

Literature Review on Alcohol Use and Sexual Risk Behaviour in South Africa

Prepared for WHO Project Alcohol and HIV infection: Development of a methodology to study determinants of sexual risk behaviour among alcohol users in diverse cultural settings

by

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Summary

A project on alcohol use and sexual risk behaviour is of great importance to South Africa. In addition to having one of the highest rates of HIV in the world, there are also high levels of alcohol use and misuse in South Africa. Many of South Africa's social and health problems are attributable to the misuse of alcohol, with sexual risk behaviours considered to be one such problem. However, there has been a limited amount of research on the mechanisms through which alcohol misuse increases the occurrence of sexual risk behaviour within South African communities. Such research is crucial to inform the development of interventions to help communities recognise their increased vulnerability with respect to their engagement in and/or exposure to sexual risk behaviours in contexts where alcohol is misused. In addition, such research can conceivably be used to inform behaviour change interventions.

This report has seven main parts. Part 1 provides background information on the demographic characteristics of South Africa. It shows that in 1996 South Africa had a population of approximately 41 million people. The majority of the population is relatively young and the society is characterised by large disparities in wealth, high rates of unemployment, crime and rapid urbanisation.

The second and third parts focus on the socio-cultural and contextual context of alcohol use in South Africa, and the nature and extent of alcohol use by various sub-groups of people in the country. It reveals that alcohol use is widespread in South Africa. For all age groups drinking is more common among males than females, and rates of drinking vary by population groups. Numerous socio-economic and cultural factors perpetuate the production, availability and consumption of alcohol in South Africa. These include the "dop" system, conditions on the mines, job opportunities provided by the informal and formal alcohol sectors and a society in which there is considerable tolerance of alcohol consumption.

Part 4 reviews information on the populations affected by HIV and STIs in South Africa. It is apparent that HIV and STI infection rates in South Africa are among the highest in the world. Those mainly infected with HIV are women in their twenties, sex workers, miners and other migrant workers.

Some of the key socio-cultural factors accounting for sexual risk behaviours of South Africans are highlighted in Part 5. Studies reveal that gender imbalances, high levels of tolerance of gender-based violence and various sexual norms and mores account for high levels of sexual risk behaviour. Levels of knowledge about HIV are extremely high among most groups, but the translation of this knowledge is seldom put into practise.

Part 6 reviews research examining the links between sexual behaviour and alcohol use in South Africa. It reveals that there is a paucity of research in this area. Most of the studies on these topics have focused on adolescents or youth in formal educational settings. The studies have examined the relationship between alcohol use (including the use of other drugs), sexual behaviour, the use of

condoms and other forms of contraceptives. One study investigated the link between alcohol use and HIV status. Due to the lack of comparability of the studies it would be imprudent to draw any firm conclusions about the degree and nature of the role that alcohol plays in sexual behaviour and subsequent risk of HIV infection.

The report concludes by highlighting the state of research on the issues of alcohol use, HIV and sexual risk behaviour in South Africa. It points to gaps in the research. Its main conclusions are as follows: that alcohol use and HIV-related sexual risk behaviours and HIV are growing problems that affect most sectors of the community in South Africa; that adolescents and youth are particularly affected by both alcohol problems and HIV; that women are most affected by HIV; that HIV-related knowledge is widespread, but people seldom protect themselves from infection; and that the role of alcohol consumption in sexual behaviour is not well understood.

Part 1: Background/Introduction

This section describes some of the key demographic characteristics of South Africa. The information presented in this section is based on the 1996 population census (Statistics South Africa, 1996) and hence is somewhat out-dated. This information is presented in the absence of data based on the most recent census of 2001, which will only be released in 2003.

Distributed over nine provinces, South Africa was estimated to have a population of approximately 44.56 million people by mid-year 2001, not taking into account HIV/AIDS-related deaths (Statistics South Africa, 2001). This figure is a projection based on the population census of 1996 (the most recent census data available), and was calculated by taking into account fertility and mortality rates. If the mortality rate that is due to HIV/AIDS-related deaths is included, the projected population size for mid-2001 was 44.33 million. According to the census of 1996 South Africa's population consisted of 41 million people (Statistics South Africa, 1996). The 1996 population size, and mid-2001 projected population size of each of the nine provinces can be seen in Table 1.

South Africa is a large country. Although a relatively poor nation, it has the highest (0.717) Human Development Index in the southern African region, and has a higher GDP than most medium development countries (UNDP Human Development Report, 2000). There are large disparities in wealth in South Africa, high rates of unemployment, and a population distribution that has a pyramid structure, with the majority of the population being young (See Figure 4).

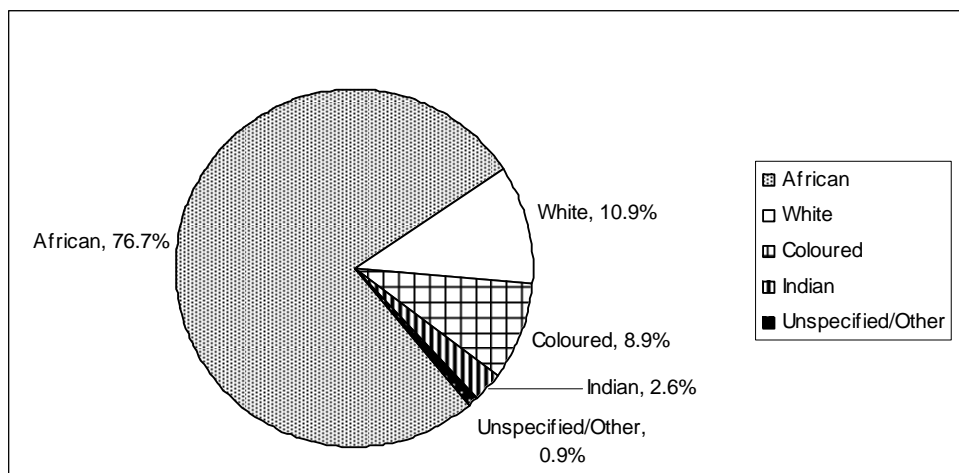
Table 1: Population of South Africa by Province (1996 and projections for 2001)

	KwaZulu-Natal	Gauteng	Eastern Cape	Northern Province	Western Cape	North West	Mpumalanga	Free State	Northern Cape	South Africa
N 1996 ^a (%)	8417021 (20.7)	7348423 (18.1)	6302525 (15.5)	4929368 (12.1)	3956875 (9.7)	3354825 (8.3)	2800711 (6.9)	2633504 (6.5)	840321 (2.0)	40583573 (---)
N 2001 ^b (%)	9146297 (20.5)	8020408 (18.0)	7001260 (15.7)	5683603 (12.8)	4255743 (9.6)	3625924 (8.1)	3111069 (7.0)	2834519 (6.4)	881818 (2.0)	44560644 (---)

Source: ^aStatistics South Africa (1996); ^bProjected figures from Statistics South Africa (2001)

South Africa has numerous population groups which have their own unique cultural heritage. According to the Population Act of 1950 the majority of people were classified into four groups (black/African, white, coloured and Indian/Asian). Although the Act has been repealed these categories continue to be used. As shown in Figure 1, 76.7% of the total population are black (African), 10.9% white, 8.9% coloured and 2.6% Indian/Asian.

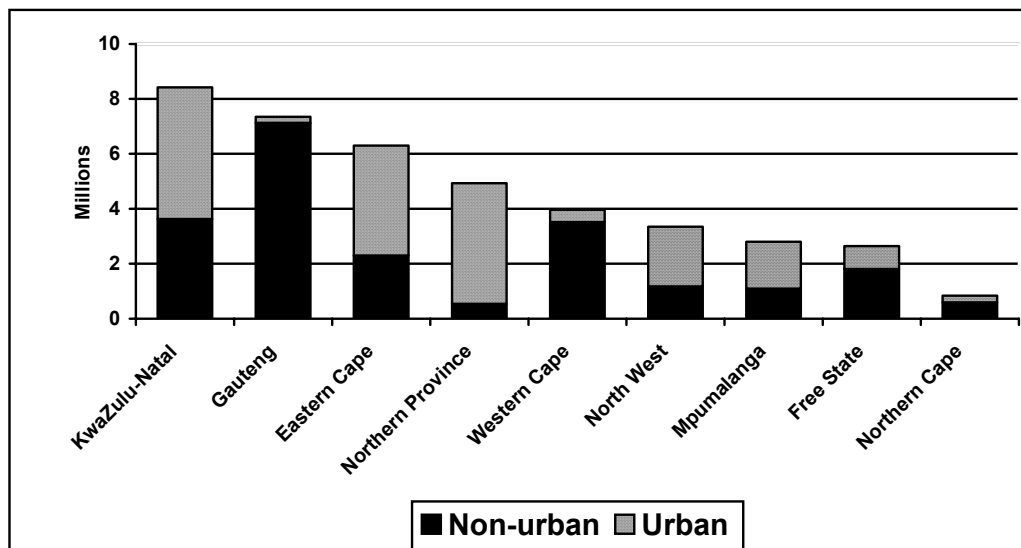
Figure 1: Percentage of the population in South Africa by population group



Source: Statistics South Africa, 1996 Census

It is estimated that 53.7% of the population reside in urban areas with Gauteng and the Western Province having the highest levels of urbanisation. The Northern Province, North West and Eastern Cape are the least urbanised (Figure 2). The main factors responsible for the flow of people to urban areas are poverty and lack of employment opportunities in non-urban areas. However, black people are still largely based in rural areas (63%), while the majority of people of other population groups are urbanised.

Figure 2: Number of people in each province by urban or non-urban area



Source: Statistics South Africa, 1996 Census

According to the population census of 1996 women comprise 51.9% of the total population. The percentage of women across provinces ranges from 49% in Gauteng to 54.3% in Northern Province (Figure 3). Table 2 shows the marital status of people 15 years and older.

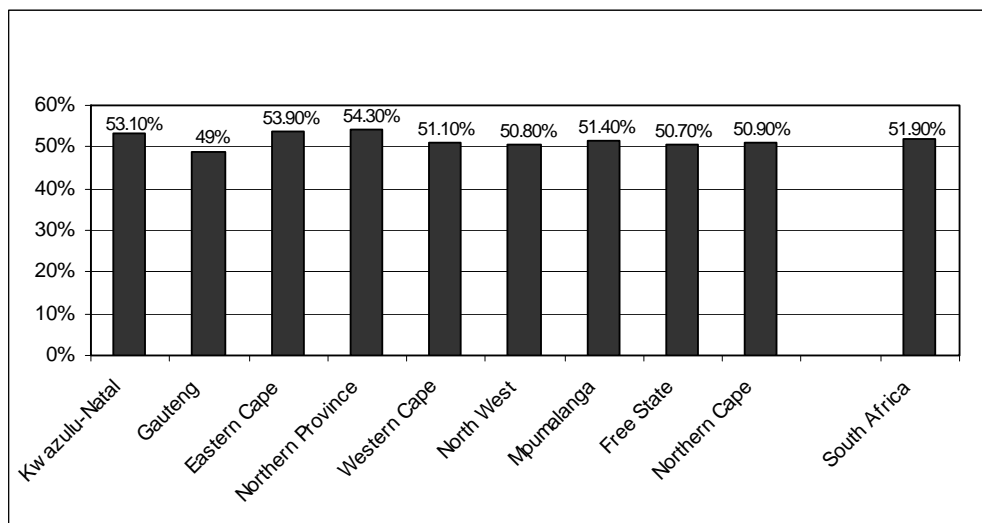
Table 2: Marital status for people 15 years and older

	Never married	Married: Civil/religious	Married: Traditional	Living together	Widowed	Divorced/separated	Unspecified	NA: Institution
Male	48.8%	27.1%	11.3%	4.9%	1.5%	2.0%	1.1%	3.3%
Female	43.6%	25.7%	12.2%	4.7%	7.8%	3.4%	1.0%	1.6%

Source: Statistics South Africa, 1996 Census.

Note: Column percentages add up to 100.

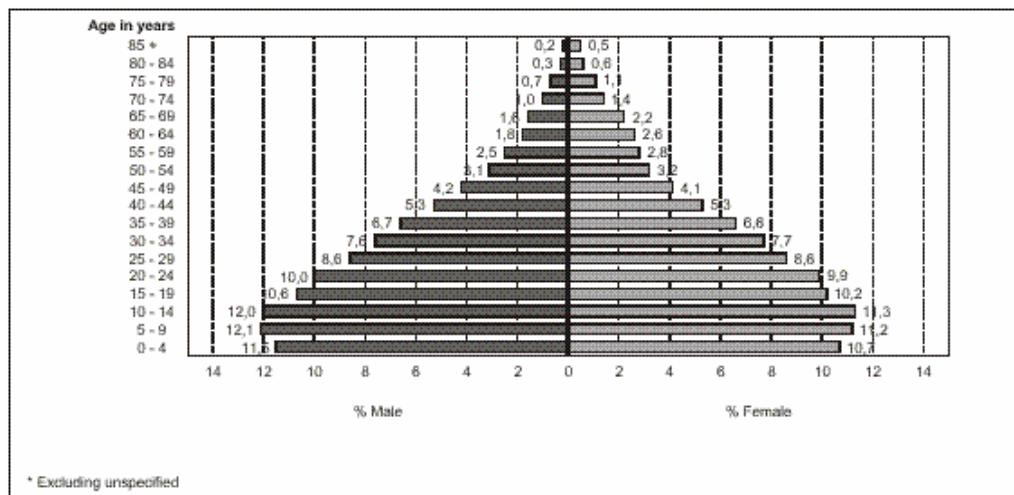
Figure 3: Percentage of women in each province and in South Africa overall



Source: Statistics South Africa, 1996 Census

Of the 40.5 million people living in South Africa, 34% (13.8 million) are 15 years old or younger, while 62.6% (25.4 million) are under the age of 30 years (Figure 5). Although this distribution is typical for developing countries it is reported that a distribution pattern that is more typical of a developed country is beginning to emerge (Statistics South Africa, 1996 Census).

Figure 4: Age distribution of the population by gender



Source: Statistics South Africa, 1996 Census

Table 3 shows various socio-economic indicators for each province in South Africa. The disparities in the socio-economic standing of the different provinces are apparent from the combination of indicators shown. Gauteng and the Western Cape provinces are the most urbanised and well-resourced provinces as evidenced from their relatively low unemployment and literacy rates and the proportions of houses with piped water and electricity supply. This is in contrast to the Eastern Cape, Northern Province and North West provinces where rates of unemployment are extremely high, while services such as water and electricity supply are in short supply.

Table 3: Socio-economic indicators by Province

Indicator	KwaZulu-Natal	Gauteng	Eastern Cape	Northern Province	Western Cape	North West	Mpumalanga	Free State	Northern Cape	Average/Total (South Africa)
Area as % of total area of South Africa – 1996	7.6	1.4	13.9	10.2	10.6	9.5	6.5	10.6	29.7	100
Population density (people per km ²) – 1996	95.1	448.4	38.4	41.7	31.5	29.9	36.7	21.0	2.3	34.4
% Urban – 1996	43.1	97.0	36.6	11.0	88.9	34.9	39.1	68.6	70.1	53.7
% Non-urban – 1996	56.9	3.0	63.4	89.0	11.1	65.1	60.9	31.4	29.9	46.3
Literacy rate* - 1996 – (%)	61.2	80.6	59.0	53.0	78.7	58.3	57.0	62.7	58.9	65.8
Unemployment rate (official definition**) – 1999 – (%)	25.9	20.6	29.8	34.0	13.7	23.5	24.4	23.3	18.1	23.3
Unemployment rate (expanded definition***) – 1999 – (%)	37.8	32.5	46.7	50.2	18.9	42.1	37.0	34.0	29.1	36.2
Households with piped water inside – 1999 (%)	34.6	58.8	23.4	12.1	76.7	21.6	27.6	29.9	48.1	38.8
Households with no toilet – 1999 (%)	12.7	0.8	25.1	18.8	3.8	5.7	3.5	5.3	10.7	9.7
Households using electricity for cooking – 1999 (%)	53.5	79.6	31.7	36.6	85.2	44.1	56.6	57.1	70.7	59.4

Source: Statistics South Africa, 1996 Census & 1999 October Household Survey

* People aged 20 years and more with no schooling or with some primary schooling are defined as “illiterate”.

** Those people within the economically active population who a) did not work during the 7 days prior to the interview, b) want to work and are available to work within a week of the interview, and c) have taken active steps to look for work or to start some form of self-employment in the 4 weeks prior to the interview.

*** Those people within the economically active population who a) did not work during the 7 days prior to the interview, b) want to work and are available to work within a week of the interview, and c) are discouraged work seekers who have failed to take active steps to obtain employment in the 4 weeks prior to the interview.

Part 2: Data on alcohol use

The consumption of alcoholic beverages has a very long history in South Africa dating back to very ancient times (Gumede, 1995). During pre-colonial days the consumption of alcohol was the preserve of elders, and other senior or authority figures, including health practitioners and healers. It was less common among youth and women of childbearing age, who would take part in the behaviour while engaging in particular rituals and religious ceremonies (Gumede, 1995).

Gumede reports that for men and women beyond their 'child bearing' years a number of different beverages were brewed from grain, and would have an alcohol content of between 3% and 5%. On certain occasions younger women, adolescents and children would be allowed to drink a "sourish fermented porridge" (p. 26) which would contain around 1.5 - 2% alcohol. Alcohol would be prepared for communal consumption, along with feasting for occasions such as (a) weddings, (b) ceremonies held for the spirit of an adult who had died one year previously, (c) ceremonies of the coming of age of both boys and girls, (d) following formal meetings of reconciliation, (e) ceremonies for the propitiation of ancestral spirits, such as in the event of sickness of a family member, and (f) graduation ceremonies of diviners.

Given the relatively low alcohol content of beverages consumed and the strict social mores governing drinking, problems resulting from the use of alcohol, including public drunkenness seldom occurred in the form and to the extent that they occur today (Gumede, 1995; MacDonald, 1996). However, drinking norms and controls in pre-colonial times were quite different from those practised among black people today (Gumede 1995, Parry & Bennetts 1998).

During modern times, drinking is fairly widespread among different members of the community. According to Parry & Bennetts (1998) illegal liquor outlets, such as private homes where alcohol is brewed, sold and consumed, known as shebeens, are a widespread cultural and economic phenomenon in the lives of black South Africans in particular. They came into being following controls that were placed on African people with respect to the production and sale of alcohol. Even though it was made legal in 1962 for black people to purchase alcohol from formal liquor outlets, the shebeen industry continues to thrive. Today shebeens are not only liquor outlets but have become a central part of life providing recreation and relaxation for many South Africans. In addition, shebeens also provide the means for many black people to make a meagre income. While the existence of the shebeen may have been a potent form of defiance against white, colonial and apartheid rule, alcohol has played a role in the social disintegration of family and community life, especially in black communities (Gumede 1995, Parry & Bennetts 1998).

During the South African colonialist and later apartheid eras alcohol was used to establish and maintain economic and social control, particularly on the farms, mines and in urban industry in order to support the economies of the times. Employers on wine and other farms in the Cape, and in the emerging diamond and gold mines to the north, used alcohol to attract and retain workers from rural areas. In addition, as part of the "tot" or "dop" system, alcohol was utilized as partial payment for labour. This system gave rise to widespread alcohol abuse and its associated social and health

consequences in the areas in which it is practised (London, Sanders & te Water Naude, 1998). The “tot” or “dop” system is still practiced on a number of wine farms in the Western and Northern Cape Provinces despite having been outlawed. It takes many forms, including the provision of alcohol as partial payment in lieu of wages and to supplement wages (Parry & Bennetts 1998, London 1999).

As far as the mining industry is concerned, there are still specific factors on the mines that predispose mineworkers to drink and misuse alcohol. Unsatisfactory work and living conditions mean that miners usually live in single-sex hostels based at the mine sites with one of the only places to socialize often being the liquor outlet. Boredom and peer pressure that are associated with this lifestyle are also contributing factors to drinking among miners (Parry & Bennetts 1998, Macheke & Campbell 1998).

A number of interrelated factors appear to have brought about a generally favourable attitude to drinking among people in South Africa. These include decreased controls over the production, sale and consumption of alcohol combined with rapid urbanisation and the traditional exclusion of women from the job market. There seems to be a high level of acceptance of heavy drinking (especially among men) and very little disapproval of it among South Africans in general. Alcohol drinking can be seen as a very popular pastime for people in South Africa. Most alcohol consumption involves malt beers and wines, while other beverages consumed include distilled spirits and home brews (Rocha-Silva, 1989; Rocha-Silva, de Miranda & Erasmus, 1996). Drinking occurs primarily during meal times, communion services at church, social functions and gatherings, and while viewing sporting events. The popularity of sports in South Africa in particular seems to encourage sponsorships involving national sports teams, which in turn create a generally favourable attitude towards the alcohol industry (Parry & Bennetts 1998).

While some cultural factors serve to increase alcohol consumption (and misuse), others, such as religious dictates, are likely to reduce or prohibit the behaviour. Many religious groupings such as evangelical or fundamentalist Christians, while permitting the consumption of alcohol in moderation and on specific occasions, have strong taboos against drunkenness. For Muslims, Mormons, Jehovah’s Witnesses, and other religious groups, however, alcohol consumption is strictly non-permissible (Parry & Bennetts 1998).

Poverty and poor education are considered to be additional factors that contribute to the high levels of production, consumption and availability of alcohol in South Africa (Parry & Bennetts 1998; 1999). The economic activity involved in the sale of alcohol in the informal sector provides “jobs” to many South Africans who would otherwise have no income. Historically, women have sold alcohol to raise money, and this tradition continues today, with most shebeen owners being women. Access to alcohol from the informal sector is virtually unlimited since constraints (such as opening hours and age restrictions) cannot easily be placed on unlicensed establishments. This ready availability of alcohol serves to encourage its use. With respect to the commercial sector, the alcohol and hospitality industries are also a major source of employment and tax revenue providing thousands of jobs that involve the production of alcohol (Parry & Bennetts 1998; 1999).

Part 3: Data on extent and nature of the problems with alcohol use

Despite the scarcity of comprehensive data on alcohol use and problems in South Africa, there is evidence to suggest that alcohol use is widespread in South Africa (Parry *et al.*, in press). Consumption of alcohol as such is not problematic. Of great concern, however, is the evidence (some of which is presented below) that suggests that large numbers of South Africans do not use alcohol in a responsible way. This section presents data on the extent and nature of problems with alcohol for adults, youth (in school and universities), and farm workers in South Africa.

1998 South African Demographic and Health Survey

The Department of Health's South African Demographic and Health Survey (SADHS) of 1998 collected data on alcohol consumption by males and females aged 15 years and older, which are presented by Parry (2001). Results of that study are presented in Table 4 as percentages of males and females reporting drinking, broken down by province, urban-non-urban location, population group, age and educational level.

As can be seen from Table 4 just under half of men (45%) and one-fifth of women (17%) aged 15 years and older reported that they had consumed alcohol during the month preceding the interview (i.e. were current drinkers). The overall rate of current drinking was 28%, which translates to approximately 8.3 million South Africans 15 years or older being current drinkers (Parry 2001).

There was much variation in rates of drinking across the different provinces. For instance, the highest current drinking levels for males were reported in the Free State and Gauteng (50% or more) whereas the lowest levels of current drinking were reported in the Northern Province (28%). For females, the lowest levels were also recorded in the Northern Province (9%), while the highest levels of drinking were for those women who were based in the Free State, Western Cape and Northern Cape provinces (23-25%). For both men and women higher rates of current drinking were recorded in urban areas.

It is apparent that rates of current drinking also differed substantially by population group and gender. The highest levels of current drinking were reported by White males (71%). This was followed by the rates reported for White females (51%), Coloured males (45%) and African males (42%). The lowest rates of current drinking were reported by African and Asian females (12% and 9%, respectively).

For both men and women the highest levels of current alcohol use were recorded among persons in the 35-44 and 45-54 year age groups, and the lowest levels in the 15-24 year age group. For both men and women, persons with either low or high levels of education were more likely to drink than those with moderate education levels (Standards 4-9).

Risky drinking was defined as drinking 5 or more standard drinks per day for men and 3 or more drinks per day for women. Rates of risky drinking for males and females were very similar and were approximately 4-5 times greater at weekends than on weekdays. Approximately one-third of current

drinkers drank at risky levels over weekends. Risky drinking levels were higher, especially on the weekends, for those living in non-urban areas.

Table 4: Percentage of respondents (≥15 years) reporting current use of alcohol, and current drinkers engaging in risky drinking

Background characteristics	Current drinking ^a		Risky drinking ^b (Current drinkers)			
			Weekdays		Weekends	
	Males (N = 5 574)	Females (N = 7 962)	Males (N = 2 478)	Females (N = 1 321)	Males (N = 2 478)	Females (N = 1 321)
Province						
KwaZulu-Natal	39.8	11.5	8.5	14.2	31.7	37.8
Gauteng	49.7	20.6	6.1	4.7	24.0	22.1
Eastern Cape	47.5	16.2	6.5	9.8	31.4	33.6
Northern Province	28.3	8.6	11.1	18.1	41.1	45.2
Western Cape	43.6	24.2	6.1	5.4	33.4	30.2
North West	46.6	17	9.1	14.9	42.9	43.0
Mpumalanga	45.9	14.2	5.8	8.6	49.4	46.4
Free State	56.2	24.5	5.6	5.6	27.3	30.0
Northern Cape	48.5	23.1	6.2	7.7	38.1	48.7
Residence						
Urban	46.7	19.2	6.4	7.1	30.0	29.5
Non-urban	41.4	13.2	8.3	12.9	38.0	39.3
Population Group						
African	41.5	12.3	7.7	13.3	35.7	42.1
Afr. Urban	43.6	12.8	6.6	11.3	32.5	40.7
Afr. Non-urban	38.8	11.8	9.2	15.3	40.2	43.5
Coloured	44.8	23.2	9.3	4.3	39.2	34.2
White	71.4	50.5	3.4	2.7	18.7	14.0
Indian	37.4	9.0	1.5	0.0	6.1	0.0
Age						
15-24	23.5	8.5	3.1	1.2	29.3	30.1
25-34	51.8	15.6	8.4	9.1	37.2	33.4
35-44	61.1	21.0	7.5	7.4	39.0	32.4
45-54	60.1	23.5	8.1	14.0	31.7	35.3
55-64	54.2	20.4	7.6	12.5	27.2	31.8
65+	45.8	20.3	6.6	7.0	21.0	30.2
Education						
No education	54.6	22.9	6.9	14.6	36.0	38.6
Sub A – Std 3	50.7	16.3	12.1	11.3	40.3	44.6
Std 4 – Std 5	42.0	13.2	10.5	9.5	42.9	44.9
Std 6 – Std 9	39.6	12.7	4.7	7.6	30.4	32.5
Std 10	46.7	18.5	6.9	5.9	24.4	18.3
Higher	57.8	33.4	2.0	1.9	24.0	12.6
Total	44.7	16.9	7.0	8.8	32.8	32.4

Source: Parry (2001).; ^aCurrent drinking: Consumption of alcohol during the past month; ^bRisky drinking: Consumption of five or more or three or more standard drinks per day for males and females, respectively.

Alcohol use among different sub-populations

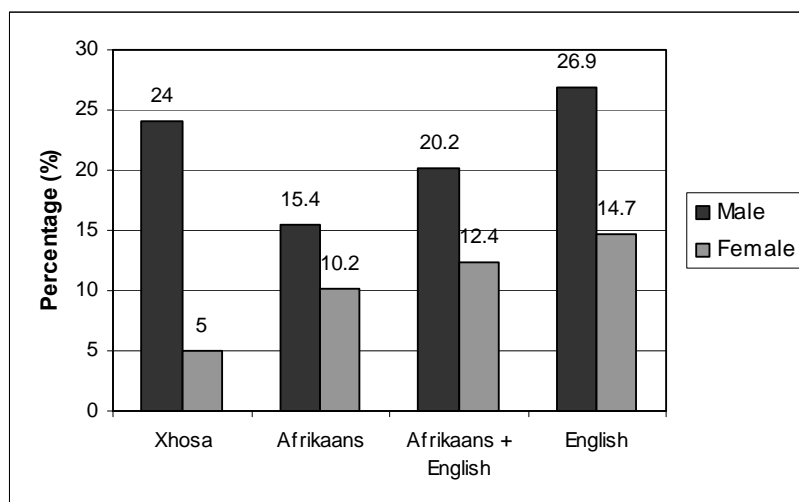
Youth

There are very few sources of information on drinking rates of young people in South Africa. Among the most informative studies concerning the prevalence of drinking behaviour of youth and adolescents have been one nationwide study among youth (Rocha-Silva, de Miranda & Erasmus), and two localised studies among high school students in Cape Town (Fisher *et al.*, 1993a; in press). A number of small studies using convenience samples have also been conducted and are also described in this section (e.g. Morojele *et al.*, 2000; Peltzer & Cherian, 2000; Visser & Moleko, 1999).

The most comprehensive study of alcohol use among youth in both urban and non-urban areas was conducted in 1994 (Rocha Silva, de Miranda & Erasmus, 1996). Although complete in assessing alcohol use among youth (young people aged from ten to twenty one years) in all parts of the country, the study focused on black people only. The results of that study revealed that 42.5% of the respondents reported having used alcohol at some stage during their lives. Overall, males were more likely to have consumed alcohol than females in both the urban areas (50.9% versus 40.9%), and the rural areas (47.2% versus 29.3%). For males, rates of lifetime alcohol consumption were slightly higher among those from the urban areas, while urban females were far more likely to have used alcohol than were their female counterparts.

Two major studies (Flisher *et al.*, 1993b; Flisher *et al.*, in press), conducted in 1990 and 1997, have assessed drinking rates among high school students of all population groups in the Cape Peninsula. The 1990 study (Flisher *et al.* 1993a, b) involved a representative sample of 7340 students in Grades 8 to 12 from 16 high schools. The sample comprised a Xhosa-speaking group consisting of black students, while the English-speaking and Afrikaans-speaking groups were more heterogeneous, and comprised persons from more than one of the other population groups (i.e. white, coloured, and a minority of Indian students). Of the total sample, 53.2% of respondents reported ever using alcohol, while 26.2% of the students had used alcohol within the week prior to the questionnaire being completed. Among the entire sample the rate of binge drinking was 15.4% with binge drinking defined as drinking 5 or more drinks on at least one occasion in the 14 days prior to the questionnaire being completed. Figure 5 shows that rates of binge drinking were highest among English-speaking males followed by Xhosa-speaking males. The lowest binge drinking rates were among Xhosa-speaking females.

Figure 5: Binge drinking rates of high school students in the Cape Peninsula (1990) by language group



Source: Flisher *et al.*, 1993b

Flisher *et al.*'s (in press) study that was conducted in 1997 consisted of 2930 primarily black, coloured and white students in Grades 8 and 11 at 39 high schools in Cape Town. It revealed that the overall prevalence rate for alcohol use in the past month was 31%. The prevalence rates for alcohol use for students in the various grades are shown in Table 5. A striking finding was the low prevalence rates for black females. Correlational analyses revealed that recent (previous month) alcohol use was

significantly related to the number of days absent from school and the number of years lived in the city.

Table 5: Prevalence rates (%) for alcohol use among Grade 8 and 11 students (N = 2779) in Cape Town (1997)

	Males			Females		
	Lifetime	Past year	Past month	Lifetime	Past year	Past month
Grade 8						
Blacks	34.7	16.1	17.7	16.2	6.7	7.7
Coloureds	39.7	22.6	21.9	32.5	18.5	20.5
Whites	49.8	33.9	22.5	52.8	39.8	25.0
Grade 11						
Blacks	55.4	35.6	37.6	18.3	9.6	8.4
Coloureds	69.0	54.3	47.7	55.6	41.3	33.2
Whites	72.9	62.3	54.7	75.7	64.1	56.8

Source: Flisher *et al.* (in press)

One particular study conducted in 1997 (Morojele *et al.*, 2000) examined the drinking behaviour of female school-leavers in Cape Town, and social psychological predictors of their drinking behaviour. The participants comprised 221 Grade 12 females from 3 schools located in formerly “white”, “coloured” and “African” areas (identified as Schools 1, 2 and 3, respectively), based on convenience sampling. Table 6 shows the numbers and percentages of females in each school who reported lifetime use of alcohol, consumption of alcohol during the previous year, month (current consumption), week, and consumption of 5 or more alcoholic drinks on at least one occasion (binge drinking) during the previous fortnight and week. The women in School 3 were less likely to have engaged in drinking and binge drinking during each of the time frames than were their counterparts in Schools 1 and 2. Those in School 1 were more likely than their counterparts in School 2 to have engaged in drinking at all and during each of the time periods in question.

Table 6: Drinking rates (%) of females in Schools 1, 2 and 3 for different time periods

Time period	School 1 (n = 82)	School 2 (n = 58)	School 3 (n = 81)
Lifetime alcohol consumption	87.3	66.7	31.5
Past year consumption	81.3	50.9	13.7
Current (past month) consumption	66.7	47.4	6.8
Past week consumption	46.3	29.8	7.0
Past 2-week binge drinking	32.5	35.1	5.5
Past week binge drinking	25.0	24.6	5.4

Source: (Morojele *et al.*, 2000)

In a recent study conducted in the Northern Province (Peltzer & Cherian 2000), the respondents included 191 students from three urban schools in Pietersburg and 209 students from three rural schools, all in Grade 11. The students in the urban school consisted of 86 boys and 105 girls whose ages ranged from 17 to 25 years (mean age = 19.1 years). Those from the rural school comprised 90 boys and 119 girls whose ages ranged from 17 to 26 years (mean age = 19.4 years). As can be seen from the results depicted in Table 7, the urban students reported higher levels of current, past and lifetime use of alcohol than those students included in the rural group.

Table 7: Prevalence rates (%) for alcohol use for urban (n =191) and rural (n =209) Grade 11 students

Current use		Past use		Lifetime use	
Urban	Rural	Urban	Rural	Urban	Rural
34.9	25.7	50.7	31.4	54.5	47.6

Source: Peltzer & Cherian (2000)

With regard to children of younger ages, a study conducted by Visser & Moleko (1999) included 460, Grade 6 and 7 students from four primary schools in a historically disadvantaged area in Pretoria, Gauteng. The ages of the group ranged from 9 to 22 years, with the majority of students between the ages of 12 and 14 years. It was found that 27% of the respondents had consumed alcohol at some stage of their lives and 14% of them indicated that in the month preceding the study they had drunk alcohol to get drunk. The most commonly endorsed reasons for using alcohol were to forget their problems (23%) and because they liked it or for fun (21%).

University students

Nkhoma & Maforah (1994) conducted a study of drinking patterns among mostly African university students living in a self-catering residence at the University of Cape Town (Western Cape province). They found that 75% of respondents in the sample drank alcohol. Half (50%) of young men in the sample were moderate or heavy drinkers. Parties were the most popular occasions for drinking, with 60% of drinkers naming parties as places where they drink. Fifty five percent of the respondents drank alcohol during weekends, with a relatively large proportion (26%) reporting drinking throughout the weekend including Friday, Saturday and Sunday.

An investigation into the use of alcohol was conducted among a random sample of 543 2nd year students from the University of Stellenbosch (Plüddemann *et al.*, 1999). The participants consisted of 269 male and 274 female students with ages ranging from 19-25 years, the mean age being 19.7 years. Respondents were classified into three groups: non-drinkers ("subjects who did not drink"), moderate drinkers ("subjects who reported 'never' getting drunk"), and severe drinkers ("subjects who reported getting drunk 'sometimes' or 'always' and "subjects who reported drinking more than 7 drinks per occasion"). Of the female students 21% were "non-drinkers", 39% "moderate drinkers", and 40% "severe drinkers". The male students consisted of 16% "non-drinkers", 27.5% "moderate drinkers", and 56.5% "severe drinkers". As many as 33% of the males reported drinking three times per week or more, and 30.5% of those who drank alcohol drank six or more drinks per occasion. Of particular concern was the fact that 12% of the males reported that they always drank until they got drunk.

Lastly, in a study conducted at the University of the North (Northern Province) comprising of 47 males (mean age 22.3 years) and 43 females (mean age 21.8 years), the past month prevalence rate for alcohol use was 57% for males and 5% for females (Peltzer & Phaswana, 1999). The ethnic background of the students was mainly Northern Sotho (47%), Tsonga (26%) and others (27%).

Farm workers

A survey (te Water Naude, personal communication) conducted in 1998 among farm workers in the Stellenbosch area (Western Cape province) showed that many of the workers were living in poor socio-economic conditions. Even though employment rates were high, wages were low and the "dop" system was still in use on 15% of the farms. The overall rate of alcohol use was especially of concern with 56% of the sample being current drinkers (76% of men and 34% of women). The most common drinks were wine and beer, both of which were consumed in large quantities and mainly over weekends. The rate for foetal alcohol syndrome (FAS) was very high at 5.6% and alcohol

consumption during pregnancy was 42%. Although no relationship between “dop” farm status and FAS was found, there was a significant relationship between drinking during pregnancy and living on a “dop” farm.

On a broader scale the South African Community Epidemiology Network on Drug Use (SACENDU) has been monitoring alcohol and other drug use in South Africa since 1996. SACENDU serves as a useful source of information on drug use trends over time and its findings lend support to existing research showing that alcohol is still the major substance of use and abuse in South Africa. First established in 1996, SACENDU’s primary aim is to monitor alcohol and drug use and misuse, and consequences over time. The network gathers information on alcohol and other drug use from numerous sources at five major sentinel sites (Cape Town, Durban, Gauteng, Port Elizabeth and Mpumalanga) across the country. From the most recent data collection period (Phase 10, January to June 2001) reported by Plüddemann *et al.* (2001) it emerged from SACENDU’s studies of treatment centres, that alcohol problems account for just under half (46% in Cape Town) to 70% (in Mpumalanga) of treatment centre admissions. Although alcohol remains the primary drug of abuse for most people who used drugs, there seems to have been a decrease since the beginning of data collection in 1996 in the proportion of people for whom this is the case.

SACENDU data also provide an indication of the extent to which alcohol misuse gives rise to problems. For example, alcohol-related mortality rates have been assessed using data from various mortuaries. For Phase 10 of SACENDU, Plüddemann *et al.* (2001) reported that between 40% (Durban) and 67% (Port Elizabeth) of cases tested positive for alcohol, with between 34% (Gauteng) and 64% (Port Elizabeth) having a blood alcohol concentration above 0.05 gm/100 ml. Alcohol has also been implicated in studies on trauma. For example, Plüddemann *et al.* (2001) reported on the results of the Injury Surveillance Project of a consortium that included the Medical Research Council (MRC), Council for Scientific and Industrial Research (CSIR) and UNISA (University of South Africa). That study found that 48% of patients who had been admitted to two hospital sites in Cape Town had breath alcohol levels equal to or above 0.05 gm/100 ml.

Part 4: Data on populations affected by STIs and HIV

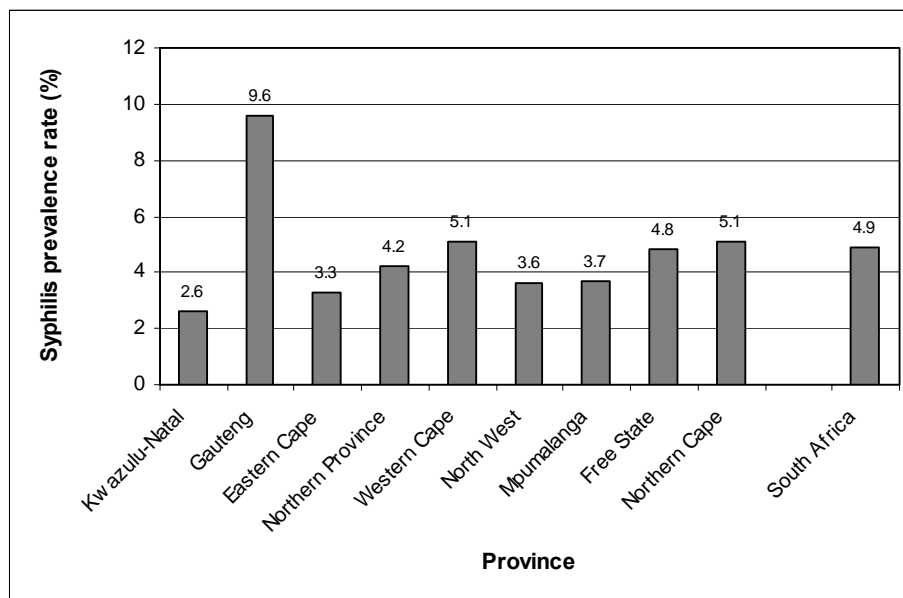
STI epidemiology

Sexually Transmitted Infections (STIs) are a major factor increasing vulnerability to HIV transmission (Laga *et al.*, 1993). The prevalence of STIs in South Africa is very high. There are approximately 11 million STI episodes treated annually in South Africa, with approximately 5 million of these managed by private general practitioners (Department of Health. HIV/AIDS & STD: Strategic Plan, 2000).

Based on the findings of the SADHS conducted in 1998, 12% of adult men in South Africa reported having recently had symptoms associated with STIs. Ten percent reported having had painful urination or a discharge from the penis, while 5% had had genital sores in the three months preceding the survey. Levels were higher among non-urban men, men in KwaZulu-Natal and Mpumalanga provinces, and African men. STI-type symptoms were also more prevalent among less well-educated men than among those with matric or a higher education (Department of Health, SADHS 1998).

Figure 6 shows syphilis prevalence rates among antenatal attendees (Department of Health, South Africa, 2001) for each province. There is some evidence that syphilis rates may be declining. National syphilis rates fell from 10.8% in 1998, to 6.5% in 1999 and 4.9% in 2000. However, trends are somewhat variable with a significant decrease observed in all provinces except Gauteng, Mpumalanga, Free State and Northern Cape. Gauteng was the only province to experience a significant increase from 4.4% (1999) to 9.6% (2000).

Figure 6: Syphilis prevalence trends by province among antenatal attendees in 2000



Source: Department of Health, South Africa, 2001

HIV epidemiology

South Africa is cited as having one of the fastest growing HIV epidemics in the world. National seroprevalence rates (based on antenatal surveys) have been growing steadily since 1990 to the unprecedented figures of 2000 (Department of Health, 2001). It must be noted that there is limited information on HIV infection rates that has been derived directly from non-pregnant women, men, newborn babies and children. Most data that are reported for those groups are estimates that are based on the figures that are derived from the annual antenatal clinic survey.

Table 8: HIV prevalence trends in South Africa, 1990-2000: antenatal clinic attendees.

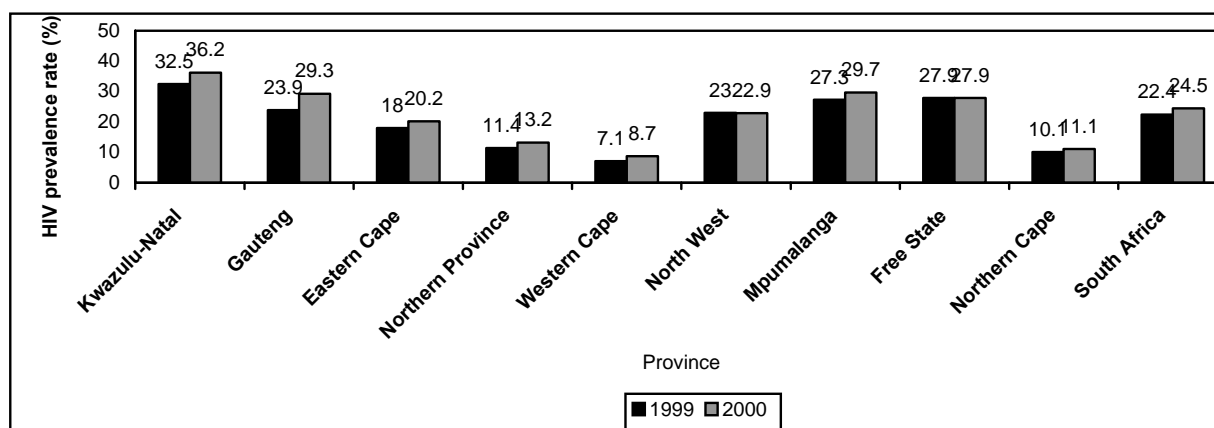
Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Prevalence	0.70%	1.70%	2.20%	4.0%	7.60%	10.40%	14.20%	17%	22.80%	22.40%	24.50%

Source: Department of Health, South Africa, 2001

The reasons why the epidemic has spread so rapidly in South Africa are many and complex. These include high levels of untreated STIs, high levels of poverty and income inequality, malnutrition, unemployment, poor education, gender inequality, the growing commercial sex industry, the entrenched system of migrant labour, a low level of condom usage and social norms that accept or encourage high numbers of sexual partners (Parry & Abdool-Karim 1999).

From 1999 to 2000, the greatest increases in HIV prevalence rates were observed in two provinces: Kwazulu-Natal (32.5% in 1999 to 36.2%) and Gauteng (23.9% in 1999 to 29.3%) (Figure 7). In the Free State and Northern Provinces no increase was observed between 1999 and 2000.

Figure 7: HIV prevalence by province among antenatal clinic attendees in South Africa, 1999 & 2000

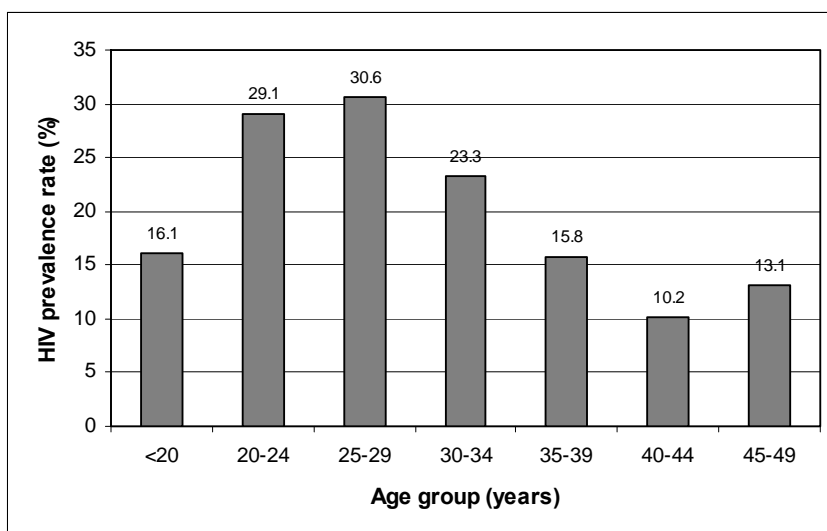


Source: Department of Health, South Africa, 2000 & 2001

The age-specific HIV prevalence figures presented in Figure 8 show that women in their 20s continue to form the majority of the pregnant women infected with HIV. Prevalence rates among women aged 20-24 years increased sharply from 25.6% (1999) to 29.1% (2000). Similarly, HIV rates among women aged 25-29 years increased from 26.4% (1999) to 30.6% (2000). Among women aged 30-34 years, the prevalence increased from 21.7% (1999) to 23.3% (2000) and for women aged 35-39 years, the infection rate dropped from 16.2% (1999) to 15.8% (2000). Encouragingly, HIV rates among the under 20s remained more or less stable from 1999 (16.5%) to 2000 (16.1%).

In order to obtain an estimate of the approximate numbers of South Africans infected with HIV, projections are made to extrapolate the total number of people who would be infected by the end of a particular year. However, these estimates need to be interpreted with caution, as there are inherent limitations in the methodology used. Projections of the estimated number of people infected with HIV in South Africa at the end of 2000 were as follows: women aged 15-49 years (2.5 million); men aged 15-49 years (2.2 million) and babies (106,109). Based on this data, the Department of Health estimated that 4.7 million, or one in nine, South Africans were HIV positive as of the end of 2000.

Figure 8: HIV prevalence by age group among antenatal clinic attendees in South Africa, 2000



Source: Department of Health, South Africa, 2001

HIV surveys among specific sub-populations

Youth

Levels of HIV infection are high amongst South African youth although data from the Department of Health's 1999 and 2000 surveys reveal that there were no marked changes in infection rates of the under 20 years age group between 1999 and 2000. A recent survey in the township of Khutsong, near Carletonville (mining town) in Gauteng, indicated that HIV infection was relatively low in the 13-16 year age group, followed by a sharp increase to 18.9% amongst 17-20 year olds and 43.1% amongst 21-25 year olds (Williams, Campbell & MacPhail, 1999). There are also significant differences in the prevalence of HIV between the sexes (Table 9). The figure of 29.9% for the 17-20 year age group reflects a much higher rate than that shown for women under 20 years of age in the 2000 National antenatal survey of 16.1%. These results suggest that women aged 17-19 years may be of particular concern.

Table 9: HIV prevalence rates among Youth in Carletonville

Sex	Age Group	HIV positive (%)
Male	13-16 years	1.2
	17-20 years	3.3
	21-25 years	22.4
Female	13-16 years	7.6
	17-20 years	29.9
	21-25 years	58.0

Source: Adapted from Williams, Campbell & MacPhail (1999)

Sex workers

Sex workers possibly constitute an important bridging group for transmission of HIV from HIV-vulnerable groups to the wider population (Leggett, 2000). However, there is scant information on the prevalence of HIV amongst sex workers and it is presently impossible to gauge whether sex workers contribute significantly to the spread of the disease. The existing evidence on the prevalence rates among sex workers suggests that they are higher than rates reported for women in the antenatal clinic surveys. One study conducted in 1999 found that 56% of 194 female sex workers (mean age 25 years) were HIV positive at a KwaZulu-Natal Midlands truck stop (Ramjee & Gouws, 2001). In another study among 359 female sex workers in Johannesburg, Cape Town and Durban over 66% of black sex workers were HIV positive compared to 18% of white and 17% of coloured sex workers. Of the total sample just over 50% were black, just over 38% were coloured, over 8% were white, and less than 3% were Indian (Leggett, 2000).

Truckers

Truck drivers have been singled out as being particularly vulnerable to HIV transmission and are implicated in the spread of the disease from region to region. The South African Medical Research Council (MRC) has studied the potential role of truck drivers in the spread of HIV in southern Africa by examining the HIV prevalence rates among truck drivers at five truck stops in the KwaZulu-Natal Midlands (Ramjee & Gouws 2001). All the truck drivers travelled to three or more provinces in South Africa and 65% travelled to neighbouring countries such as Zimbabwe, Malawi, Mozambique, Zambia, Botswana, Namibia, Swaziland and Angola.

The study conducted in 1999 showed that 60% of the 320 men interviewed reported having had a STI in the previous 6 months. Thirty four percent reported always stopping for sex during journeys and 29% reported never using condoms with sex workers. In addition, 70% reported having wives/girlfriends, and only 13% had ever used condoms with these regular partners. The overall HIV prevalence rate among the truck drivers was 56%, with 57% of black (297), 71% of coloured (7), 56% of Indian (9) and 29% of white (7) truckers testing positive for HIV. The HIV prevalence rate increased significantly with age to a high level of 69% among men aged 55 to 59 years (Ramjee & Gouws 2001).

Workplace employees

Data from at least one comprehensive survey to determine the prevalence of HIV among a working population comprising all race groups and all sexes are available (Colvin *et al.*, 2000). The project was based on 5634 employees of a company that employed more than 35 000 people in all nine provinces. The sample was drawn from 34 sites of employment nationwide. Saliva and blood samples were voluntarily donated for Elisa testing.

The study found that the crude HIV prevalence was 8.9%. The highest HIV prevalence among men was in KwaZulu-Natal, with 22.9% of the men testing positive. This was followed by North West Province with a rate of 16.6% and Mpumalanga at 10.5%. The Northern Province, Northern Cape, Free State, Gauteng, Eastern Cape and Western Cape had HIV prevalence rates between 8.8% and 1.2, with those in the Western Cape being the lowest.

By race group the black group's prevalence was 13.9%, white group was 2.1%, coloured group 2.3% and Indian group 3.6%. Semi-skilled workers had the highest prevalence rate at 14.7%, with skilled and management-level workers showing rates between 3.2% and 5.8% (Colvin *et al.*, 2000).

Carletonville community

Gilgen *et al.* (2001) conducted community surveys of sex workers, miners, Khutsong township residents and youth in Carletonville. The survey, conducted in 1998, showed that 69% of sex workers, 29% of mine workers, 37% of Khutsong township women, 22% of Khutsong township men, 34% of females aged 14-24 years and 9% of males aged 14-24 years were HIV positive. Thirty-six percent of sex workers, 22% of Khutsong women, 14% of Khutsong men and 11% of mineworkers had a current STI, with gonorrhoea and syphilis being major STIs. Lifetime exposure to syphilis was 77% among sex workers, 48% among Khutsong women, 28% among Khutsong men and 30% among mineworkers.

Part 5 : Data on prevailing sexual risk behaviours

Background

Complex socio-cultural factors shape marriage, sexual relationships and morality in southern Africa. According to Preston-Whyte & Zondi (1989) images of femininity and masculinity within the traditional Zulu and Xhosa cultures of South Africa are dominated by fertility. They argue that in a society where patrilineal descent and lineage membership are of great significance children are highly valued. Furthermore, it is implied that the larger number of children one has, the better one will be able to live in one's old age. This explains traditional women's primary role as child bearer and minder. Being able to bear a child is considered to be an essential part of being a woman and of achieving success as a woman.

The continued existence of the lineages was traditionally ensured by polygamy where men were permitted to have multiple wives (Preston-Whyte & Zondi, 1989). Today, for both economic and religious reasons, monogamy is the rule, particularly in urban areas, but multiple sexual encounters, either with regular partners, casual partners or with sex workers remain (Reddy & Meyer-Weitz, 1999). Nevertheless, marriage provides the institution in which procreation takes place. It is usually accompanied by lobola or brideprice, a practice that serves to compensate for the transfer of wealth, but that also entrenches the notion of the woman as a possession of the husband (Preston-Whyte & Zondi, 1989). This subordinate status assigned to women makes it difficult for them to influence their own fertility. The current unequal status of men and women in general is maintained by strong socio-cultural structures and protocol. Men's socialised roles are characterised by the expectations of male dominance and sexual prowess while women are expected to be subordinate and submissive. As a result many women often feel powerless to negotiate for safer sex or to claim monogamy from their partners (Reddy & Meyer-Weitz, 1999). In a recent survey conducted among rural women in the Eastern Cape, Mpumalanga and Northern Province, 74% of respondents said they understood that in their culture if a man paid lobola for his wife it meant she had to have sex whenever he wanted it (Jewkes *et al.*, 1999).

1998 South African Demographic and Health Survey

Given the high prevalence of STIs including HIV/AIDS among the South African population, the 1998 SADHS collected data from 11 735 women aged 15-49 years concerning women's sexual behaviour, condom use and knowledge and attitudes about HIV/AIDS.

Number of Sexual Partners and Condom Use

Using the Women's Questionnaire, women who were interviewed in the SADHS were asked a number of questions about their sexual behaviour including how many sexual partners they had had in the past 12 months, how long ago they last had sex, whether that sexual encounter had been with a spouse or a regular or casual partner, and whether they had used a condom on that occasion.

Very few women (3%) reported having had two or more sexual partners in the 12 months preceding the survey. This figure was only slightly higher among currently unmarried women (4%) than among married women (2%). Moreover, there are only very minor differences in the number of sexual

partners women reported having across background characteristics. It is interesting to note that almost 40% of unmarried women reported having no partners during the previous year.

Women were also asked about condom use during the most recent sexual intercourse. Only 8% of the women reported that their partner had used a condom during their last sexual intercourse. Somewhat more encouraging, however, is that condom use was considerably higher for sexual encounters with non-marital partners than with marital partners. Among women whose most recent sexual intercourse was with a boyfriend or casual acquaintance, 16% reported that they had used condoms compared to 6% who last had sex with their husband (or the man they live with).

It was also found that younger women (under 20 years) and women living in urban areas were more likely to use condoms than other women. Condom use was also higher among women in Free State, Gauteng, Mpumalanga, and North West Provinces. As might be expected, women with more education were also more likely than less educated women to have used a condom the last time they had sex. Overall, condom use was highest among African women, followed by coloured women and white women. It was lowest among Asian women, although they were more likely than coloured or white women to use condoms with their husbands.

Awareness and Knowledge of HIV/AIDS

The Women's Questionnaire also included a series of questions regarding knowledge and attitudes about HIV/AIDS. Women were first asked if they had ever heard of AIDS and if so, whether they thought they could protect themselves against the disease through certain specific behaviours such as having a good diet or staying with one faithful partner.

Results showed that knowledge of AIDS was almost universal with 97% of women aged 15-49 years saying they have heard of the disease. Moreover, they were rather well-informed about the way HIV is transmitted. Almost 90% of women reported that staying with one faithful partner, using condoms, using clean needles for injections, and avoiding sharing razor blades are valid means of protection against the virus. Conversely, between 65% and 75% of women knew that having a good diet, not using public toilets, avoiding touching people with AIDS, and not sharing food with a person who has AIDS are not effective means of protection. The only point on which the women were almost equally divided is whether avoiding mosquito bites can protect against HIV: 44% said no, 38% said yes and the remainder were not sure. As expected, urban women were more knowledgeable about HIV/AIDS than non-urban women.

Youth

The Community Agency for Social Enquiry (CASE), commissioned by the Royal Netherlands Embassy, conducted a survey of a representative sample of 2500 youth (between the ages of 16 and 34 years) in South Africa between April and July 2000 (Community Agency for Social Enquiry, 2001). The survey found that almost 80% of the youth were single, with men more likely to be single (88%) and women more likely to be married (18%) or living with a partner (8%). The ages at which youth become sexually active, according to the respondents' survey responses, are shown in Table 10.

Table 10: Age at which youth become sexually active:

Age in years	%
Under 12	3
13-15	16
16-18	45
19-20	11
20+	5
Not had sex yet	15
Refused	4
Total	100

Source: Adapted from Community Agency for Social Enquiry (2001)

Another survey conducted in the same year by loveLife (loveLife 2001) among a random sample of 2000, 12 to 17 year olds found that overall, 31% were sexually experienced (defined as having had sexual intercourse) by age 17 years and 24% were sexually experienced by age 15 years. Boys were more likely to be sexually experienced than girls (33% versus 28%). Of sexually experienced youth, 32% were sexually experienced by age 13 years or younger and 78% were sexually experienced by the age of 15 years. Among sexually experienced youth, multiple sexual partners were relatively common with 22% having had more than two sexual partners in their life. Eighteen percent of the sample reported two or more current partners. Rural teenagers were more likely to be sexually experienced compared to those living in an urban area (34% versus 26%). These findings are supported by a study conducted at two schools in KwaZulu-Natal (one urban, the other rural) in which youth from the rural site were more likely to be involved in love relationships and initiate sex at a younger age than their urban counterparts (Hlongwa *et al.*, 2001).

Although the reasons for this are complex, and probably include high rates of poverty, young women sometimes enter into relationships with older men-called "sugar daddies" who pay their school fees, buy them gifts, and offer other inducements. Other young women establish similar relationships with young men in exchange for favours, gifts, and cash (MacPhail & Campbell, 2001, Leclerc-Madlala, 2001). In the loveLife survey (loveLife, 2001) 43% of respondents said they knew people their age who have sex for money, drinks, food or other gifts. Twenty percent of sexually experienced boys said they had given money or gifts for sex and 16% of sexually experienced girls said they had received money or gifts for sex.

The loveLife survey results also revealed that sexual coercion was disturbingly widespread with 39% of sexually experienced girls and 7% of boys saying they had been forced to have sex. Thirty-three percent of sexually experienced girls and 15% of boys reported that they were afraid of saying no to sex. Of those who had heard of HIV/AIDS (91% of all youth), the majority (83%) knew that condoms prevent HIV transmission. Thirty-nine percent of sexually experienced boys said they try to have sex without a condom and for both sexes 41% still did not use condoms consistently. The majority of sexually experienced boys (68%) and about half of the girls (54%) believed that having sex without a condom is more enjoyable (loveLife, 2001).

The imbalance of power between male and female partners in heterosexual relationships reduces the ability of young women to either refuse sex or negotiate the use of condoms. Notions of masculinity that include the ideal of "flesh to flesh" sex with numerous partners are particularly well developed in South Africa and prevent young women from adequately protecting their health (MacPhail & Campbell,

2001). In addition, there is a growing body of literature documenting patterns of sexual practice among the youth, including assault, coercion, poor interpersonal communication and high levels of "risk"-taking. Increasingly, gender-based violence has come to be viewed as a major factor driving not only growth rates of HIV, but also STIs, teenage pregnancy, rape and child abuse (Wood & Jewkes, 2001, Leclerc-Madlala 2001).

Street children

Street children in South Africa are generally between the ages of 11 and 17 years. Rape, prostitution, sexual bartering and exchange, casual sex and romantic sexual relationships all occur among street children. In one particular study (Richter, 1997) the AIDS-related knowledge, attitudes and behaviour of 141 street youth, living in seven large cities in South Africa, were elicited in focus group discussions. The results indicated that the levels of AIDS knowledge of the street children were comparable to levels reported for groups of "hard-to-reach" youth in other parts of the world. However, fear of HIV infection did not appear in a list of day-to-day priorities constructed by the children. Instead this list was dominated by survival concerns with food, money and clothes. More than half of the boys conceded that they engaged in sex for money, goods or protection. Several boys indicated that they had been raped, and most reported being sexually active with "girlfriends", who themselves frequently engaged in transactional sex. With the girls, customers often seek unprotected anal sex (Richter, 1997).

Commercial sex workers

A study conducted by Wojcicki & Malala (2001) entailed a series of interviews done with commercial sex workers in a hotel in Johannesburg. It revealed that the women reported using condoms on most occasions, but still contracted STIs. The most common reason for not using condoms was that they were offered more money for "flesh to flesh" sex. Those who requested to use condoms earned less money and attracted fewer clients. Furthermore, because of practices such as dry sex (where the vagina is expected to be small and dry), which was reportedly regularly requested by men, these women were at increased risk for HIV infection when condoms were not used (Wojcicki & Malala 2001). Many women emphasized the need to drink alcohol so as to loosen up and become more 'forward' with clients. Other women said that they would have difficulties wearing revealing clothes (often worn while the women are working) and being assertive if they were not drunk (Malala 2001, Wojcicki & Malala, 2001).

Sex work and trucking are interwoven and some sex workers wait at bars, hotels and truck parks patronised by truckers (Ramjee & Gouws, 2001). In some highway sites, informal "brothels" are situated near truck routes and truck stops and their inhabitants acknowledge that their clients are largely drivers. Truckers tend to hire sex workers for both companionship and sex, picking them up at the outset, then having sex with them at some stage during the journey (Ramjee & Gouws, 2001).

Migrants (mine workers)

The back and forth commuting of migrant workers between urban areas where they work, and their homes in the rural areas, is often considered to be a major risk factor in the spread of HIV and STIs. The majority of migrant labourers end up working on the mines. As with other migrant workers

separated from their families for extended periods, patterns of sexual networking around the mining communities take place. Sex plays a central role in the migrant mine worker's self-image with the concept of masculinity being of central importance (Macheke & Campbell 1998). Macheke & Campbell's (1998) qualitative study of mine workers revealed that many of the migrant workers who were studied believed that regular sex is necessary for good health and mental balance, and that only "flesh to flesh" sexual contact can satisfy male sexual needs. Even though many of the miners were well aware that condoms are a means of protecting oneself against HIV/AIDS they were also seen to be unnatural and to take away pleasure from sex.

The majority of mine workers live in all male, single-sex hostels, with women not being allowed in the compound. Under these conditions many mine workers have sexual relationships with the commercial sex workers who operate in the vicinity of the mine and hostels, and/or have a regular girlfriend in the township near the mine. In addition, homosexual relationships, although relatively uncommon, do occur in the single sex hostels. Such relationships are often low-risk as far as HIV is concerned, with men preferring to engage in thigh sex (in which the dominant partner ejaculates between the thighs of the passive partner) rather than anal penetration (Macheke & Campbell 1998).

Research comparing risky sexual behaviours amongst mineworkers from 1995 to 1997 found that those who had four or more partners in the past year fell from 25% to 13%, while those whose last sexual partner was their spouse increased from 56% to 70%. Condom use with partners other than their spouse remained constant at 67% (Meekers, 2000).

Men who have sex with men

A recent survey, Sex Survey 2000, was conducted among 185 gay men (Boxford, 2001). These men were from three areas of Cape Town (City Bowl, Cape Flats and townships). Over 75% of the respondents were aged 20-40 years and approximately 66% were white, 25% coloured and 10% black (under-represented due to difficulties accessing informal networks of black men). Nearly half of the respondents were in a relationship with a male partner, the majority having been so for more than a year.

Fifteen percent of the men were behaviourally bisexual, having had sex with both men and women within the last year. The number of sexual partners ranged from 1 to 150, but most reported having had less than 10 partners in the previous year. Men with over 20 partners were also more likely to engage in unprotected sex. Homes, steambaths, beaches, bars and clubs were the most common places to have sex.

Thirty-three percent of the individuals who reported having anal sex, both insertive and passive, were doing so without a condom and without knowing their sexual partner's HIV status. Encouragingly, 75% had been tested for HIV. Of those who had been tested, over 80% had tested negative and nearly 8% had tested HIV positive. Younger, less educated men were less likely to have been tested. Twenty percent of the respondents reported finding it hard to say no to sex that they did not want and 18% agreed that the sex they have is not always as safe as they would like it to be. Eighty-four percent of the respondents were generally confident in what they knew about HIV (Boxford, 2001).

Part 6: Data on sexual risk behaviour linked to alcohol use

Research that has focussed on the relationship between alcohol use and sexual risk behaviour is very limited within the South African context. Most studies, of which we are aware, have involved adolescents living in the Cape Town area, with the exception of two studies, one of which was a study of arrestees in three major cities and the other was a study conducted at a university in the Eastern Cape. Thus far, the findings reveal conflicting results and further work will need to be done to clarify the nature and extent of the relationship between alcohol use and sexual risk behaviour. Each of the studies is described in turn.

Flisher *et al.* (1996a, b) conducted a study in 1990, to ascertain whether the notion of a syndrome of adolescent risk behaviour is valid for Cape Peninsula high school students. The sample consisted of 7340 high school students, from grades 8 to 12, from 16 schools in the Cape Peninsula. The relationships between the risk behaviours were demonstrated by means of unadjusted odds ratios. The alcohol risk behaviour variable (binge drinking) was defined as "having had 5 or more drinks on at least one occasion in the previous 14 days". The sexual risk behaviour variable was defined as "ever having had heterosexual vaginal intercourse". The research indicated a statistically significant relationship between alcohol bingeing and sexual intercourse, with a stronger correlation among boys than among girls.

Another study examined the relationship between drug use and sexual behaviour among students from four private schools in Cape Town (Morojele *et al.* 2000). The participants comprised 92 (74%) males and 31 (25%) females, with a mean age of 14.33 years, enrolled in grades 8 to 11, with the majority (79%) being white. The measure for alcohol use was "had used alcohol in the past month" and for sexual behaviour two measures were included. These were (1) engagement in sex with a near-stranger (whether respondents' last sexual partner had been known to them for more than 7 days); and (2) failure to use family planning (whether they or their partner had used anything to prevent pregnancy or prevent disease on the last occasion that he/she had had sexual intercourse). This study showed that there were significant correlations between alcohol use and both sexual behaviour variables. It should be noted that the authors of the study suggest caution in interpreting the results because of sample bias (mostly white males at private schools).

Adolescent contraceptive use and its association with other risk behaviours (including alcohol use) was investigated in a study among 913 sexually active high school students in Cape Town (Flisher & Chalton 2001). Two measures of alcohol use were included: (1) ever used alcohol, and (2) used alcohol in the past month. Use of contraception was measured as "used contraception on the last coital episode". Contraceptive use was not found to be significantly associated with the use of alcohol.

A study (Simpson 1996) conducted among 176 predominantly white, female second-year psychology students at Rhodes University, Grahamstown in the Eastern Cape, assessed students' alcohol use and sexual behaviour, and their beliefs about how alcohol and other drug use would affect their sexual behaviour. There were significant associations between alcohol/drug use and number of sexual partners (alcohol/drug users have more sexual partners) and knowledge of HIV transmission

(alcohol/drug users have better knowledge). However, alcohol/drug use was not significantly related to frequency of condom use or respondents' perceived risk of HIV infection. Although the students had high levels of knowledge regarding safe sex practices, only 15% of the sexually active respondents used condoms regularly.

In a 1995 study to examine the risk factors for teenage pregnancy among sexually active black adolescents in Cape Town, it was found that alcohol use was not associated with sexual risk behaviour that leads to pregnancy (Vundule *et al.* 2001). This finding would appear to support the finding of the above study by Flisher & Chalton (2001). It should be noted that teenage pregnancy has been identified as one of the most important health, development and population problems currently facing South Africa. Most teenage pregnancies in South Africa occur within the context of unstable relationships and are either unplanned or unwanted. This has important implications for efforts to reduce many other outcomes, such as the spread of STIs and HIV (Department of Health: National Framework for Contraceptive Services, 1998)

One final study examined the relationship between alcohol and other drug use and respondents' HIV status (Parry *et al.* 2001). Conducted by the Medical Research Council and the Institute for Security Studies the main purpose of the study was to investigate the links between drug use and crime among 827 arrestees in three surveys in three major cities over three time periods: August/September 1999, February/March and August/September 2000. With respect to data that were collected for Phase I of the study (August to September 1999) it emerged that 20% (166 out of 827) of the arrestees tested positive for HIV, with a greater prevalence among females (30%) than males (18%). The highest prevalence was found among the African respondents (25%), followed by Indian (19%), white (10%) and coloured (5%) respondents. No age differences were found with regard to HIV status. It emerged that 19% of those who reported using alcohol in the past month were HIV positive, whereas 15% of those who reported not having used alcohol in the past month were HIV positive. Contrary to expectations, these results suggest that HIV prevalence rates were higher among non-drinkers during the past year than they were among drinkers. The same unexpected direction of results emerged with respect to the correlation between use of various illicit drugs and the arrestees' HIV status. The authors speculate that under-reporting of alcohol/drug use by the respondents could be a cause of their failure to find a strong relationship between HIV status and drug/alcohol use, and to find a relationship between the two variables in the expected direction.

Part 7: Conclusion

Research shows that alcohol use is widespread in South Africa. It reveals that for all age groups drinking is more common among males than females, and rates of drinking vary by population group. White females are more likely to drink than are their black counterparts, but males of all population groups have roughly the same rates of alcohol consumption. People in urban areas tend to be more likely to drink than their rural counterparts, although people based in rural areas seem to be more inclined to drink at risky levels when they do drink. Numerous socio-economic factors perpetuate the production, availability and consumption of alcohol in South Africa. These include working conditions on wine farms and in the mines. In addition, alcohol production and distribution provide many job opportunities in a society with high rates of unemployment. Prevailing societal norms and attitudes favour alcohol consumption. Across the country alcoholic beverages are very readily available from both licensed and unlicensed establishments. More nationwide research is needed on patterns of alcohol consumption among various sub-groups in South Africa.

Research suggests that HIV and STI infection rates in South Africa are among the highest in the world. South Africa has experienced a rapid increase in the rate of HIV infection since 1990, although there is some indication that the rates may be levelling off. Those who seem to be mainly infected with HIV are women who are in their twenties, people in KwaZulu-Natal province, miners and other migrant workers, sex workers, and women in general. Inter-provincial differences in rates of HIV stem from, among other factors, poverty levels and migration patterns. HIV transmission is attributable mainly to heterosexual sex. Levels of knowledge about HIV are extremely high among most groups studied, but the translation of knowledge into practice is far from optimal. Condom use is low and inconsistent. Moreover, many women are not sufficiently empowered to negotiate safe sex and fear the repercussions that may arise from such attempts.

Although limited, there is a growing body of literature on the sexual practices and behaviour of young people in South Africa. However, there is a paucity of research on a number of aspects of sexual practices and behaviours. For example, more needs to be known about 'normal' sexual behaviour of the adult population. HIV prevalence data are based on the annual survey of public antenatal clinic attendees, a group that is not representative of the greater population. There is still a lack of accurate information about the HIV prevalence rates of men, and the rest of the population who are not well represented by pregnant women attendees of public antenatal clinics.

There has been very little research on the links between sexual behaviour and alcohol use in South Africa. Most studies have focused on adolescents or youth in educational settings. The studies have been limited to cross-sectional and correlational designs and student samples. In the main they have examined the relationship between alcohol use (including the use of other drugs) and sexual behaviour, the use of condoms and other forms of contraception. One study has investigated the link between alcohol consumption and HIV status among arrestees. The research in this area fails to examine potential causes of the links between alcohol use and sexual behaviour. In addition the correlational studies use somewhat different methodologies and hence preclude meaningful comparisons between findings.

In conclusion:

1. Alcohol use, HIV-related sexual risk behaviours and HIV are growing problems that affect many sectors of the community in South Africa.
2. Adolescents and youth constitute one group of individuals who are particularly affected by both alcohol problems (and particularly binge drinking) and the HIV pandemic.
3. HIV-related knowledge is widespread, but people do not have the skills required to protect themselves from HIV exposure and infection.
4. Women's lack of empowerment is at the heart of their inability to prevent exposure to HIV.
5. The role of alcohol consumption in sexual behaviour is not well understood.

Much needs to be done to clarify the determinants of the use and misuse of alcohol, whether alcohol consumption relates to sexual behaviour, and the factors that account for the relationship between the two behaviours. It is also essential to understand the individual/personality, family, community, and broader societal factors that determine people's sexual and alcohol use behaviours. Current research should be augmented by use of new methodologies rather than simple correlational analyses. Alcohol consumption may play a role in sexual risk behaviour, but this may be the case only for those who drink at all, those who drink at risky levels, or those who binge drink. Ethnographic and exploratory research is a useful route through which such understanding can begin to be realised.

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