastructure facilities. Most houses are built with mud and covered by rusty corrugated iron sheets while a few are plastered with cement. They are usually lumped together, derelict and lack adequate ventilation and maintenance. Rent in this section of the city is cheap compared to what obtains in other parts of the city; however the savings on rent are often expended on the cost of meeting basic social services like water and this pushes the rent beyond what many residents can afford. Environmental sanitation is poor and in most parts of the communities, human and animal waste, waste products from food and other consumables litter pathways and households. Kumuyi (1987) described a large part of this area as an urban commercial slum as a result of congestion and overcrowding due to high vehicular and human traffic that patronize many old markets located in the area.
The population is wholly indigenous, consisting of predominantly Ibadan indigenes. It is unusual to find other Yoruba or people from other ethnic groups in these communities because of the strong cultural identity and attachment to the family compound that is shared among the inhabitants and even by the more affluent ones living in other parts of town who continue to maintain strong links with their kith and kin. In terms of the population structure, young people between the ages of 15-30 make up the majority of inhabitants. Educational status show large proportions reporting primary education and a lower proportion with secondary school education. Though there are several primary schools scattered around communities, very few of the communities have secondary schools situated within them. Residents in other communities have to walk two-three kilometers to the nearest secondary school. Since the majority of young people are currently out of school, they are engaged in unskilled work as cobblers, seamstresses, tailors, barbers, auto part sellers, bus conductors, drivers, and mechanics or involved in other forms of handicrafts.

Existing health facilities in Ibadan include a teaching hospital, i.e. the University College Hospital, two State Hospitals and several private medical facilities in addition to traditional medical practitioners and itinerant medicine sellers in various parts of the city. However, for a number of reasons, including location, cost and quality of services available, government health facilities are largely inaccessible to majority of residents; the closest government owned hospital is the state-owned general hospital\(^3\), in

\(^3\) Adeoyo Maternity Hospital is the nearest state government owned health facility that is available to the communities. It is nearer than the more popular federal government owned University College Hospital, where more comprehensive and specialized services are rendered.

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some cases, several kilometers away from many of these communities. For instance, as at 1983, Iyun observed that ‘not a single hospital was located in the traditional slums of Ibadan and out of the existing 21 hospitals in the city only four were located in the periphery of the slums’ (Iyun, 1983:606-616). The situation has not changed much at the time of the study, apart from the establishment of the Ouyoro Catholic Hospital which provides maternity care for women residing in these areas and few private clinics. In communities where few private health facilities exist there is hardly any qualified staff and equipment or drugs to run the facilities. Consequently, patent medicine stores, (chemists) and itinerant medicine sellers serve the health needs of residents in these communities. Often, only emergencies force people to go to the general hospital for services.

Photo 2: Street in Odinjo after the World Bank Urban Renewal assisted project was abandoned

Photo credits: Adebola Adedimeji, Ibadan, July 2002

Similarly, leisure or recreational facilities are non-existent in all the communities except for open spaces within secondary schools, which are converted to football fields by young people in these areas. The absence of recreational facilities might be responsible for the strong community organizations found in the areas and these cooperative societies afford residents the opportunity to come together and harness their social capital to implement community development activities.

Data and Methods

Data Sources

Obtaining valid data on sexual behavior, especially among young people, is often difficult for various reasons: the sensitive nature of sexual behavior, poor infrastructural facilities, problems with logistics of collecting data in a largely unplanned densely populated urban slum covering a wide land mass, and the low literacy level of potential respondents among others. To overcome these challenges, a combination of methods was adopted in order to ensure the quality, reliability and validity of the information collected.
Thus, both quantitative and qualitative data were obtained, involving a triangulation of methods: questionnaire survey, verbal tools (focus group discussions, individual in-depth interviews) and non-verbal tools (pair wise ranking and flow charts), that complement one another.

Subjects
Respondents for the study consisted of a sample of male and female adolescents aged 15-19 years and young adults aged 20-24 years living in the slum communities described above. One thousand six hundred respondents participated in the study.

Sampling
Selection of participants was accomplished through multi-stage sampling techniques. In the first stage, the two LGAs; Ibadan Northeast and Ibadan Southeast were purposively selected because they contain the highest number of indigenous slum communities in the metropolis. The second stage involved a mapping exercise undertaken to generate a list of communities in the 2 LGAs. This mapping yielded a list of 72 communities from which 8 communities: Ita-Ege, Esu-Awele, Isale-Ijebu, Odinjo, Agugu, Ode-Aje, Irefin and Aworawo were selected by systematic sampling. Within each selected community, systematic sampling techniques were applied to select 5 enumeration areas (EAs) from a list of enumeration areas obtained from the National Population Commission. With this procedure, a total of 40 enumeration areas were selected. Forty respondents equally divided between males and females and age groups 15-19 and 20-24 years were selected from each enumeration area to yield a total of 200 respondents from each community. Individual participants were selected by simple random techniques from a list of households containing at least one eligible respondent in each EA.

Quantitative data
A self administered questionnaire, containing one hundred and fourteen items on sexual experience, reproductive health knowledge, knowledge of STIs/HIV/AIDS, condom knowledge attitude and use, risk perception and health seeking behavior were used in obtaining information. Respondents were briefed on the objectives of the study and informed consent was obtained from them before interviews proceeded. The average completion time for each questionnaire was 50 minutes. All interviews were conducted in the Yoruba language. Data processing was done using EPI INFO version 6 and analysis was conducted with SPSS version 10 to generate frequency tables and cross tabulations of important variables which provide insights into the issues being investigated.

Qualitative Data
Focus Group Discussions (FGDs) along with other Participatory Learning and Action (PLA) activities were conducted within each community. The inclusion criteria used included residence in the community, age, sex and willingness to participate. Two discussion sessions were held in each community, making a total of sixteen FGDs in eight communities. There were eight participants at each session, which was moderated by the three research personnel. Each discussion session was recorded on tape after permission to do so was obtained. After each session, each of the three facilitators translated and transcribed the tapes to achieve a uniform understanding of the contents in the best way possible. The transcripts were reviewed for accuracy by reading them while listening to the tapes to check for anomalies. Processing and preliminary coding of the transcripts was done with ‘Open Code’, software for analyzing qualitative data. The coding focused on identifying consistent themes during the discussions, views from different transcripts were contrasted, and commonly held perceptions established. A validity check on this process was conducted, which involved the transcript being read by 3 persons who did not participate in the sessions and there was complete agreement on the themes, which emerged. Preliminary coding of the transcripts was then carried out to identify consistent themes during the discussions, views from different transcripts were contrasted, and commonly held perceptions established.

Participatory Learning and Action (PLA) qualitative techniques were used to complement information obtained from the focus groups. Specifically, flow charts and pair-wise ranking techniques were used. Flow charts identify participants' knowledge of cause-effect relationships of various phenomena, while...
providing them the opportunity to suggest solutions to identified problems based on their understanding of the cause-effect relationship and the context. Pair-wise ranking enabled participants to prioritize issues for intervention based on certain observable criteria identified by them. These activities were done at the end of each discussion session when participants listed what they considered important issues emanating from the group's discussion; reached consensus on their importance and relevance to their situation, and on the cause-effect and solutions based on participatory dialogue. At the end of the sessions, the charts were re-copied and the participants were allowed to keep a copy.

**Socio-demographic profile of young urban slum inhabitants**

Table 1 shows the participants' demographic and socioeconomic information. Young adults aged 20-24 years make up the majority of respondents. The large proportion of Moslem respondents reflects Islam as the dominant religion among residents in the study areas. Data on educational status show that girls are the only respondents that reported no formal education whereas all boys attained some level of formal education. Sixty-six percent of girls as opposed to forty-nine percent of boys were not in school at the time of the study. The majority of respondents (78.2% of boys and 67.2% of girls) reported secondary education as the highest attained at the time of the study. Due to the poor economic conditions, it is common to find young people engaged in income generating activities either to meet one's own needs or supplement family income. More girls (53%) than boys (47%) were involved in an income generating activity. The majority live with one or both parents however, more girls (41%) than boys (8%) reported living with other relatives while more boys (18%) than girls (1.2%) reported living alone.

**Table 1: Characteristics of sexually experienced respondents**

<table>
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<th>Males (n=800)</th>
<th>Females (n=800)</th>
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<tbody>
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<td>Age</td>
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<tr>
<td>None</td>
<td>-</td>
<td>1.7</td>
</tr>
<tr>
<td>Primary only</td>
<td>10.0</td>
<td>23.0</td>
</tr>
<tr>
<td>Secondary only</td>
<td>78.2</td>
<td>67.2</td>
</tr>
<tr>
<td>Others</td>
<td>11.8</td>
<td>8.1</td>
</tr>
<tr>
<td>Generate income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>46.5</td>
<td>53.1</td>
</tr>
<tr>
<td>No</td>
<td>53.5</td>
<td>46.9</td>
</tr>
<tr>
<td>Currently living with</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent(s)</td>
<td>72.6</td>
<td>57.0</td>
</tr>
<tr>
<td>Older sibling/relative</td>
<td>8.0</td>
<td>41.4</td>
</tr>
<tr>
<td>Unrelated guardian</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Alone</td>
<td>18.6</td>
<td>1.2</td>
</tr>
</tbody>
</table>

**Sexual and reproductive health related knowledge and sources of information**

The trend of HIV/AIDS epidemic among young people depends on a range of factors, including basic knowledge about the disease and of preventive measures. The information that young people receive regarding their sexual and reproductive health (SRH) is crucial because it influences not only their knowledge and attitudes, but also their abilities to avoid negative outcomes of sexual behavior. Young people all over the world have a variety of sources from which they receive information on sexual and
reproductive matters and these include the print and electronic media, school, siblings, parents, relatives and friends. Despite this variety, some gaps exist because of incomplete and/or inaccurate information emanating from these sources, thereby making them unreliable.

The majority of young people in Nigeria have a basic knowledge of sexual and reproductive health issues, including contraceptive methods. For example, DHS data shows that 90% of women aged 15-24 know at least one contraceptive method [ORC Macro, 2004]. Participants in this study demonstrated similar levels of basic knowledge regarding condoms (94%) and oral pills (70%). Knowledge of natural and traditional methods including withdrawal, billings (calendar method), and abstinence were also mentioned (Table 2). Despite this, it is striking that knowledge of emergency contraception was almost none existent. Respondents did not spontaneously report knowledge of emergency contraception; however, when prompted during focus groups, few girls vaguely recollect ‘a method that you can use soon after unprotected intercourse to prevent pregnancy’. When probed further to name the method or explain how it works, they could not offer any useful information. Generally, girls had higher knowledge of contraceptive methods than boys and knowledge was considerably higher among those aged 15-19 years.

Table 2: Awareness of contraceptive methods and sources of information

<table>
<thead>
<tr>
<th>Variable</th>
<th>Male</th>
<th>Female</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pills</td>
<td>45</td>
<td>53</td>
<td>87</td>
</tr>
<tr>
<td>IUCD</td>
<td>8</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Injectable</td>
<td>7</td>
<td>18</td>
<td>33</td>
</tr>
<tr>
<td>Condoms</td>
<td>91</td>
<td>96</td>
<td>94</td>
</tr>
<tr>
<td>Traditional methods</td>
<td>13</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>Safe days</td>
<td>8</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td>Withdrawal</td>
<td>14</td>
<td>26</td>
<td>19</td>
</tr>
<tr>
<td>Complete Abstinence</td>
<td>13</td>
<td>25</td>
<td>25</td>
</tr>
</tbody>
</table>

Sources of Contraceptive Information

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Older sibling</td>
<td>47</td>
<td>44</td>
<td>40</td>
<td>38</td>
</tr>
<tr>
<td>Friend/peer</td>
<td>40</td>
<td>42</td>
<td>46</td>
<td>47</td>
</tr>
<tr>
<td>Boy/girl friend</td>
<td>19</td>
<td>22</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>Media</td>
<td>61</td>
<td>74</td>
<td>77</td>
<td>84</td>
</tr>
<tr>
<td>Health worker</td>
<td>30</td>
<td>39</td>
<td>59</td>
<td>65</td>
</tr>
</tbody>
</table>

Results in table 3 show a near universal awareness (99%) of STIs/HIV/AIDS as well as the sources of infection and preventive measures among the study population. The transmission routes commonly reported were heterosexual transmission (99%), sharing of body piercing instruments (58%) and to a lesser extent transfusion of infected, blood (42%). Knowledge of mother to child transmission is very low with less than 5% of participants reporting on this. Knowledge of preventive measures reported include abstinence (49%), staying faithful to one partner (32%), use of condoms (79%) and avoidance of body piercing instruments (35%).

The focus of several intervention programs being implemented in Nigeria is to enhance behavior change through the provision of information, education and communication. The impact of such programs manifests in substantial increases in awareness of STIs/HIV/AIDS among the general population. Despite considerable increases in knowledge, there is no corresponding change with regard to risky behaviors particularly among young people who spontaneously mention heterosexual transmission of HIV yet few make efforts to ensure they have adequate protection when engaging in risky sexual activities. During focus groups, male participants emphasized the importance of sterilizing shaving instruments when they visit barbers, but chose to ignore condoms even when they have high risk sex, while sexually active girls are more concerned about preventing pregnancy rather than infection with STIs/HIV to the extent that they are willing to abstain from intercourse when the likelihood of pregnancy is high than to risk asking
their sexual partners to use condoms to prevent an infection for fear of upsetting them.

**Table 3: Awareness and knowledge of STIs/ HIV/AIDS preventive measures and treatment sources**

<table>
<thead>
<tr>
<th>Awareness and Knowledge</th>
<th>Male</th>
<th></th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
<th>Female</th>
<th></th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aware of HIV/AIDS (Yes)</td>
<td>98</td>
<td>98</td>
<td>99</td>
<td>100</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Believe AIDS is real? (Yes)</td>
<td>99</td>
<td>98</td>
<td>100</td>
<td>99</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infection sources</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual intercourse</td>
<td>99</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>99</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sharing of sharp objects</td>
<td>59</td>
<td>65</td>
<td>49</td>
<td>58</td>
<td>58</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receive unscreened blood</td>
<td>41</td>
<td>51</td>
<td>39</td>
<td>39</td>
<td>42</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother to child (pregnancy)</td>
<td>4</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother to child (delivery)</td>
<td>2</td>
<td>4</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother to child (breast milk)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preventive measures</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abstinence</td>
<td>41</td>
<td>46</td>
<td>58</td>
<td>52</td>
<td>49</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Being faithful to one partner</td>
<td>14</td>
<td>16</td>
<td>42</td>
<td>57</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Encourage partner to be faithful</td>
<td>6</td>
<td>11</td>
<td>26</td>
<td>34</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoid unscreened blood</td>
<td>19</td>
<td>20</td>
<td>24</td>
<td>23</td>
<td>22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use condoms</td>
<td>85</td>
<td>86</td>
<td>71</td>
<td>75</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoid sharing body piercing instruments</td>
<td>41</td>
<td>46</td>
<td>24</td>
<td>32</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoid Commercial sex workers</td>
<td>12</td>
<td>15</td>
<td>2</td>
<td>3</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoid casual sex</td>
<td>25</td>
<td>30</td>
<td>31</td>
<td>35</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoid skin piercing</td>
<td>5</td>
<td>6</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In table 4, information regarding other sexually transmitted infections is presented. Awareness of gonorrhea was widely reported (84%). Other equally devastating STIs including Genital Warts, Chlamydia, Syphilis and Chancroid and the general symptomatic manifestations of STIs are relatively unknown and this is further confirmed in the proportion of those reporting knowledge of symptoms. It appears young slum dwellers lack basic information about other STIs, and because of this, there are several myths/misconceptions. For example, male discussants reported four types (or symptomatic manifestations) of gonorrhea. The first is called atosi – the generic name for gonorrhea based on symptoms of yellowish discharge from the penis; atosi eje - referring to discharges from the penis containing blood; atosi sugar- when there is sugar in urine, clearly a manifestation of diabetes; and atosi egbe (loss of weight) a term associated with symptomatic manifestations of several diseases, including tuberculosis and HIV/AIDS. Knowledge that these conditions existed and were curable before onset of the HIV/AIDS pandemic contributed to the fatalistic attitudes often exhibited by young people regarding AIDS. Furthermore, this suggests that young people may not recognize and/or seek medical attention when they are infected since they lack basic information on symptomatic manifestations. Such basic knowledge is, however, important because it enables individuals to recognize an infection, the type infection, and to aid treatment when it is based on symptomatic manifestations in resource constrained settings where laboratory diagnostic facilities are absent.

In terms of treatment of STIs, participants suggested places where those who are infected with an STI could seek treatment. The sources mentioned include government hospitals (72%), chemist shops (59%) and private health centers (45%). That the majority mentioned government hospital reflects a general awareness of government health facilities in offering adequate care and not of their preference for it as a first point of contact in seeking health care. For a variety of reasons, many young people seek health care from other sources and will only go to government hospitals when the illness become severe. As discussed later in the report, such responses highlight the likely sources from where they seek treatment when they are infected with an STI.
It is possible to conclude from the foregoing that there are gaps in the knowledge of STIs among young urban slum dwellers. This underscores the need to provide adequate information on the nature, symptomatic manifestations and consequences of untreated STIs, so that they can recognize when they are infected and more importantly, seek appropriate treatment. This is important in view of the reported levels of sexually transmitted infections and the poor health seeking behaviors.

Young people living in urban slum inhabitants like most of their counterparts elsewhere in Nigeria, receive information regarding sexual and reproductive health from sources including print and electronic media (mostly radio and television), school teachers, siblings and friends in that order. In both the quantitative and qualitative data, the media was ranked as the most prominent source of information due to health-related (especially STIs/HIV/AIDS) public announcement messages that are broadcast from time to time. This finding is consistent with those of other nationally representative samples (for example, the Demographic and Health Surveys [DHS] 2003 and the Behavioral Sentinel Survey [BSS] 2002). Although the media is a significant source of information for young people in Nigeria, the content of sexual and reproductive health information disseminated by the media is often regulated and lacking in important details because of concerns about cultural appropriateness. This is partly responsible for the existing knowledge gaps that compel young people to seek alternative sources of information for what is missing.

In the same vein, school teachers also constitute important sources of information given their role in teaching sex education curriculum\(^4\) in secondary schools. Whereas, the information from this source is considered authentic and reliable, similar considerations of cultural appropriateness restrict what is included in the curriculum. A close examination of the existing sex education curriculum show that apart from lacking in specific details, formal HIV/AIDS prevention messages are directed towards knowledge improvement and only ostensibly address cultural factors in the context of practice and not in the context of attitudes and beliefs (Adedimeji, personal communication). Sex education in schools has, therefore, been unable to reach its full potential in helping young people protect and enhance their sexual health. The cultural milieu (including school culture) has sought to prescribe ‘acceptable’ modes of sexual behavior to adolescents rather than assist them in developing the critical skills necessary to make informed decisions (McKay, 1998). Moreover, the majority of young urban slum dwellers are not in school, therefore, only those who are currently in school benefit from this source of information. In addition, the illiterate are denied access to the information presented through the print and electronic media that are increasingly used by the government and the civil society to pass on information about sexual health including HIV/AIDS.

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\(^4\) For example, the DfID supported Life Planning Education project being implemented in all public secondary schools in Oyo State, Nigeria by the Association for Reproductive and Family Health (ARFH), a non governmental organization based in Ibadan.

Beyond knowledge and behavior change: The social-structural context of HIV/AIDS risk perceptions and protective behavior among young urban slum inhabitants in Nigeria

16
### Table 4: Awareness of other STIs, knowledge of symptoms and treatment sources and sources of information

<table>
<thead>
<tr>
<th>Awareness and Knowledge</th>
<th>Male</th>
<th>Female</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gonorrhea</td>
<td>88</td>
<td>92</td>
<td>70</td>
</tr>
<tr>
<td>Syphilis</td>
<td>22</td>
<td>37</td>
<td>13</td>
</tr>
<tr>
<td>Chancroid</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Chlamydia</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Genital Warts</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>Vaginitis</td>
<td>1</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

#### Known signs/ symptoms

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penile/vaginal discharges</td>
<td>26</td>
<td>35</td>
<td>19</td>
</tr>
<tr>
<td>Burning pain/genital itching</td>
<td>27</td>
<td>33</td>
<td>32</td>
</tr>
<tr>
<td>Abnormal vaginal itching</td>
<td>4</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Loss of weight</td>
<td>80</td>
<td>82</td>
<td>84</td>
</tr>
<tr>
<td>Penis/vaginal sores/warts</td>
<td>11</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Painful urination</td>
<td>49</td>
<td>59</td>
<td>44</td>
</tr>
<tr>
<td>Swelling in the groin</td>
<td>5</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>Infertility</td>
<td>1</td>
<td>1</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Treatment sources

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medicine vendors</td>
<td>4</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Traditional healers</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Chemist shops</td>
<td>60</td>
<td>64</td>
<td>58</td>
</tr>
<tr>
<td>Pharmacies</td>
<td>11</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>Government health centre</td>
<td>70</td>
<td>69</td>
<td>71</td>
</tr>
<tr>
<td>Private health centre</td>
<td>52</td>
<td>54</td>
<td>37</td>
</tr>
</tbody>
</table>

The situation is exacerbated by the lack of involvement of parents, particularly fathers, in providing sexuality information to children. Available evidence show that poor parental communication is strongly associated with poor sexual health outcomes among teenagers. For example, Aggleton and Campbell (2000) report that young people who communicate with their parents about sex are more likely to use condoms and contraception. Similarly, Perrino and colleagues (2000) reported that apart from feeling embarrassed to discuss sex with their children, parents often believe that the discussion of contraception will encourage children to become sexually active and therefore the reality of young people’s premarital sexual activities and miss out on an excellent opportunity to discuss the consequences as well as benefits of abstinence. The research of Slap and colleagues (2003) show that the sense of connectedness that young people have with their parents, teachers and other adults may potentially improve sexual health outcomes.

Although parents shy away from discussing sex-related issues with children, male and female participants during focus groups expressed a strong desire for parents to be involved in providing sex education to them. Girl participants expressed their disappointment that mothers do no more than inform them of changes they expect to see at puberty and to warn them to stay away from boys and men; leaving them curious, and desirous of information from any available source. As the female discussants reported: ‘mothers should do more in giving us sex education...we are more likely to accept what they tell us as true and reliable since they would not want to lead us astray’. Boys often mentioned that fathers were too unsympathetic to be involved in discussions on sex, and that it was thinking the impossible to engage them in discussions on sex; mothers, on the other hand would only tell sons to be careful and not impregnate girls or catch a disease. Consequently, friends, magazines, books and other non-conventional sources fill the vacuum created by the regulated media, school teachers and parents. As some male participants during focus groups put it... what you fail to teach your children, they will learn elsewhere.'
The inadequate information available to young people is reflected in their knowledge of sexual and reproductive health events. As shown in table 5, while three-quarters of respondents reported that it was possible for a girl to get pregnant if she has unprotected intercourse for the first time, there is little knowledge of other factors associated with the timing of intercourse to prevent conception. Only 13% of participants knew that unprotected intercourse could result in pregnancy if it took place during ovulation and about one-third had knowledge of other risk period for pregnancy during the menstrual cycle. This may be one reason for the high level of teenage pregnancy that was revealed in both the flow charts and pairwise rankings. Male and female participants reported that 4 out of 10 girls had been or were currently pregnant. The high proportion of teenage pregnancy also reflects young people’s poor attitudes to contraception (despite high awareness). Although knowledge was generally poor, girls displayed better knowledge than boys.

Table 5: Knowledge of other Sexual and Reproductive Health issues

<table>
<thead>
<tr>
<th>Percentage responding</th>
<th>Male 15-19</th>
<th>Male 20-24</th>
<th>Female 15-19</th>
<th>Female 20-24</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Riskiest time for sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>During period</td>
<td>49</td>
<td>35</td>
<td>45</td>
<td>29</td>
<td>40</td>
</tr>
<tr>
<td>Middle of cycle</td>
<td>5</td>
<td>6</td>
<td>17</td>
<td>22</td>
<td>13</td>
</tr>
<tr>
<td>Right after period</td>
<td>23</td>
<td>44</td>
<td>22</td>
<td>37</td>
<td>31</td>
</tr>
<tr>
<td>Just before period</td>
<td>5</td>
<td>5</td>
<td>9</td>
<td>11</td>
<td>7</td>
</tr>
<tr>
<td>Don't know</td>
<td>18</td>
<td>10</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Pregnancy is possible at first sex</td>
<td>66</td>
<td>71</td>
<td>74</td>
<td>89</td>
<td>75</td>
</tr>
<tr>
<td><strong>Other SRH issues</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Girl can get pregnant having sex only once</td>
<td>72</td>
<td>83</td>
<td>74</td>
<td>90</td>
<td>80</td>
</tr>
<tr>
<td>Girl can get pregnant if boy withdraws before ejaculation</td>
<td>8</td>
<td>7</td>
<td>24</td>
<td>39</td>
<td>20</td>
</tr>
<tr>
<td>Know ways to avoid pregnancy</td>
<td>95</td>
<td>95</td>
<td>97</td>
<td>99</td>
<td>96</td>
</tr>
<tr>
<td>Know girl previously pregnant</td>
<td>78</td>
<td>89</td>
<td>83</td>
<td>96</td>
<td>87</td>
</tr>
<tr>
<td>Masturbation is injurious to health</td>
<td>31</td>
<td>36</td>
<td>44</td>
<td>51</td>
<td>41</td>
</tr>
<tr>
<td>Necessary to get pregnant before marriage</td>
<td>28</td>
<td>28</td>
<td>32</td>
<td>55</td>
<td>36</td>
</tr>
<tr>
<td>Sex is OK for money and material benefits</td>
<td>26</td>
<td>25</td>
<td>40</td>
<td>48</td>
<td>35</td>
</tr>
<tr>
<td>Contraception makes conception difficult later</td>
<td>66</td>
<td>64</td>
<td>74</td>
<td>72</td>
<td>69</td>
</tr>
<tr>
<td><strong>What is safer sex?</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abstaining from sex</td>
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<td>Using condoms</td>
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<td>Avoiding sex with multiple partners</td>
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<td>Avoiding sex with prostitutes</td>
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Since the mid 1990s, several programs have been implemented to improve knowledge of sexuality issues among young people in Nigeria. Although, few of these programs have been rigorously evaluated, available evidence and findings from this study suggest that apart from improving knowledge about HIV/AIDS, not much impact has been made in improving knowledge beyond the basics. Several factors are responsible for this situation. The first is that these programs were implemented mainly through school or clinic settings, and a large proportion of young people, particularly those from resource constrained communities who do not have access to these sources cannot benefit from them. Second, the content of what is approved for teaching through school settings lack sufficient details to allow young people to practically deal with issues that confront them. Furthermore, young people in many parts of sub-Saharan Africa live with a crisis of identity, which results from the way ‘adolescence’ itself is defined. As Gage (1998) reported, that there is little agreement on when the period of adolescence begins and ends owing to variation across cultures and the expectations associated with this crucial stage of life. In some cultures, because they are considered children and subjected to the authority of adults, social and legal restrictions constrain their abilities to access information and/or utilize services. In other cultures,
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The period of adolescence as conceptualized in western societies is almost non-existent when, through various rites of passage, children are expected to take on adult responsibilities in a swift transition.

The limited impact of previous programs may also be due to the failure to recognize the differences existing among young people and tailor programs to reflect this diversity. Young people have often been treated as a homogenous group, yet their diversity is reflected in some being in or out of school, some living on the streets or with families, some being unemployed or working, some being sexually exploited, or in stable relationships, some older or younger, some male or female. It is important to adopt an approach that target the peculiar circumstances of all young people; or, at the very least, one in which they will all benefit irrespective of their situation. Every young person is a member of a community, thus a community based strategy may facilitate efforts aimed at creating and sustaining adequate sexual and reproductive health knowledge among young people, while also offering a means to potentially reach all young people.

Sexual activities, sexual risk taking and risk perceptions

The nature of social interaction highlights some of the influences on sexual behavior of young urban slum dwellers. Although, boys and girls are expected to engage in separate social/leisure activities, the close-knit nature of slum communities, presence of beer parlors/movie viewing houses, lack of recreational facilities, and the effects of globalization as evident on youth culture, influence of mass media, western lifestyles, tendency toward individualism and erosion of traditional social control set the stage for social interaction that tend to favor premarital sexual activities.

Although social customs discourage sexual relations before marriage, available evidence suggests that premarital sex is common and studies have shown this to be more common among young people in the urban areas (Kaufman, 2002; Mahay and Gupta 2002). One in every four adolescents in this study reportedly commenced sexual relations before the age of 15 years with about two-thirds of all respondents being sexually active by the time they are 19 years old (not shown). The extent of premarital sex in slum communities confirms those already reported in nationally representative data (NDHS, 2003). Overall, 65% of all respondents reported unprotected intercourse in the last 3 months before the survey. Among these, multiple partnerships during the same period was reported by 48% of boys and 12% of girls. In addition, there was evidence of the widespread practice of transactional sex as shown in the proportion of male (29%) and female (38%) respondents who reported having economic-related sex within the same period. This finding confirms that an increasing number of girls are becoming involved in transactional sexual activities.

Hayes (1987) noted that young people are confronted by difficult circumstances under which they have to make health enhancing or health compromising choices regarding their sexual behavior; for example, deciding to initiate sex, practice contraception and what to do in event of pregnancy. Although Gage (1998), in a review of literature documented, several factors that influence this decision-making process; among young people in the slums of Ibadan, economic considerations emerges as a major factor which influence the decision to start premarital sexual activity, or to remain sexually active and whether or not to implement and sustain protective behaviors. For instance, in all the female and half of the male discussion groups, financial/material consideration was highlighted as a major factor in the decision to commence and continue sexual relationships, especially among girls among whom 38% reported engaging in transactional sex in the three weeks before the survey. During focus groups, girl participants reported that

"Why would a girl have sex with a man from whom she can benefit nothing? Even if you are in love, you must be sure that the man is able to take care of you financially in case anything happens before you allow him to sleep with you".

Girls are of particular concern because of the widespread practice of sexual intercourse with much older men who are able to fulfill their needs for money, school fees and other material requirements. Such girls are strongly motivated by immediate economic considerations as well as by a desire to increase their
future life chances through acquiring education and building a career. In addition, older men are reported to prefer younger sexual partners because they are believed to be less likely to be infected with HIV (Luke 2003). In these circumstances, girls have relatively little power to negotiate the terms of safe sex (Blanc 2001).

The phenomenon of transactional sex also involved boys some of who engaged in economic related sexual activities either by offering financial incentives to girls living in the neighborhood and commercial sex workers, or performing sex-related services for much older single female professionals that have become a major feature of the city due to increased economic activities. Apart from engaging the services of commercial sex workers, boys aged 20-24 acknowledged that some of their mates have been approached by older ladies who need the companionship of younger males. Although the extent of this practice could not be confirmed beyond passing references to it in some of the male and only one female focus group discussion; that it was acknowledged as an emerging feature of young people's sexual behavior in the slum communities is worth further investigation. Boys noted that it is normal to experience sex for the first time with a commercial sex worker or to visit them regularly as part of a socialization process. Twenty-nine percent of boys who participated in this study reported engaging in economic/transactional sex with more than one person in the 3 weeks before the survey and as responses from focus groups show, most boys who patronize commercial sex workers do not protect themselves against infection, despite being aware of the possibility of being infected; an attitude that portends serious consequences for the spread of HIV [Van Landingham and Trujillo 2002]. Boys reported that...

Boys visit sex workers to avoid the commitment of maintaining a girl friend. They know there is a risk of catching disease, but they choose to ignore this ...many of them don't care. [Boys, 20-24].

Compared with more affluent areas of the metropolis, manifestations of poverty and social inequality are so noticeable in slum communities and young peoples' lives are characterized by conditions of deprivation that permeates every aspect of their lives. The context of poverty that surrounds the lives of many young slum inhabitants not only influences their decision making abilities but that of their families. Many participants noted the difficulty with meeting daily needs for survival and their future. That many are unemployed was reported a source of constant anxiety and high crime rate in the areas. Girls are mostly affected by the circumstances of economic deprivation. Their needs are often not considered a priority when financial constraints compel families to take difficult decisions regarding educational aspirations and the future prospects of their children. Female discussants reported being forced to stop schooling because parents could not afford to pay their school fees along with those of male siblings. They are also not able to embark on vocational training for similar reasons. Caldwell et al. (1989) and Schoepf (1998) argued that such limited opportunities for educational, economic and career advancement to enhance their life chances compel many women to exchange sex for economic survival. Young women confronted with such limited life opportunities are more vulnerable to exploitative and manipulative sexual practices.

The decision to have sex is mostly unplanned for many young people. Many of them do not often think about or plan for sex either because of constraints in the social environment or because, in many cases, they take the chance to have sex whenever the opportunity presents itself. For example, when social or domestic activities (going to parties, meeting in the beer parlors cum movie houses, running errands for adults, simply taking a walk around the community, or when there is no electricity) compel boys and girls to meet, they may have sexual intercourse without really planning for it. Such circumstances make it difficult carrying condoms or being prepared to say no. This lack of preparedness partly reflects in the number of previous or current pregnancies that were reported in the communities. Girls who participated in focus groups reported that despite the high number of girls who are/were pregnant, teenage pregnancy is considered shameful for a girl who has not completed educational/vocational training and is unmarried, thus those who become pregnant under these circumstances may resort to [dangerous] abortion procedures (due to cost considerations) to avoid the stigma.

The extent of sexually transmitted infections reported among the study population also reflects the negative outcomes of unplanned and unprotected sex. Data on the prevalence of other STIs among

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young people are scarce, but existing studies demonstrate that a substantial proportion of young people have contracted an STI. For example, the WHO estimates that globally, one in three new infections occur in people less than 25 years old (WHO 1999). Furthermore, Brown et al. (2001) reported that in eight countries, between 3% and 12% of males aged 12 to 24 years, and 1% and 14% of females in the same age group had experienced an STI. Specific data on Nigerian adolescents showed similar levels of STIs incidence among young people (Okonofua et al. 1999; Adedimeji 1999; Adedimeji and Jagha, 1999; Brabin, et al. 1995). Although findings in the present study with regard to STI incidence should be interpreted with caution since they are not based on clinical reports, they seem to confirm a high prevalence of STIs among young people in urban slum communities. For instance, that 27% of boys and 10% of girls reported being previously infected, and almost half of the boys (49%) reported knowing another adolescent with an STI presents a grim picture of the actual prevalence rates and of the fact that many respondents in the study may not have reported their own infections. Consequently, the need for further research and program intervention is urgent given that the presence of other sexually transmitted infections greatly enhances the probability that HIV infection will spread between sexual partners. It is therefore likely that HIV may already be spreading rapidly among this population.

Risky sexual behavior include having multiple sexual partners, frequently changing partners, engaging obvious risky partners (such as commercial sex workers), coerced sex, not using any protective measure, especially not using condoms and early sexual initiation amongst others (National Research Council and Institute of Medicine 2005). It also includes having unprotected sex with a partner of unknown sero-status. Such sexual practices are strongly linked to the spread of AIDS, and because AIDS is a highly stigmatized condition, most people who indulge in risky sexual practices are unwilling to disclose related information. Although data documenting the extent of the practice are very scanty; some studies (Singh and Bankole, 2001) provide evidence that the practice of sexual intercourse with multiple partners is widespread among young people aged 15-19 in sub-Saharan Africa with quite a substantial number of women reported having two or more partners over the most recent one year period.

The dynamics of sexual relations and its effect on young people’s abilities to determine risks associated with sexual behavior has not been thoroughly investigated (Blum, McNeely and Nonnemaker 2002), but it is known that generally, they grossly underestimate the risk of becoming infected with HIV/AIDS. The risk associated with HIV/AIDS is well known among participants however, information regarding how risk perceptions influence their sexual practices is scanty. The majority of participants acknowledged that they were at risk of infection (58% of boys and 36% of girls were worried about getting infected with AIDS [table not shown]), the reported sexual behavior suggests that many young people do not seriously consider these risks. Smith (2003) has suggested that among many people, risk assessment is based on perceptions of a general rather than personal vulnerability to infection and it is usually conceptualized in terms of those with multiple sexual partners. This prevailing attitude of morality defines the context in which young people assess risk. Consequently, while girls reported that boys were more at risk because they are promiscuous, boys reported that girls were more at risk because of the tendency to have multiple sexual partners. Clearly, associating risk assessment with being promiscuous may not compel the need to adopt protective measures, so long as people do not perceive themselves as promiscuous or immoral.

Furthermore, perception of risk varied by gender and type of sexual partner. As shown in figures 3 and 4, similar proportions of females and males reported ‘great’ or ‘moderate’ risk in unprotected intercourse with casual partners. Where a regular partner was concerned, 60% of boys and 20% of girls reported ‘great’ risk and 30% of boys and 16% of girls reported ‘moderate’ risk [not shown]. Reasons for these differences were highlighted during focus group discussion. Girls who mentioned ‘little’ or ‘no’ risk talked about having only one partner or trusting such partners, while those who mentioned ‘moderate’ or ‘high’ risk reported lack of trust and/or the inability to protect themselves. Boys who mentioned similar elevated risk cited lack of trust for girls as a reason. Their responses demonstrate a pervasive belief that females are largely responsible for the high incidence of sexually transmitted infections. Most females rarely manifest symptoms of infection as quickly or as often as men, making it difficult for them to recognize that they are infected. Without symptomatic manifestations, it is difficult to seek treatment or notify a
sexual partner and this may lead to the partner and/or others being infected. This may also inform the widely held perception that females are responsible for transmitting infections. In addition, most boys believe that infection with one STI leads to infection with several others. Again, this notion highlights the poor levels of knowledge regarding STIs since untreated or inadequately treated STIs may lead to repeat episodes of infection. This is particularly the case because males infected with STIs were reported to patronize herbalists, itinerant medicine sellers or self medicate when they seek treatment for infections. The perception of young people regarding repeated infections in quick succession is related to poor knowledge and lack of effective treatment for previous episodes of infection.

**Fig. 3: Perception of risk associated with unprotected sex with *Casual* partner**

**Fig. 4: Perception of risk associated with unprotected sex with *Regular* partner**

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As previous researches (Arowojolu 2002; MacPhail and Campbell 2002; Kapiga and Lugalla 2002; Meekers and Klein 2001; Fapohunda and Rutenberg 1999; Amazigo, Kaufman and Obikeze 1997) suggest, the discrepancy between knowledge and behavior may be responsible for the continuing spread of the AIDS epidemic in Africa. It is possible that this discrepancy results from widely held notions of a ‘general’ as opposed to a ‘personal’ risk (AIDS is real, therefore everyone is at risk, however, I am not at risk). Smith (2003) observed that ‘conception of risk in ethical and moral terms and the complex intertwining of collectively shared moralities with individual assessments of ethics of personal behavior account for much of the seeming disconnect between what young people know about HIV/AIDS and what they do’ (p.345).

Perhaps, one of the major barriers to safer sex among young urban dwellers is inaccurate risk perception. Weinstein (1989) reported a situation in which people compare their own risk with those of others at much greater risk, resulting in an underestimation of risk than the actual evidence would suggest. Underestimation of risk in this regard, may be due to several factors: lack of accurate information, misconceptions about modes of transmission and fatalistic attitudes about the disease. It might also be related, as Brown (2001) suggested, to a desire to be accepted, to be trusting of one’s partner and not to wish oneself or one’s partner ‘evil’ or death since AIDS is generally regarded in these terms. Moreover, since infection with HIV does not have instant manifestations, young people may not readily understand consequences that seem removed from their immediate situation (Weiss, Whelan and Gupta 1996).

Although, the knowledge of HIV and how it can be avoided is essential, the findings of this study confirm Caldwell’s (1999) assertion that knowledge alone is insufficient to guarantee behavior change. One reason for this is that current approaches toward controlling the epidemic that emphasize the role of the individual, are incompatible with the close-knit, collective nature and social structure of most sub-Saharan African societies that exert considerable influence on individual behavior. Similarly, addressing gender disparities that increase women’s vulnerabilities can be effectively addressed when attention is focused on the social structure and social processes in most societies. Mann et al. (1992) suggested that removing gender inequalities may be an important step in preventing HIV transmission, given the powerlessness of women to negotiate their sexual safety in so many societies.

Therefore, the wider social context is more important and needs to be taken into account to make interventions more effective. As Ross and Ferreira (2000) and Ross and Kelly (2000) argued, approaches and models of risk that considers how the wider social context influences behavior and realizes that individuals have little power to alter behaviors on their own should be developed and applied in addressing the persistent problem of AIDS in Africa. In this regard, identifying social, cultural and structural-environmental factors that facilitate risk may be an important step in addressing the sexual health problems of young urban inhabitants. Nevertheless changes are occurring in social and economic factors in several societies (Nag 1994).

**Condom use and protective behaviors**

Condoms are highly effective in preventing the spread of STIs/HIV and unintended pregnancies (Cates, 2001; Gardner, et. al., 1999; Trussell, 1999; World Bank, 1997). When used correctly and consistently, male condoms can provide as much as a 94% reduction in the risk of HIV transmission (Holmes, et. al. 2004). Condoms have therefore been promoted as a major public health strategy to combat unwanted pregnancies and the rising rates of STIs including HIV/AIDS. However, the widespread knowledge of the protection that condoms provide does not determine use. Some studies in Nigeria (Onoh, et. al. 2004; Olaseha, et. al., 2004; NDHS, 2003; Smith, 2003; Peltzer, 2000) show that despite this knowledge, use is relatively low among the general population and among sexually active adolescents.

Generally, condom use in sub-Saharan Africa, especially among older men, is largely within the context of non-regular, short-term sexual relationships, but this is not the case with young people among whom condom use in premarital sexual relations is very low indeed. Young people are unlikely to use a condom or other preventive measures when they have sex, but, over the years, as evidence from the demographic and health survey data show, the situation is changing. The UNAIDS (2000) reported that the increasing tendency for younger women to use condoms more than older women suggests increased willingness to

The 2003 Nigerian Demographic and Health Survey data show that among men aged 15-19 and 20-24 years, the proportion reporting ever use of condoms was 9.8% and 30%, while among women in the same age groups the proportion was 6.5% and 14.8% respectively. None of the respondents in this study reported using any preventive measure the first time they had sex. Overall, 39% reported ever using condoms and males were more likely to report on this. More than 70% did not use a condom the last time they had intercourse and only 35% of those who are current users reported consistent use in the last 3 months [data not shown]. Although there was no question on the type of partner to determine the extent of risk, the proportion of respondents who did not use a condom at last intercourse was similar across age and gender categories.

Apart from having a generally low level of use, young people are known to be inconsistent condom users and it is established that the risk for HIV is greater among those who are inconsistent users than among non-users (Allen, 2002; Shelton and Johnston, 2001; Ahmed, et. al., 2001; Taha et al. 1996; Darrow 1989; Mann et al. 1988). This further highlight the need to understand the pathways and dynamics of condom use among adolescents so that program planners can design more effective and context specific strategies to encourage consistent use and scale down risky behavior (Hearst and Chen, 2004).

Why sexually active young people do not use condoms or other contraception in spite of wanting to avoid pregnancy/disease is a complex question. Otoide and colleagues (2001) provided some explanations. They reported that many young people are afraid of the effect prolonged contraceptive use will have on their future fertility and would rather opt for abortion which they see as an immediate solution to an unplanned pregnancy. In Nigeria, children are highly valued, especially within marriage; it is therefore understandable that young people would do anything to protect their future fertility, even though their actions are based on wrong information and exposes them to severe consequences.

Findings from this study show that apart from protecting future fertility, inadequate information about methods, access and availability, lack of basic knowledge of reproductive biology and sexual risks, underestimation of risk and the barriers created by the social environment are some of the reasons for the low level contraceptive use. When young people are provided with regulated and inadequate sex education in schools, or are not encouraged to learn about their sexuality (Nyanzi, Pool and Kinsman 2001; Jejebhoy, 1998), they may harbor misconceptions. Conversely, as Magnani and colleagues (2001) showed, when they possess adequate knowledge about issues as HIV/AIDS, their sexual behavior is more responsible, involving fewer lifetime partners and a higher level of condom use.

The literature suggests that the social environment of adolescents is influential in the decision to use or not to use condoms (Slap, et. al., 2003; Smith, 2003; Ezumah, 2003; Bongaarts and Cohen, 1998). Individual attitudes are more often than not based on the dominant norms of their peers, family and society. Baker et al. (1992) reported that young people are more comfortable discussing sexuality with their peers, though the information circulating among adolescents may not be accurate. Still, peer support for condom use may exert a powerful influence on individuals. Existing evidence (Edem and Harvey, 1995; Van Landingham, et. al., 1995) indicate that attitudes to condoms and adoption of other protective behaviors would be enhanced if the social environment is supportive. As Meekers and Klein (2002) reported, parental support was a significant predictor of condom use among adolescents, especially girls, in urban Cameroon. Social support is therefore critical, given the strong influences that the social environment exerts on adolescent sexuality especially in developing societies (Gage, 1998).

The poor attitudes exhibited by young people toward condoms and contraception generally are related to these societal, situational and environmental factors. Condoms are widely available for free or at highly subsidized rates, but negative perceptions (mostly of the adult community) regarding condoms and those
who use them discourage young people from using them. It is believed that only unmarried people use condoms, and this is because they are promiscuous. Although young people may not entirely subscribe to such perceptions, lack of adequate information and peer influence creates a different set of contradictions. While they acknowledge that condoms effectively protect against pregnancy and disease, they believe that a real man does not use condoms because it takes away the pleasure from intercourse. This view was predominant among the older males who reported that they earn respect from a girl if they have sex without wearing a condom and that it is a waste of resources if they pay to have sex (with a commercial sex worker) and then go on to wear a condom. The view that 'I enjoy it [sex] if I do it naturally...so if I pay to enjoy myself, using condoms will reduce my pleasure' was widely shared among male discussants.

Another prevailing perception among young people in slum communities is that condoms are basically used to prevent pregnancy and as a result, only those who want to avoid pregnancy should use condoms. Such perceptions are rooted in the circumstances surrounding the introduction and promotion of condoms in Nigeria as a family planning method. Although, over the years, condom promotion messages have focused on their effectiveness in preventing disease, the perception that condoms are used primarily for pregnancy prevention continue to belie their acceptance as disease preventive methods. Moreover, the difficulty with regard to the acceptance of condoms as disease preventive measures could also be seen in terms of the common reasons that are given for not them, which include that they have holes that allow disease causing agents to enter the body or that they could slip off or burst during intercourse. Furthermore, the importance attached to various preventive measures varies by gender. Females have a greater tendency to emphasize abstinence and avoiding sex with multiple partners while males talked more about using condoms.

Access to condoms within the community is also an issue. Male participants reported that few trusted outlets exist in the community where they can obtain condoms. Even when they are interested in using condoms, the need to avoid attention makes it difficult to purchase condoms from available outlets in the community. The location of these outlets does not guarantee quick and anonymous access for young people to obtain condoms within the shortest possible time given the tendency to have sex without planning for it. Removing such barriers would require innovative strategies to increase and encourage consistent use among young people. Further, there were complaints about the quality of condoms sold at these outlets; in many cases, condoms are already expired or damaged before they are sold, thus leading to high failure rates during use.

In focus groups, participants agreed that condoms and abstinence were the best means of avoiding infection from STIs/HIV, however, considering their poor attitudes and low usage, it is clear such opinions only reflect the influence of information they got from the media. Media messages on preventing HIV/AIDS infection have emphasized abstinence or the use of condoms following the success of the ABC approach in slowing down the epidemic in Uganda and Thailand.

Health seeking behavior

Amaro and Gornemann (1991) noted that both individual and external factors affect the capacity to utilize health services and determine whether treatment is initiated and sustained if the condition warrants it. Individual factors include knowledge of the problem, beliefs regarding health, knowledge of whether treatment would be helpful, previous experience with the health care system, willingness to contact the health care system, personal priorities and possessing the resources necessary to secure the services and overcome potential barriers to treatment. External factors include social enabling factors (e.g., social support, peer group influence, social norms), nature of health services and characteristics of service providers (e.g., knowledge, communication style and treatment ability).

The assessment of health seeking behavior regarding STIs reveal the influence of both individual and external factors. During focus group discussions, participants reported that the ability to recognize symptoms, knowledge of treatment sources, the seriousness of the condition, perceived efficacy of alternative treatment methods, peer group norms, availability of social support, availability and
accessibility of youth friendly treatment facilities, cost, characteristics of health personnel and the physical environment where health care services are available affect their health seeking behavior.

These factors, but more importantly their economic circumstances, generate a treatment seeking behavior that starts with a personal effort to obtain treatment and which may then lead to consulting more qualified sources of treatment where these initial efforts fail to improve the situation. For instance, a young man infected with an STI may commence treatment by first doing a self diagnosis/medication based on the information they have about symptoms and/or the drugs that might help cure the ailment. When this fails, they may seek help from friends who had similar experiences or people perceived as knowledgeable about the condition. These may include itinerant drug sellers, quacks or traditional healers. Further action depends on the outcome of this and may include contact with physicians in the formal health care system. The motivation to seek care is also based on the perception of the likely consequences of the infection. In other words, if the individual realises that the condition has serious implications for their health, then urgent steps are taken to seek care, but if they are ignorant of the likely consequences, then health care may be delayed, haphazard, ineffective and incomplete, resulting in further complications.

Young men in the slum communities identified cost as a barrier to what they considered appropriate and adequate health care even in life threatening situations, but because they are confronted with a multitude of competing and often immediate concerns for daily subsistence, seeking care for a highly stigmatized condition, however life threatening, may not be a priority. Thus, even when other factors are removed the desire to maintain secrecy or avoid social stigma may hinder positive health seeking behaviors.

Poor access to treatment facilities may impede health seeking behavior. Structural-environmental factors (e.g., location of the clinic, speed with which care can be obtained, the physical and administrative structure, availability of youth-friendly personnel, and privacy) and more importantly providers' attitudes were cited as important factors that influence health seeking behavior. In the slum communities, there are no government health facilities and the few existing private facilities are poorly equipped and services are very exhorbitant. Apart from these, only the Catholic maternity hospital located in Oluyoro caters for the health needs of many residents. The fact that this hospital primarily provides maternal health services makes it unattractive to young people. These factors also constrain preferences regarding sources of health care. For example, participants expressed a preference for chemist shops and itinerant medicine sellers, and herbalists because they are affordable and eliminate most of the constraints associated with regular health care systems, including social-structural-environmental factors.

This pattern of health seeking behavior, however, may have several implications for the rapid spread of HIV among young people in slum communities, hence urgent measures are needed to ensure access to existing facilities, while working to improve access to services for young people. More importantly, young people need to be equipped with vital, factual and adequate information regarding STIs. Those who are infected should be motivated to seek adequate care from qualified physicians given the widespread reports of STIs in the community, which may be the result of repeated infections because of inadequate treatment. The link between other STIs and HIV warrant increased attention at encouraging voluntary counseling and testing not only for HIV, but other STIs.
Conclusions and recommendations for improving sexual health among young urban slum dwellers

Young people's sexual risk taking, largely results from a sense of invulnerability and lack of understanding of the consequences of their actions. Apart from being at increased risk, they also become potential sources of transmission (Frosberg, et al., 1998). Moreover, the unplanned nature of sexual activities further complicates the challenges of behavior change. Butler et al. (1996) describes young people as pre-contemplators who do not understand that they are at risk, and who, for a variety of reasons, are unable to avoid risky behaviors; a situation further aggravates the HIV epidemic and complicates efforts at controlling its spread. It is therefore important to understand the reasons for this lack of change in order to develop better interventions or make existing ones more effective.

To design effective interventions for the sexual health needs of young people, it is important to understand how they juxtapose costs and benefits before engaging in certain behaviors. Poverty and conditions within the socio-cultural environment (including cultural values regarding sexuality, gender roles, power relationships, and the availability of information) are crucial elements of this process. Effective interventions to reduce HIV/AIDS and address sexual and reproductive health problems among young people need to identify and understand the dynamics of these factors and how they can enable change not just among individuals but the larger society. Interventions that seek to change individual behavior through improving knowledge, attitudes and skills of individuals have not entirely succeeded in slowing the epidemic; therefore, increased attention must be directed at structural interventions and broader societal issues, usually beyond the individual, that continues to drive the epidemic. Sumartojo (2000) and Page-Shafer et al. (1999) identified the physical, social, cultural, organizational, community, economic, and legal/policy aspects of environment that impede people's efforts to adopt health enhancing behaviors among others. Furthermore, some studies (van der Stratan et al. 2000; Anderson et al. 1999; Williams and Campbell 1998) noted that interventions focusing on these issues must involve an integration of various strategies covering the long term (initiating macro-economic policies to reduce economic deprivation), the medium term (re-orientating the society and encouraging social norms that enhance sexual health) and the short term (enhancing the quality of behavior communication messages; detection and treatment of STDs). Perhaps, the lack of behavior change that has been observed with regard to sexual behavior of young people is because the broader structural context is not supportive of such changes in behavior. It is therefore important to re-examine these structural factors and design interventions in addressing them.

Future trends of the HIV epidemic will be largely determined by the sexual behavior of young people. Though, they share similar characteristics, vast differences exist among young people all over the world that it is important to consider these when designing interventions for them. Whatever the differences, all young people belong to a 'community'; thus multiple community-based, culturally appropriate strategies, relevant to the peculiar needs of young people may be effective in meeting their needs. Such multi-component strategies- enhancing the quality of available information on not just HIV but other sexual health problems, detecting and preventing STI/HIV infection or re-infection through voluntary counseling and testing and treatment of those already infected, making services youth friendly, reducing stigma and creating safe and supportive environments by targeting significant others (authority figures) in the life of young people are likely to be more effective when they complement behavior change programs. On the basis of this, the following recommendations are made.

Improving the quality of sexual health communication messages

Early efforts explaining the continuing spread of the HIV epidemic in sub-Saharan Africa was hinged on lack of information about the disease. Therefore, initial efforts in addressing the epidemic focused on providing better communication messages. Over time, however, and given the recent trends in the epidemic, it is obvious that the problem is beyond providing information. So widespread is knowledge regarding AIDS that almost all young people know about it more than say, Gonorrhea or Chlamydia. As some studies (Hojer, 1999; Varga, 1999) have shown, there is little evidence that knowledge of AIDS changes sexual behavior.

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The above raises an important question: Why are young people unable to avoid the negative consequences of sexual behavior despite the entire information, education and communication programs to which they have been exposed? The answer is, knowledge alone cannot bring about changes in behavior otherwise the epidemic would have been brought under control. Examples from previous public health promotion programs, say in tobacco control demonstrates that knowing the negative consequences of a behavior, is not enough to deter some people from smoking. In addition, personal, ethical, economic, religious, biological and socio-cultural reasons act as barriers to prevent the adoption of safe behaviors. Moreover, as Caldwell (1999) suggested existing messages regarding the connection between sexual behavior and HIV/AIDS tend to portray prevailing sexual norms among young people as unacceptable, thus eliciting resistance from those who are not willing to change such sexual practices.

Despite what appeared to be widespread information dissemination, there is still reluctance to talk about sex education at almost every level of the society, particularly among adult gatekeepers of young people’s sexual health, especially parents and religious leaders. This contributes to the superficial level of knowledge of sex and sexuality, particularly among girls. The reason adults disapprove of sex education is because they believe it encourages promiscuity and premarital sex, but there is evidence confirming the opposite to be true. Adults, as gatekeepers of young people’s sexual health, need to know the benefits of sex education. Therefore, they need to be informed, educated and convinced that sex education enhances rather than jeopardize young people’s sexual health. Moreover, they need to be equipped with the skills to discuss sexual issues with children in an open, non-invasive and non-judgmental way. The approach adopted in training teachers to deliver sex education in schools can be adapted into community settings to encourage and enable parents do the same for their children. This would compliment what is taught in schools, while enabling those who do not have access to the school setting to also benefit.

Furthermore, providing basic sex education to individuals is not enough to address the situation. As the evidence from Uganda demonstrates (Green 2003), the success in curtailing the epidemic involved additional communication process using personal channels in all segments of the society, both urban and rural. Using personal channels through social networks, rather than media messages, to communicate about AIDS will stimulate honest and open discussions and behavioral response.

**Facilitating and encouraging the adoption of protective behaviors**

In the absence of a cure for HIV and of major behavioral change in risky behaviors, it is important to focus on other factors that facilitate protective behaviors. Condoms and abstinence offer the best protection; therefore it is important to understand the dynamics of condom use behavior among young people. Although there is widespread knowledge of the protective effects of condoms, not many people, and certainly most adolescents do not use condoms. Attitudes to condoms are largely influenced by general negative perceptions, which can be addressed within the contexts of community-based programs by providing factual information. Moreover, attitudes to condoms would be enhanced and sustained if the social environment is supportive of young people who do not want sex to lead to pregnancy or infection. In these circumstances, condom promotion messages become attractive when they are provided by those that young people trust. Currently, there is limited communication about sexuality issues between parents and children, but findings from this study highlights the importance of engaging the adult community in promoting protective behaviors among those who are sexually active. It is likely therefore that parental support for condoms will increase the number of sexually active young people who use condoms. To engage parents to support condom use would require creating awareness about young people’s susceptibility to HIV/AIDS.

Furthermore, the general low prevalence of condom use is related to underestimating risk and unwillingness to adopt protective behaviors. Young people need to be aware that their previous sexual history or those of their partners can increase their susceptibility to infection. Low condom use is also related to the inability of individuals to protect themselves even if they want to because of economic circumstances or inequalities that characterize the sexual relations between men and women. Women and especially young women are particularly at risk in this regard as the combined effects of gender inequality and poverty may considerably dis-empower them, thereby increasing their vulnerability. Understanding
the dynamics of condom use among young people requires a better understanding of the dynamics of their sexual relationships and the context within which condoms are negotiated in sexual relations.

**Ensuring access to and improving quality of sexual and reproductive health services**

Access to the health care is important in the overall efforts to improve the sexual health of young people in urban slums and in preventing the spread of HIV among them. Distance, cost, stigma, unskilled and unfriendly health providers and inadequate knowledge of the consequences of untreated STDs are some of the identified barriers to accessing and using services. The few private health clinics located in slum communities are poorly equipped and exorbitant, therefore access to health care is severely restricted. Health care is provided mainly by traditional healers and drug vendors who have little or no knowledge regarding STIs/HIV and other sexual health problems of young people. This makes it important to identify and train health providers at this level in order to improve the quality of care from these sources. More importantly, existing private health facilities need to be strengthened and their capacities improved so that they can offer youth friendly services. In addition, since cost of services is identified as a barrier to seeking care, it may be necessary to subsidize or eliminate user fees that prevent young people from accessing health care. A referral system for those needing comprehensive care would also need to be established with the two tertiary health care centers located close to the slum communities.

**Voluntary Counseling and Testing**

Sexually transmitted infection rates (and possibly HIV) are high because people have inadequate information and services are limited. Voluntary counseling and testing (VCT) is effective in encouraging behavior change and reducing the spread of infection. Currently, VCT services are located in hospitals and antenatal clinics and many young people are unable to utilize this service because of these structural constraints. Young people would need to be motivated to use VCT services by eliminating these constraints, while making the delivery of VCT services attractive. In addition, the range of VCT services need not be provided in hospitals and antenatal clinics. Adult community members and the leadership of youth groups could be identified and trained to provide the initial counseling and to refer and encourage people to go for testing in centers equipped for that purpose so as to guarantee confidentiality and anonymity. The idea of utilizing mobile VCT centers using trucks equipped for that purpose and which takes the service to the people could also be explored and implemented on a pilot basis.

Another constraint people have to utilizing VCT is AIDS-related stigma. In many communities, AIDS is synonymous with promiscuity, evil or death. People who become diagnosed with AIDS are considered immoral and treated with disdain. People are therefore afraid to find out their HIV status and those who are tested positive tend to be secretive about it so as not to be stigmatized and shunned by those around them. Therefore, to encourage VCT, stigma would have to be addressed and this could be done by initiating the voluntary counseling in the community rather than hospitals. This will also consolidate existing efforts at dispelling the myths surrounding HIV including beliefs about how it is contracted.

Testing of HIV status should also be promoted as is already being done by some religious institutions before marriage ceremonies are held. Young people should be encouraged to demand proof of HIV testing from potential partners. This will require policy and program support to be effective. Testing should not also be a ‘once-in-a-lifetime’ affair. Sexually active young people, especially those who have more than one partner should be encouraged to take HIV test on a regular basis. Similarly, approaches which make use of young people who are positive for HIV as role models may also help eliminate fatalistic attitudes. Forsberg et al. (1998) study which targeted young people who are already infected to control further spread of the disease can be replicated in other settings.

In addition, VCT should be tied to treatment to make it attractive and effective. Those who test positive need to be reassured that they will not be abandoned or left to suffer the consequences. The goal of VCT is to offer treatment therefore, treatment options should be tied to services. To achieve this, antiretroviral therapies must be readily available. Local government administrators have a big role to play in ensuring appropriate counseling and putting in place HIV/AIDS management structures to make the testing worthwhile. In this regard, local action committees on AIDS (LACAs) that oversee these communities
should be strengthened to undertake this role.

**Poverty, gender inequality and empowerment**

A strong link has been established between poverty and HIV/AIDS at the national, community and individual levels. It is important therefore, that non-health related interventions (for example, economic empowerment programs) are designed to address issues of poverty. Such programs should be aimed at increasing income at the individual and household levels in order to improve the socioeconomic status of individuals (especially women) and their families. In the slums of Ibadan, poverty and economic dependence are some of the risk factors for young people.

Furthermore, gender inequalities and traditionally accepted beliefs about women and girls and the difference in the perception of men’s and women’s sexuality has also been linked to the increased vulnerability of women for HIV infection. Perception of sexuality is learnt through socialization processes, which are culturally and individually determined. Deeply entrenched beliefs about the role of men and women significantly affect women’s ability to decide the circumstances of sexual relations. This is why for many girls the approach of prevention: abstinence, be faithful and condom use (the ABC approach), are incompatible with the realities of poverty and gender inequality that characterize their lives. Forced sex renders abstinence ineffective in the life of a victim; faithfulness offers little protection to those whose partners have other partners, and condoms do not offer any protection when men refuse to use them because it indicates a lack of trust. Besides, girls are reluctant to request their partners to use condoms and those who do tend to stop insisting on it once the relationships become stable. In some cases, they may not be comfortable speaking about sexual issues and they may acquiesce to unsafe sexual practices to preserve a relationship. The ABC approach can be more effective when it considers the specific circumstances of girls and is implemented along with other programs.

There is now a consensus that the empowerment of women is important for ensuring their sexual health and stemming the tide of HIV among the poorest peoples in the world. A contentious issue, however, is the form and shape such empowerment should take. Paulo Freire (1993a, b) argued that empowerment should be seen from a cognitive or intellectual dimension that focuses on people’s intellectual analyses of their circumstances. This means that positive behavior change among marginalized groups can be accomplished when there is an understanding of how poverty and gender inequality contribute to poor health. Therefore people have to work together to safeguard their health by challenging the processes that engender adverse social circumstances that put their health at risk. Others (Tawil, Verster, and O’Reilly, 1995) argue that psychological empowerment is inextricably linked to real political and economic empowerment and unless there are real changes in access to economic power, interventions that seek to enhance behavior change are unlikely to succeed.

The need for prevention strategies that focus on girls is important given the rising rates of HIV among them. Prevention strategies need to address their specific needs and realities along a continuum of prevention, treatment and care. For adolescent girls, it is important that programs, build on self confidence, life skills, including decision making, negotiation skills, job training and health services. Those who are not yet sexually active should be encouraged to abstain or delay their first sexual experience and should be equipped with the skills to do so. It is also important to consider the context in which sexual decision making takes place. Above all, young women need economic opportunities that increase their life chances. Economically disadvantaged girls need to find safe ways to financially support themselves.

The problem thus far is the tendency to adopt a blanket approach, which fails to recognize the diversities that exist between women and girls and the contexts where they live, and this is important if intervention programs are to succeed. For example, women and girls are subjected to different economic, cultural, social, and educational circumstances that have implications for empowering them. What programs should aim to accomplish is to give them the ability to take control of important aspects of their lives and their health given the peculiarities of their situations.

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Apart from girls, it is also important to empower boys. This can be done by improving their knowledge, encouraging them to be more sexually responsible and equipping them with the skills to increase the likelihood that they will enact and sustain protective behaviors that are beneficial to them and their partners. It is important to realize that efforts towards girls’ empowerment may yield little returns if boys are not involved in view of cultural perceptions of male and female sexuality. For example, there are still widely held beliefs among boys that one sex act cannot lead to pregnancy, thus many do not see a need to use condoms when they have sex occasionally. More importantly, because men have more power over women in sexual matters, they need to be educated that contraception is not just the woman’s business, but theirs as well. Similarly, given the attitudes to STIs, they need to know the value of procuring adequate treatment and notifying partners of infection. Generally, boys need a re-orientation that the responsibility for safe guarding sexual health is not just a girls’ responsibility as they are also liable to suffer the negative outcomes of unprotected sex.

Although there are programs already being implemented in this direction, the shortcoming with existing programs is lumping boys and girls together in the same program and providing them with similar information. To achieve more success, programs of this nature would have to be separated for boys and girls. Interventions should aim to modify boys’ sexual and gender-related attitudes, values and behaviors so as to promote sexual health and ensure equity between them and their partners in sexual health decision making. Again, community based organizations would be useful in delivering such interventions. This is important considering that many boys in slum communities do not have access to schools, health clinics, telephone counseling and media where programs have been traditionally delivered.

**Provision of social and recreational facilities**

Urban slum communities are unlike more affluent ones that have social and recreational facilities. They lack basic social amenities and recreational facilities for the inhabitants. Lack of recreation breeds boredom and idleness that contributes to increased sexual activities. Providing social and recreational facilities that occupy young people is therefore important in the overall efforts to improve sexual health outcomes. Establishing community youth centers will also provide opportunities for them to meet and discuss issues of concern to them and learn vocational skills with which they can improve their socioeconomic status.

**Working with Community leaders and Parents**

Numerous health-related policies and programs directed toward protecting the health of young people in developing country settings have tended to downplay the important roles that community leaders, parents and guardians play in the lives of young people. While the primary beneficiaries of these policies and programs are young people, it is important to recognize that the social institutions, families, communities and environment where young people are raised significantly influence their behaviors. In addition, gender socialization practices, which considerably affect sexual behaviors, are learnt in the home, religious institutions and the community. This makes families and communities as key actors in the sexual health of young people, should not be ignored. Interventions that aim to redress gender relations and power imbalances would therefore need to target parents, families and community leaders as a means of influencing contextual factors to achieve better results.

There is ample evidence to support the fact that significant proportion of young people experience premarital sexual relations and when religious and community leaders continue to preach against it as sinful, it makes it difficult for sexually active young people to seek help. This is a major barrier to behavior change because religious leaders command a lot of influence among their followers. Their opinions are highly regarded; therefore they would need to support any effort in addressing sexual health problems of young people. Caldwell (1999) has suggested that initiating community level interventions may be helpful in turning back the hand of the epidemic, however, community level interventions can only succeed if religious and political leaders are willing to acknowledge the reality of the situation and speak out in favor what can be done in curtailing the spread of AIDS. Again, Uganda provides an excellent example of how much community based actions and the efforts of political and religious leaders can contribute in making programs effective.

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Program planners and policy makers need to recognize the important roles of adults as primary gatekeepers of young peoples’ sexual health and seek to engage them in planning and implementing intervention programs. The challenges that adults have in discussing sex education with children has already been identified, therefore, appropriate strategies for overcoming these have to be designed and implemented. Perhaps, parental involvement in sex education programs, with renewed emphasis on parental supervision may be crucial for their success. The focus on adults does not in anyway undermine the important roles of young people themselves; the youth leadership has to be encouraged to identify practical ways of reducing the adverse outcomes of sexual behavior. To do this successfully, they will obviously need adult assistance.
REFERENCES


Beyond knowledge and behavior change: The social-structural context of HIV/ AIDS risk perceptions and protective behavior among young urban slum inhabitants in Nigeria
Beyond knowledge and behavior change: The social-structural context of HIV/AIDS risk perceptions and protective behavior among young urban slum inhabitants in Nigeria


Beyond knowledge and behavior change: The social-structural context of HIV/AIDS risk perceptions and protective behavior among young urban slum inhabitants in Nigeria


Freire P. 1993b: Education for critical consciousness. New York: Continuum


Green EC. 2003: Rethinking AIDS Prevention: Learning from Successes in Developing Countries. Praeger Publishers

Hauser PM. 1965: Observations on urban-folk and urban-rural dichotomies as forms of Western ethnocentrism. In Hauser PM and Schnore LF (eds.) The study of Urbanization. New York: Wiley; 503-514


Heise LL, Elias C. 1995: Transforming AIDS Prevention To Meet Women's Needs: A Focus on Developing Countries. Social Science and Medicine, 40; 931-943


Iyun F. 1983: Hospital service areas in Ibadan City. Social Science and Medicine, 17:601-616

Jejeebhoy SJ. 1998: Adolescent sexual and reproductive behavior: A review of evidence from India. Social Science and Medicine, 46(10): 1275-1290


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Beyond knowledge and behavior change: The social-structural context of HIV/AIDS risk perceptions and protective behavior among young urban slum inhabitants in Nigeria


MacPhail C, Campbell C. 2001: ‘I think Condoms are good, but aai, I hate those things”: Condom Use Among Adolescents and Young People in a South African Township. *Social Science and Medicine*. 52(1): 1613-1627


Mahy M, Gupta N. 2002: Trends and differentials in adolescent reproductive behavior in sub-Saharan Africa. (DHS Analytical Studies No. 3) Calverton, MD. ORC Macro International


Beyond knowledge and behavior change: The social-structural context of HIV/AIDS risk perceptions and protective behavior among young urban slum inhabitants in Nigeria
Beyond knowledge and behavior change: The social-structural context of HIV/AIDS risk perceptions and protective behavior among young urban slum inhabitants in Nigeria


NISER. 1997: Nigeria Migration and Urbanization Survey, Ibadan


Okonofua FE. 1999: Assessment of health services for the treatment of sexually transmitted infections among Nigerian adolescents. *Sexually Transmitted Diseases*, 26; 184-190


Otoide VA. Orosanye F. Okonofua FE. 2001: Why Nigerian Adolescents use induced abortion rather than contraception: evidence from focus group discussions. *International Family Planning Perspectives*, 27; 77-81


Ross MW. Ferreira-Pinto JB. 2000: Toward a public health of situations: the re-contextualization of risk. Cadernos Saude Publica 16; 109-21


Taha TE. Canner JK. Chiphangwi JD. 1996: Reported condom use is not associated with incidence of sexually transmitted diseases in Malawi. AIDS 10(2): 207-212

Tawil O. Verster A. O’Reilly K. 1995: Enabling approaches for HIV/AIDS promotion: can we modify the environment and minimize the risk? AIDS 9; 1299-1306

Thompson VD. Tashakkori A. 1993: Another look at heredity and environment as shapers of the person: a proximal-distal framework for consideration. Advance Population 1; 57-84


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