SEXUAL ACTIVITY AND CONDOM USE
IN LUSAKA, ZAMBIA

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INTRODUCTION

Zambia has been extremely hard hit by the AIDS epidemic, with HIV prevalence estimated at over 14% in the adult population. Lusaka is one of the cities worst hit by the AIDS epidemic in Africa, with over 20% seroprevalence of HIV-1 by 1995 (U.S. Bureau of the Census, 1995 and 1997). Estimates suggest that between 40,000 and 50,000 people died of AIDS-related causes in Zambia in 1993 and that the number of AIDS related deaths is likely to double by 1997 (van den Borne et al., 1996; Fylkesnes et al., 1994).

In response to the rapid spread of HIV infection in Zambia, the Government launched the National AIDS prevention and Control Program in 1988. Since then the Ministry of Health (MOH) has directed a number of projects to educate Zambians about the threat of AIDS and to promote safer sex practices (Yoder et al., 1996). While there appear to be have been substantial increases in knowledge of HIV/AIDS in Zambia, little is known about changes in sexual behavior and condom use that may have occurred in Zambia. The present study examines patterns of sexual behavior and condom use in Lusaka primarily on the basis of a survey conducted by the Zambia Social Marketing Project in 1996.

BACKGROUND

In slightly more than a decade there have been substantial changes in the environment for sexual behavior and contraceptive use in Zambia. Although the Family Planning Association of Zambia (PPAZ) was founded in 1972, there was substantial opposition to the promotion of contraception throughout the 1960s and the 1970s (van den Borne, 1996). Married women were required to get their husbands’ permission to obtain contraceptives (Pillai, 1993; Sheldon and
Hollerbach, 1981) and the law prohibited unmarried women from obtaining family planning from clinics (Pillai and Yates, 1993; PPAZ, 1988). While sexual activity levels among teenage women were significant (Pillai and Yates, 1993) young women were required to drop out of school at the onset of pregnancy and allowed to return only after having delivered (Peltzer and Likwa, 1993). Although Zambia has had one of the most liberal abortion laws in sub-Saharan Africa with abortion being legal for health and socio-economic reasons since 1972 (Bradley et al., 1991), safe abortion services were largely inaccessible due to limited information knowledge and access to these services (van den Borne, 1996; Bradley et al., 1991).

Official adoption of a population policy by the Government of Zambia (GRZ) occurred in 1989 and the earlier opposition to contraceptive use disappeared after GRZ’s formal adoption of a strong position on contraceptive use - although there continues to be some opposition towards modern contraceptive use by religious groups such as the Roman Catholic church (van den Borne et al., 1996).

Prior to the adoption of a national population policy by GRZ in 1989, the burden of educating the public about the need for using contraception was shouldered by the Zambian media (Nyirenda, 1986). The increasing importance of HIV/AIDS as a public health problem resulted in IEC activities for AIDS prevention being initiated by the MOH and several NGOs in 1986 (van den Borne et al., 1996) and then an extensive mass media campaign between 1988 and 1992 including a 39-episode radio soap opera (Yoder et al., 1996; van den Borne et al., 1996).

After 1986, a wide range of channels, messages and mediums were used to raise awareness of AIDS. A public debate ensued as a result of campaigns launched to promote preventive behaviors resulting in cessation of criticism by religion organizations of condom
promotion (van den Borne, 1996; Mouli, 1992). Knowledge of the existence of AIDS was widespread by 1990 (Kapilikisha, 1990) and results from a 1990 population based survey in Lusaka showed that over 70% of 15-49 year old men and women perceived AIDS as a serious threat (Cleland and Ferry, 1995).

While news media reports have noted that significant changes in sexual behavior and lifestyle have occurred as a consequence of the AIDS epidemic (e.g. Kapilikisha, 1990) the extent and nature of these changes remain unknown. One study conducted in two provinces of Zambia, the Copperbelt and the Northern province, found that condom use increased between 1991 and 1992 although there was no change in the proportion of men and women reporting non-regular sexual partnership. The study found that condom use in last sex was substantial but limited to non-regular partners (nearly a third of men reported using condoms in last sex with a non-regular partner). As expected, non-regular sexual partnership was considerably higher among men compared to women (Yoder et al., 1996; Yoder et al., 1993).

There is little known about the patterns of sexual behavior and condom use in Zambia. A 1990 survey conducted in Lusaka showed that 33% of men and 9% of women had non-regular sexual partners in the last 12 months (Carael et al., 1995). About one in ten men and less than one in forty women reported commercial sex in the last 12 months. The survey showed high levels of awareness of condoms (over 70% of respondents were aware of condoms) but relatively low levels of access to condoms (32% of those who knew of a condom source were within 15 minutes traveling time to that source). One in three men had ever used condoms compared to one in five women (Cleland and Ferry, 1995).

A study of sexual activity among 13-20 year old females enrolled in secondary schools in
urban areas of and Copperbelt provinces showed that 71% of teenagers had boyfriends and 67% reported a close relationship with their boyfriend. The study estimated that 48% of these teenagers had a high risk of sexual intercourse. Teenagers who had actually had sex in the last 2 months comprised about 30% of the sample. At all ages the percentage of teenagers using contraception was very low: 94% of teenagers had never used modern contraception. The study concluded that the likelihood of pregnancy and sexually transmitted disease among this group was very high (Pillai and Yates, 1993). The actual time period of data collection for this study was not reported.

In a study of condom use for AIDS prevention conducted by the Planned Parenthood Association of Zambia (PPAZ) with technical assistance from the Population Council, 12 focus group discussions were carried out in Ndola and Mansa in 1990. The discussions were carried out with female nursing students, male industrial workers, female marketeers, male out of school youth, male and female teachers and male and female bar users. Knowledge of AIDS was very high among respondents and respondents reported that having one sexual partner was the safest way to avoid getting AIDS (Kapumba et al., 1991). That the majority of study participants suggested having one sexual partner to avoid AIDS reflects important change in views about sexual partnership as, in Zambia, the image of men who have only one partner has been that of poverty or disability (Hawkins, 1992).

In 1986, the editor of the Zambia Daily Mail reported that “Zambians react with revulsion to talk about sex education or open marketing of contraceptives” (Nyirenda, 1986). Since 1986, significant changes in have occurred in the environment for sexual behavior and contraceptive use in Zambia. This study examines patterns of sexual behavior and condom use in Lusaka in
1996 as well as changes in behavior that may have occurred in recent years.

DATA

This paper is based on the 1996 Lusaka (Zambia) Sexual Behavior and Condom Use Survey (LSBCU-96) which was conducted by Population Services International (PSI) as part of a mid-term assessment of the performance of the Social Marketing Project in Zambia. The Zambia Social Marketing Project was started in 1992 by PSI, in collaboration with the Pharmaceutical Society of Zambia, and has been financed by the United States Agency for International Development and the Government of Japan as part of their assistance to the Ministry of Health.

The LSBCU-96 survey data was collected using a two stage probability sample of 806 men and women 15-49. The sample was drawn by the Central Statistical Office of Zambia. One hundred Standard Enumeration Areas (SEA) were randomly selected and four male and four female respondents were interviewed in each SEA. The instrument was adapted from the WHO Partner Relations (PR) and Knowledge Attitude Behavior Practices (KABP) Surveys which were conducted in 18 developing countries from 1989 to 1993 as part of WHO’s efforts to document patterns of sexual behavior in the developing world.

The LSBCU-96 questionnaire has questions on socio-demographic characteristics, relationship with last sexual partner (marital, regular, casual), the number of different sexual partners in the last 12 months, condom use in last sexual intercourse, condom brand used in last sexual intercourse, reasons for use of condoms, barriers to condom use, availability of condoms, exposure to brand advertising messages and message recall.
RESULTS

Partner Relations

The percentage distributions of young adult respondents (ages 15-24), by type of partnership are shown in Figure 1. Consistent with the fact that women tend to marry at an earlier age than men, the results show that levels of marriage for female young adults are much higher than those for male young adults: 40% of young women are married compared to 9% of young men\(^1\). The level of regular partnership amongst young men and young women are comparable (33% of young men and 27% of young women) and the percentage of virgins is identical (24%).

Figure 1 about here

For older adults (25-49), the distribution of respondents by type of partnership is shown in Figure 2. The results shows that partnership patterns are quite similar for older men and women: 76% of men and women 25-49 are married and the rest are almost equally divided between those unmarried and those with regular partners.

Figure 2 about here

Non-regular sexual partnerships

The level of non-regular sexual activity is important because of the relationship between non-

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Differences reported in this study are statistically significant at the p < 0.05 level.
regular sex and the spread of HIV/AIDS. In the LSBCU-96 questionnaire both married and unmarried respondents were asked about their relationships with their last sexual partners.

The percentage of unmarried respondents whose last sexual intercourse was with a casual partner is shown in Figure 3. The level of casual sexual partnership is high amongst unmarried men, with approximately half of all unmarried men reporting last sex with a casual partner. The level of casual sexual partnership is much lower among women than men with slightly more than one in six women reporting last sex with a casual partner. Since Figure 3 is restricted to unmarried respondents, this gender difference cannot be attributed to differences in age at marriage.

Figure 3 about here

The percentage of married men and women whose last sexual intercourse was with a casual partner is shown in Figure 4. Again, casual sex among married respondents is much higher for men than for women: 11% of young married men and 5% of older married men had last sex outside of marriage compared with less than 2% of all married women. Since this information refers only to the last sexual act, these findings suggest that the percentage of males who have sexual relations with casual partners is very high.

Figure 4 about here

Changes in non-regular sexual partnerships: 1990-1996

The distribution of the number of non-regular sexual partners reported by men and women
in Lusaka in 1990 and 1996 is shown in Table 1. In 1990, 33% of men and 9% of women reported having at least one non-regular sex partner. In 1996, these percentages were virtually identical (32% and 9% respectively). Thus, over a six year period, there appears to be no change in the percentage of persons reporting any non-regular sex.

Table 1 about here

An earlier study conducted in the Copperbelt and the Northern provinces showed that while there was no change in the percentage of men and women reporting non-regular sexual partnership between 1991 and 1992, there was an increase in condom use during this period (Yoder et al., 1993). It is thus possible that the population of Lusaka may be responding to the HIV/AIDS epidemic by increased condom use.

Changes in Condom Availability: 1990-1996

In a study conducted in 1990 by Planned Parenthood Association of Zambia focus group participants reported the need to increase access to condoms. One of the recommendations of that study was to increase condom distribution points and to forecast condom requirements in order to avoid shortages (Kapumba et al., 1991).

We now examine trends in the availability of condoms from 1990 to 1996. The first panel of Table 2 shows the percentage of respondents who know of a condom source. The second panel of Table 2 shows the percentage of respondents who report living within 15 minutes of a condom source (among those who knew of a condom source). The results show that knowledge of a condom
source increased substantially, from 54% to 79%, during this time period. The percentage of persons reporting less than 15 minutes traveling time to a source of condoms increased dramatically from 32% to 72%. Thus, while there is no evidence of a reduction in the number of casual partners, it is evident that access to preventive methods has increased considerably.

Table 2 about here

Condom Use in Last Sex

Condom use can greatly reduce the risk of contracting the HIV virus. Figure 5 shows condom use among young adults (aged 15-24) by relationship with the last sexual partner and by gender. The results show that condom use varies dramatically by type of partner. For both males and females, condom use is lowest with marital partners (about 13%), and considerably higher for regular partners (35-44%). For males, there is also evidence of substantial levels of condom use with casual partners (32%). Although similar levels of condom use with non-regular partners have been found in a previous study (Yoder et al., 1993), such high levels of condom use in regular partnership have not been noted in the previous literature on Zambia. Moreover, while condom use is lowest with marital partners it is much higher than what would be expected (see Knodel and Pramualratana, 1996).

Figure 5 about here

\[2\] There was not a sufficient number of young or older females with casual partners to determine the level of condom use among these groups.
Condom use among older adults (25-49) is shown in Figure 6. As in the case of young adults, condom use is lowest among marital partners and is considerably higher for regular or casual partners. A comparison of levels of condom use among younger and older adults (Figures 5 and 6) shows that, overall, condom use in last sex is higher among younger than older adults. This finding in part reflects the effectiveness of recent mass media and programmatic activities in increasing condom use: the younger generation in Zambia has become sexually active at a time when information about the risk associated with unprotected sex has been widely disseminated in Zambian society and the knowledge and availability of condoms has increased dramatically.

Figure 6 about here

Reasons for and Barriers to Condom Use

The LSBCU-96 survey also contains information on the reasons for using condoms. Table 3 shows the percentage of condom users who report using condoms for pregnancy prevention and the percentage who report using them for HIV/AIDS/STD prevention, by age and sex. In general both young and older adults use condoms both for the dual purpose of pregnancy prevention and HIV/AIDS/STD protection. This is consistent with findings from an earlier study in which focus group participants reported AIDS/STD prevention as well as pregnancy prevention as reasons for use of condoms (Kapumba et al., 1991).

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3 The number of cases shown in the far right columns of tables 3 and 4 are from the unweighted data. The frequency distributions shown in these and other tables are always weighted.
The percentage of non-users who state specific reasons for not using condoms (among non-users only) is shown in Figure 7. Trusting partner is the most commonly cited reason for non-use of condoms (64%), followed by not liking condoms (55%), partner objection to condom use (37%) and lack of availability of condoms (34%). Less than one in twenty non-users report the cost of condoms as a reason for non-use. An earlier study found that the main reason cited by respondents for non-use of condoms was condom breakage. The other major reason was a reduction in sexual pleasure. Other reasons were trust for partner and lack of knowledge of condom use. Among women the desire to satisfy their husbands in order to retain their loyalty and faithfulness was an important reason for non-use of condoms (Kapumba et al., 1991).

A breakdown of reasons for non-use of condoms by age and gender shows illuminating patterns (Table 4). A significantly higher percentage of older compared to younger adults (71% vs 52%) report trust of partners as a reason for non-use. Younger adults report not liking condoms and partner objection as a reason for non-use more often than older adults (46% vs 32%, respectively). Men are significantly more likely than women to report that trusting partner (73% vs 54%) and non-availability of condoms (39% vs 29%) are the reasons for non-use. Women are more likely to report that condoms are not used because they do not like condoms (60% vs 50%) and because their partners object to condom use (47% vs 28%).
The Maximum Brand Advertising Campaign and Changes in Condom Use

To overcome barriers to condom use and to further increase the use of condoms, it is important to know whether condom promotion interventions have been effective. The Zambia Social Marketing Program has advertised and promoted Maximum condoms since 1992, using the slogan “Strong for maximum protection, sensitive for maximum pleasure”. If this intervention has been effective, condom use should be higher amongst those who have heard the brand advertising message compared to those who have not.

To evaluate the effectiveness of the Maximum brand advertising campaign, the existence of any significant association between condom promotion messages and condom use⁴ was examined. Figure 8 shows the percentage of respondents who used a condom at last sex amongst those who heard the condom advertisement slogan, and those who did not, after controlling for the level of education. The results show that respondents who had heard the brand advertising message were significantly more likely to have used condoms during their last sexual intercourse. Moreover, the pattern holds for respondents at each level of education. The finding of a strong association between the brand advertising message and condom use in last sex, even after controlling for education, shows that condom advertising is an effective way to increase condom use⁵.

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⁴ Of all 156 respondents reporting condom use during last sex, 77% reported using Maximum.

⁵ Since the analysis presented here is based on data from a cross sectional survey, the possibility of reverse causation cannot be ruled out. However, the finding of simultaneous increases in the knowledge of condom source and accessibility of condoms implies causality.
These results are consistent with findings from a study of client perceptions of the image of different contraceptive methods, conducted as part of the Zambia Family Planning Services Project (Tweedie and Lemba, 1996). This study found that both men and women consider condoms to be the most widely available and the least expensive of all modern contraceptive methods. Moreover, the Image Study also found that condoms were perceived as being equally effective as the pill and the injection and somewhat less effective than sterilization.

**DISCUSSION**

HIV-prevention programs emphasize a reduction in the number of sexual partners, and an increase in abstinence and condom use as effective ways of decreasing the spread of the HIV virus. The results of this study strongly suggest that condom use has increased substantially in Lusaka as a result of condom marketing, promotion and distribution activities. The primary evidence for this finding is supplied by the strong association between a specific brand advertising message and condom use, independent of education. This finding is supported by evidence of dramatic increases in the percentage of persons reporting knowledge of condom source and easy access to condoms.

The findings of this study also suggest that the time span required for changes in sexual behavior may be longer than the time needed to increase condom use. In spite of tremendous efforts by a range of organizations to educate people about the risks associated with non-regular partnerships, the present study provides little evidence of a decrease in non-regular sexual partnership in Lusaka over a six year period. If true, this is a useful finding for programs, suggesting
that to expect a change in sexual partnership patterns even within several years may not be realistic. The study does find strong evidence, however, of a rapid adaptive response to the HIV/AIDS epidemic in the form of increased condom use. This study makes a contribution to the nascent literature on the effectiveness of population-based HIV prevention programs by showing that substantial increases in condom use are possible within a few years.
REFERENCES


Mouli, V. “Bridges Crossed Yesterday, Peaks to be Conquered Tomorrow. AIDS and the Condom.” African Health, 14, 5:12-14.


Planning Outlets under the Lusaka Branch of Planned Parenthood Association of Zambia.”


**TABLE 1**

% Distribution of Respondents by # of Non-regular Sexual Partners

<table>
<thead>
<tr>
<th># of non-regular partners</th>
<th>1990¹</th>
<th></th>
<th>1996</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>Female</td>
<td>Male</td>
</tr>
<tr>
<td>0</td>
<td>91</td>
<td>67</td>
<td>91</td>
<td>68</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
<td>11</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>2-4</td>
<td>2</td>
<td>15</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>5+</td>
<td>1</td>
<td>7</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

¹Source: Carael et al., 1995. "Sexual behavior in developing countries: implications for HIV control"
<table>
<thead>
<tr>
<th>% of Who Knew of Condom Source and % Who Were Within 15 Minutes of Source</th>
<th>1990(^1)</th>
<th>1996</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge of condom source</td>
<td>54</td>
<td>79</td>
</tr>
<tr>
<td>&lt; 15 minutes traveling time to condom source</td>
<td>32</td>
<td>72</td>
</tr>
</tbody>
</table>

\(^1\)Source: Cleland, J and Ferry, B. 1995. "Sexual Behavior and AIDS in the Developing World"
<table>
<thead>
<tr>
<th></th>
<th>% Using for pregnancy prevention</th>
<th>% Using for HIV/AIDS/STD prevention</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-24</td>
<td>79.3</td>
<td>98.9</td>
<td>102</td>
</tr>
<tr>
<td>25-49</td>
<td>88.3</td>
<td>98.3</td>
<td>54</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>93.1</td>
<td>96.6</td>
<td>61</td>
</tr>
<tr>
<td>Male</td>
<td>76.1</td>
<td>100.0</td>
<td>95</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>82.7</td>
<td>98.9</td>
<td>156</td>
</tr>
</tbody>
</table>
TABLE 4

<table>
<thead>
<tr>
<th></th>
<th>Trust partner</th>
<th>Do not like condoms</th>
<th>Partner objected</th>
<th>Not available</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15-24</td>
<td>52.4</td>
<td>58.5</td>
<td>45.8</td>
<td>32.1</td>
<td>250</td>
</tr>
<tr>
<td>25-49</td>
<td>71.0</td>
<td>52.3</td>
<td>32.4</td>
<td>36.1</td>
<td>291</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>54.4</td>
<td>59.6</td>
<td>47.0</td>
<td>29.4</td>
<td>280</td>
</tr>
<tr>
<td>Males</td>
<td>73.4</td>
<td>49.6</td>
<td>28.0</td>
<td>39.9</td>
<td>261</td>
</tr>
<tr>
<td><strong>Overall</strong></td>
<td>63.9</td>
<td>54.7</td>
<td>37.4</td>
<td>34.6</td>
<td></td>
</tr>
</tbody>
</table>
% Distribution of Respondents by Type of Partnership
Older Adults (25-49)

Figure 2
Figure 3

% Distribution of Un-married Respondents Whose Last Partner Was a Casual Partner

<table>
<thead>
<tr>
<th></th>
<th>15-24</th>
<th>25-49</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>16.4</td>
<td>17.8</td>
</tr>
<tr>
<td>Males</td>
<td>48</td>
<td>52.7</td>
</tr>
</tbody>
</table>
% Distribution of Married Respondents Whose Last Partner Was a Casual Partner

Figure 4
% of Young Adults Who Used Condom During Last Sex, by Relation with Last Sexual Partner

Young Adults (15-24)

Figure 5
% of Older Adults Who Used Condom During Last Sex, by Relation with Last Sexual Partner

Older Adults (25-49)

- Marital
- Regular
- Casual

Figure 6
% of Non-users Reporting Reason or Non-use of Condom During Last Sex

Figure 7
% of Respondents Who Used Condom in Last Sex by Exposure to Maximum Message by Level of Education

- Not heard message
- Heard Message

Up to primary: 21.1% Not heard, 20.5% Heard
Any secondary: 15.4% Not heard, 32% Heard
Secondary+: 15.4% Not heard, 45% Heard

Figure 8