CHAPTER 10

MORTALITY AND MORBIDITY IN ADULTS

10.1 Introduction

The paucity of information on the health of adults, particularly chronic diseases, was recognised in the planning of the SADHS and a module was developed to fill this gap. While it was not possible to do a clinical examination of the respondents, hypertension and lung disease were identified as sentinel conditions which could be measured by lay interviewers. The adult health module was designed to obtain information related to these conditions including risk behaviours, self-reported history of the conditions, utilisation of services and long-term medication use. In addition, the module included information regarding occupational illness and injuries and a section on oral health. The extent of adult mortality and self-reported morbidity are presented in this chapter, combining information obtained from the Household, Women's and Adult Health questionnaires.

10.2 Adult Mortality

Direct estimates of adult mortality have been obtained from the sibling history information. This approach uses the reported ages at death and dates of birth of respondents' brothers and sisters. Age-specific death rates were computed by dividing the number of deaths in each age group by the total person-months of exposure for the same reference period. They are presented for men and women in Table 10.1 for the periods 0-2 years, 3-6 years and 7-9 years prior to the survey. The age-specific death rates are also shown for men in Figure 10.1 and for women in Figure 10.2. The death rates for men are considerably higher than those for women. Each series of rates is a little erratic, which is probably due to misreporting of ages or dates by some respondents and to random fluctuations in the sample. The rates clearly indicate, however, that young adult mortality was fairly constant during 3-9 years before the survey (1989-1995) but substantially higher in the three years before the survey. This rise in the mortality of young adults is consistent with the growing HIV epidemic in South Africa that has been documented by the antenatal surveillance (Department of Health, 1998).

Figure 10.1 and 10.2 also show a West model life-table selected to match the level of child mortality observed in the SADHS (West level 20). The death rates for women are more or less consistent with the model rates except in the last 3 years when observed mortality rose substantially. In the case of adult men, however, the observed death rates are consistently higher than the model rates, even for the period before the HIV/AIDS epidemic began to have an impact on adult mortality. In addition, the death rates for the earlier periods exhibit a rather more marked "accident/violence" hump among men in their twenties than those in the model.

The probability of a 15-year old person dying before the age of 60, $_{45}q_{15}$, is a summary measure of premature adult mortality that is often used as an adult health status indicator. Sibling history data collected from women aged 15-49 are not suited to estimation of the mortality of individuals aged 50-59 years. However, the probability of a 15 year old person dying before the age of 50, $_{35}q_{15}$, can be calculated directly from the data and is included in Table 10.1. This shows that the probability of dying in this age range rose in just three years by at least half from about 8 percent to 13 percent for women and from somewhere in the range of 15-18 percent to nearly 25 percent for men.

Although sibling history data display good internal consistency, it will be useful to establish the reliability of the estimates of adult mortality based on them by comparing them with other sources of data. In addition, it will be useful to model the data to derive estimates of adult mortality, 45q15, that incorporate the extent of premature mortality between ages 50 and 60.

Table 10.1 Adult mortality rates by age

Age-specific death rates and probabilities of dying between age 15 and 60 per 1000 adults, by sex for 0-2, 3-4 and 7-9 years prior to survey, SADHS 1998

	Years before survey								
	0-2 years			3-6 years			7-9 years		
Age	Deaths	Exposure (years)	Death rates	Deaths	Exposure (years)	Death rates	Deaths	Exposure (years)	Death rates
MEN									
15-19	16	6,900	2.32	25	11,136	2.27	16	9,430	1.73
20-24	50	8,734	5.74	46	12,848	3.58	23	9,660	2.40
25-29	56	9,586	5.88	57	12,390	4.64	41	9,117	4.53
30-34	86	8,955	9.63	46	11,534	3.99	35	7,377	4.81
35-39	58	8,074	7.21	41	8,489	4.89	19	4,636	4.07
40-44	57	5,293	10.70	49	5,505	8.82	15	3,307	4.55
45-49	56	3,649	15.25	42	3,497	11.9	13	1,424	8.84
$_{35}q_{15}$			247			182			150
WOMEN									
15-19	10	6,789	1.43	10	11,380	0.90	14	9,743	1.48
20-24	30	9,104	3.29	24	13,337	1.83	3	10,037	0.30
25-29	39	10,087	3.91	25	13,027	1.93	14	9,589	1.41
30-34	39	9,558	4.12	19	12,292	1.56	15	7,829	1.89
35-39	39	8,668	4.45	27	9,127	2.96	14	5,056	2.75
40-44	24	5,863	4.10	21	5,983	3.45	4	3,324	1.30
45-49	26	3,945	6.50	14	3,589	3.89	6	1,483	3.77
$_{35}q_{15}$			130			79			78

Note: Data are based on reports of the survivorship of siblings of survey respondents

Figure 10.1 Age specific death rates for men for the periods 0-2 years, 3-6 years and 7-9 years preceding the survey, South Africa 1998

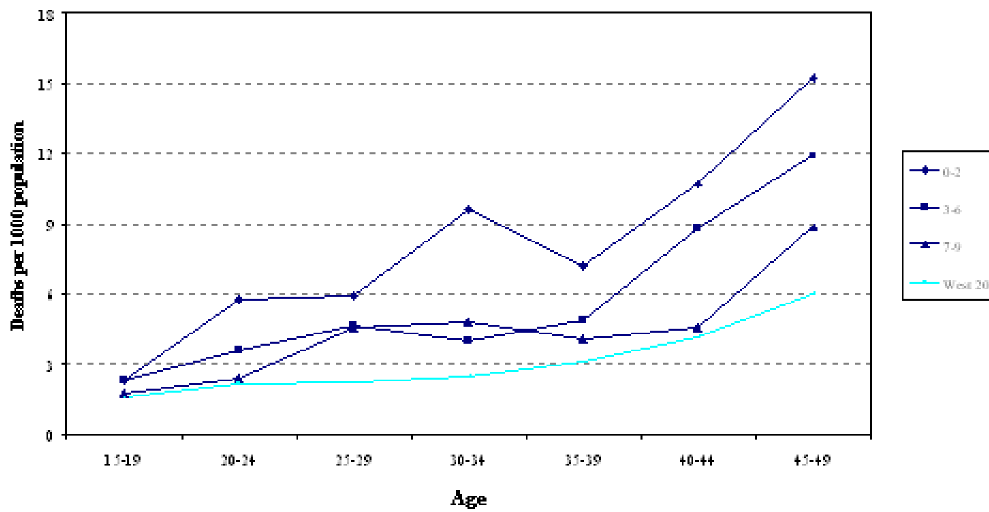
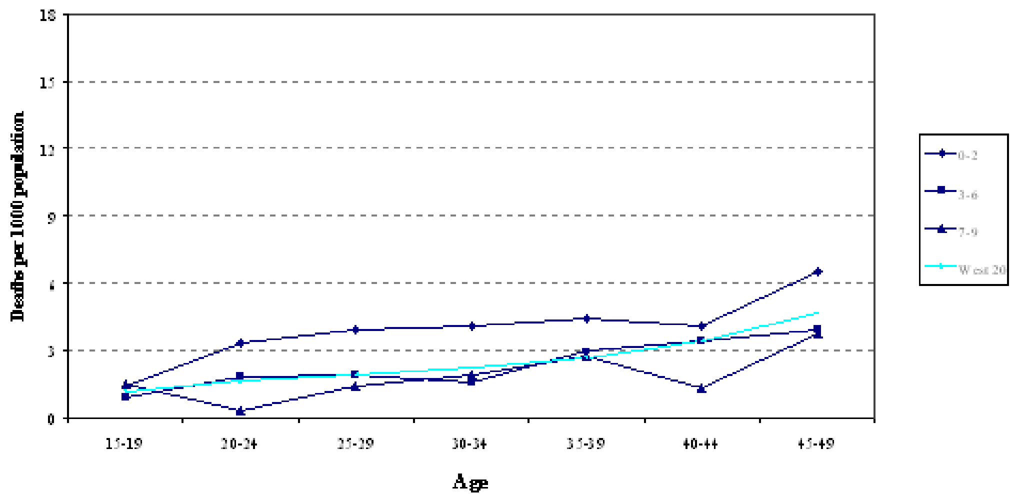


Figure 10.2 Age specific death rates for women for the periods 0-2 years 3-6 years and 7-9 years preceding the survey, South Africa 1998



10.3 Chronic Diseases

The participants were asked if a doctor or a member of the health profession had informed them that they suffered from common chronic conditions, and if so whether any episodes of illness had occurred during the last year. From these data it is possible to calculate self-reported prevalence and incidence rates. However, chronic conditions are frequently under-reported or incorrectly reported by patients, therefore self-reported prevalence and incidence rate should be interpreted with caution. Many of the chronic diseases tend to have a familial pattern. A positive family history for specific chronic diseases can potentially be put to good use in cost-effectively identifying persons with a higher risk than the general population.

Family history of chronic diseases

The data in Table 10.2 show the reported prevalence of family history of a number of common chronic diseases that have been shown to have a familial pattern, by background characteristics. A family history for hypertension of 27 percent for men and 32 percent for women was reported. This was reported more frequently in the urban than non-urban areas and at a very low rate in the Northern Province. The finding that the more educated participants reported such a family history more frequently might suggest a lack of knowledge of hypertension and its occurrence in the families of the less educated. Family history of hypertension was recorded most frequently by Asians and whites and least frequently by non-urban Africans.

For ischaemic heart disease (IHD), commonly known as a heart attack or having angina, a family history was reported by 13 percent of men and 16 percent of women, and far more frequently in the urban than non-urban areas. This was reported most frequently in Gauteng, and the Northern and Western Cape provinces and least in the Northern Province. Another feature is that the more educated participants reported such a family history most frequently as did the white and Asian participants. Participants who reported a family history of stroke were about half of those who reported having IHD, and mostly from an urban setting and in the Western Cape. Only 4 percent of respondents reported a family history of hyperlipidaemia, which occurred most frequently in the white community and the highly educated groups.

Family history of diabetes was reported in 12 percent of men and 13 percent of women. The rates were much higher in the urban than the non-urban areas and the highest in the Western Cape and KwaZulu-Natal. There was a strong association between level of education and such history of diabetes, and as expected, Asian participants reported the highest rates.

Only 5 percent of men and 6 percent of women reported a family history of cancer, again markedly more frequently by urban participants than by non-urban ones. The highest rates were reported in the Western Cape, the highest educated group and white participants.

Table 10.2 Family history of chronic diseases

Percentage of adult men and women who reported a family history of hypertension, ischaemic heart disease (IHD), stroke, hyperlipidaemia, diabetes and cancer, according to background characteristics, South Africa 1998

Background characteristic	Hyper-tension	IHD	IHD* Before 50 yrs	Stroke	Hyperlipid-aemia	Diabetes	Cancer	Number
Age of respondent								
15-24	24.9	9.0	59.6	3.0	3.7	8.9	1.8	3,892
25-34	35.0	15.3	49.1	7.3	3.4	13.3	4.0	2,836
35-44	33.7	17.0	43.5	9.6	5.0	15.6	6.7	2,457
45-54	32.4	20.1	42.3	12.1	6.3	16.7	7.7	1,813
55-64	27.9	17.3	34.8	10.4	3.8	12.4	9.2	1,428
65+	23.8	15.4	38.4	8.1	3.3	11.5	8.1	1,364
Sex								
Men	26.6	12.9	39.5	6.9	3.7	11.5	4.6	5,671
Women	31.8	15.8	49.2	8.0	4.5	13.4	5.8	8,156
Residence								
Urban	34.8	17.4	44.5	9.3	5.6	16.3	7.3	8,569
Non-urban	21.5	10.2	49.0	4.6	1.8	6.6	2.0	5,258
Province								
Western Cape	36.9	17.8	33.9	13.3	8.0	20.5	10.6	1,519
Eastern Cape	28.8	12.9	46.2	6.1	2.1	12.1	4.2	1,920
Northern Cape	39.4	18.1	42.5	9.4	4.3	8.8	7.8	303
Free State	32.3	14.6	40.9	6.0	2.8	8.1	3.6	963
KwaZulu-Natal	32.7	14.4	47.0	8.6	3.4	17.5	5.1	2,672
North West	24.2	10.9	42.3	3.1	1.8	3.8	2.0	1,199
Gauteng	32.4	19.3	50.5	9.4	7.1	14.4	7.5	2,986
Mpumalanga	29.1	16.0	51.2	6.1	3.1	10.1	4.9	885
Northern	12.8	5.7	49.4	2.7	1.5	4.4	0.6	1,381
Education								
No education	18.5	9.8	39.4	4.4	1.0	6.4	2.5	1,748
Sub A - Std 3	25.2	13.5	44.7	7.4	1.5	9.1	2.5	1,864
Std 4 - Std 5	28.2	13.3	45.3	8.3	2.5	13.0	4.3	1,890
Std 6 - Std 9	30.5	14.3	49.6	7.2	3.8	13.1	4.9	5,390
Std 10	36.7	18.3	43.7	7.7	7.2	16.6	8.7	1,922
Higher	43.5	23.1	44.5	13.0	14.8	19.8	12.5	935
Population group								
African	26.1	10.4	49.3	5.2	1.3	10.0	1.9	10,526
Afr. urban	31.1	11.7	50.4	6.4	1.5	13.3	2.5	5,723
Afr. non-urban	20.2	8.9	47.7	3.8	1.1	6.1	1.1	4,803
Coloured	39.8	16.9	33.4	12.3	6.4	18.2	8.7	1,444
White	40.1	37.8	41.4	17.6	20.6	16.6	26.5	1,331
Asian	46.9	36.2	53.7	15.4	13.6	41.3	11.3	495
Total	29.7	14.6	45.7	7.5	4.1	12.6	5.3	13,827

Note: Family history refers to a close blood relative (father, mother, brother, sister or child) who ever had the condition.
*Expressed as percentage of those who reported family history of IHD

Self-reported prevalence of chronic conditions

Tables 10.3 and 10.4 show the self-reported prevalence of some commonly occurring chronic conditions, according to the background characteristics. More than twice as many women than men reported suffering from hypertension. This finding clearly illustrates the inaccuracy of self-reported prevalence when compared with the actual hypertension rates of men and women.

The self-reported rates for hypertension were higher in urban than non-urban areas. For both men and women these rates were reported more often in the Northern Cape and least in the Northern Province. Interestingly, for women the lower the education level, the higher the reported hypertension rate is, while this is not the case for men. The highest hypertension rates were reported by white male participants and the lowest in non-urban Africans, while white and coloured women reported the highest rates. The lowest hypertension rates were reported by non-urban African females.

IHD was reported by 3 percent of men and 6 percent of women, giving another example of the inaccuracy of self-reported conditions, since it is well known that more men than women suffer from IHD. The reported rate increases with age, and women with the lowest education level reported the highest IHD rates, with little difference among participants in the various population groups. In the case of men, whites and Asians reported the highest rates.

Very low rates of stroke and hyperlipidaemia were reported. As expected, for hyperlipidaemia the highest rates for both men and women were reported by whites, followed by the Asian participants. The reported diabetes rate was 2 percent for men and 4 percent for women. These rates increased with age and were higher in urban than non-urban settings for both genders. As expected, diabetes was most frequently reported in the Asian participants, especially among the Asian women.

About 4 percent of men and women reported emphysema or chronic bronchitis and asthma. These conditions were reported more frequently in the urban than non-urban areas. In the Free State and Northern provinces the lowest rates were reported for both genders. These conditions, particularly chronic bronchitis and emphysema, were reported most often by white participants followed by coloureds and Asians. Less than one percent of respondents reported that they had been told they had cancer.

Self-reported incidence of chronic conditions

The incidence of a condition refers to the number of people newly diagnosed with that condition during the previous year. Self-reported incidence of chronic conditions, like self-reported prevalence, is likely to be inaccurate, and therefore should be interpreted with caution. Nonetheless, these data are the only incidence data available in South Africa. Tables 10.5 and 10.6 show the self-reported incidence rates of a number of common chronic conditions.

The self-reported incidence rate for hypertension is more than double in women than in men. Again, the pattern of incidence rates corresponds to that of the prevalence of hypertension. The highest incidence rate was recorded in the Northern Cape for men and in Gauteng for women. It is highest among urban African women, three times higher than for urban African men. The lowest rate was recorded for non-urban African men.

For IHD and stroke the reported rates were again higher in women than in men and reflect how inaccurate self-reported disease rates are, as it is known that more men than women die of heart attacks in South Africa. More men reported suffering from hyperlipidaemia, asthma and cancer than women. The highest reported rates for hyperlipidaemia were in those participants with the highest education level and in the white and Asian communities.

Table 10.3 Chronic disease prevalence among men

Percentage of men aged 15 and over who reported that they had ever been told by a doctor or nurse or staff member at a hospital or clinic that they had various chronic health conditions, according to background characteristics, South Africa 1998

Background characteristic	Hyper-tension	Ischaemic heart disease	Stroke	Hyperli-pidaemia	Diabetes	Emphysema/ Chronic bronchitis	Asthma	Cancer	Number
Age									
15-24	0.2	0.3	0	0.2	0.1	2.3	2.9	0.0	1,812
25-34	2.7	1.9	0.7	1.2	0.8	2.8	1.9	0.2	1,120
35-44	7.5	2.9	0.5	1.8	2.5	3.0	4.0	0.0	1,003
45-54	18.0	4.6	2.0	4.3	5.4	8.7	4.7	0.6	700
55-64	16.9	6.6	2.0	3.8	7.9	6.7	5.4	0.1	514
65+	25.0	7.8	2.3	3.7	4.8	8.6	7.3	1.6	502
Residence									
Urban	9.4	3.1	0.7	2.2	2.9	4.9	4.1	0.3	3,569
Non-urban	5.5	2.4	1.2	1.2	1.7	3.2	3.2	0.2	2,102
Province									
Western Cape	9.2	2.8	0.9	1.7	3.2	9.4	4.6	0.4	721
Eastern Cape	9.0	3.5	0.9	1.3	2.7	5.2	4.7	0.3	758
Northern Cape	13.2	4.1	1.3	1.8	2.1	5.6	3.2	0.2	135
Free State	7.2	2.6	0.4	1.4	1.3	0.7	1.3	0.4	444
KwaZulu-Natal	7.5	3.2	1.6	1.7	3.1	3.4	4.9	0.2	1,064
North West	4.8	2.4	0.3	1.1	0.9	1.4	2.4	0.0	551
Gauteng	10.7	3.1	0.7	4.0	3.3	5.7	4.5	0.5	1,099
Mpumalanga	4.9	1.8	1.1	0.9	2.0	2.9	2.9	0.2	378
Northern	4.4	2.0	0.5	0.2	0.9	1.1	1.3	0.2	521
Education									
No education	11.6	4.8	2.8	0.3	2.9	4.3	5.4	0.2	562
Sub A - Std 3	7.2	2.6	0.9	0.4	2.8	4.5	5.7	0.0	777
Std 4 - Std 5	7.0	2.7	0.4	0.9	1.3	3.2	3.7	0.2	755
Std 6 - Std 9	6.4	2.1	0.6	1.0	2.3	3.9	2.6	0.2	2,297
Std 10	8.7	3.0	1.1	3.7	2.7	5.0	4.0	0.2	801
Higher	10.9	3.5	0.5	8.3	4.0	6.5	3.6	1.4	440
Population group									
African	5.8	1.9	0.8	0.2	1.6	1.8	3.0	0.1	4,257
Afr. urban	6.9	1.7	0.5	0.2	1.6	1.5	3.0	0.2	2,375
Afr. non-urban	4.3	2.0	1.0	0.2	1.5	2.2	3.1	0.1	1,882
Coloured	9.0	2.9	0.9	1.3	3.1	8.6	4.5	0.3	637
White	21.1	8.6	1.6	12.4	6.0	16.5	7.7	1.4	564
Asian	11.9	8.0	1.5	8.5	8.5	6.4	5.5	0.0	195
Total	7.9	2.9	0.9	1.8	2.4	4.2	3.7	0.3	5,671

Table 10.4 Chronic disease prevalence among women

Percentage of women aged 15 and over who reported that they had ever been told by a doctor or nurse or staff member at a hospital or clinic that they had various chronic health conditions, according to background characteristics, South Africa 1998

Background characteristic	Hyper-tension	Ischae-mic heart disease	Stroke	Hyperli-pidaemia	Diabetes	Emphy-sema/Chronic bronchitis	Asthma	Cancer	Number
Age									
15-24	3.8	1.7	0.2	0.5	0.5	3.4	2.6	0.0	2,080
25-34	8.0	4.2	0.6	0.8	1.6	3.7	3.2	0.4	1,716
35-44	15.1	4.3	1.0	0.3	2.7	4.4	3.4	0.7	1,454
45-54	30.5	7.2	1.0	3.0	7.2	6.4	5.6	0.9	1,113
55-64	40.9	11.7	1.9	2.5	7.6	6.0	5.2	1.3	914
65+	42.2	14.7	2.6	2.8	8.9	7.6	5.1	1.7	862
Residence									
Urban	20.6	5.3	1.1	1.6	4.4	5.8	4.3	1.0	4,999
Non-urban	15.4	6.9	0.7	0.8	2.7	3.3	3.1	0.1	3,157
Province									
Western Cape	19.3	5.2	2.4	3.0	4.9	11.4	6.2	2.0	799
Eastern Cape	18.9	6.5	1.2	1.1	3.5	4.9	4.9	0.6	1,161
Northern Cape	22.8	5.2	0.9	1.2	2.9	5.5	3.3	0.4	168
Free State	20.4	7.7	0.8	0.0	2.3	0.3	2.7	0.3	519
KwaZulu-Natal	20.7	7.0	1.1	1.0	5.9	3.1	4.5	0.4	1,608
North West	14.9	5.4	0.9	0.5	1.1	2.0	3.2	0.0	647
Gauteng	21.7	5.0	0.4	2.2	4.3	7.9	3.5	0.8	1,887
Mpumalanga	16.7	8.2	1.2	1.1	2.8	3.9	4.0	1.1	507
Northern	8.7	4.0	0.5	0.4	1.2	0.7	0.8	0.0	859
Education									
No education	27.0	11.1	1.6	0.7	6.8	3.1	4.1	0.3	1,186
Sub A - Std 3	25.6	9.1	1.5	0.5	3.5	4.0	4.9	0.4	1,088
Std 4 - Std 5	22.5	5.5	0.8	0.7	4.0	2.8	3.9	0.5	1,136
Std 6 - Std 9	15.6	4.8	0.6	1.6	3.2	4.4	3.3	0.6	3,094
Std 10	10.1	2.8	0.7	1.9	2.1	8.1	2.8	1.1	1,120
Higher	11.7	2.2	1.4	3.1	2.5	10.6	6.6	1.7	495
Population group									
African	17.4	6.1	0.9	0.4	3.0	2.3	2.9	0.2	6,269
Afr. urban	19.9	5.4	0.9	0.3	3.7	2.6	3.1	0.3	3,349
Afr. non-urban	14.6	6.9	0.8	0.4	2.2	1.9	2.7	0.1	2,921
Coloured	22.3	5.5	1.5	1.9	5.8	7.3	5.0	0.7	806
White	21.4	5.1	1.4	7.6	4.8	23.5	9.2	4.0	767
Asian	23.8	5.4	1.0	3.9	11.5	3.8	6.2	0.7	300
Total	18.6	5.9	1.0	1.3	3.7	4.8	3.8	0.6	8,156

Table 10.5 Chronic disease incidence among men

Self-reported annual incidence rate (per 100,000) of hypertension, ischaemic heart disease, stroke, hyperlipidaemia, diabetes, bronchitis, asthma and cancer in men, according to background characteristics, South Africa 1998

Background characteristic	Hyper-tension	Ischaemic heart disease	Stroke	Hyperlipi-daemia	Diabetes	Emphysema/ Chronic bronchitis	Asthma	Cancer
Age								
15-24	76	250	0	112	13	493	371	43
25-34	1,080	699	253	556	65	1,057	421	120
35-44	2,607	1,492	84	275	1,001	353	351	0
45-54	4,418	743	0	1,139	2,020	2,399	1,349	377
55-64	4,520	1,646	193	1,441	1,896	1,622	918	0
65+	5,055	785	587	46	376	2,201	1,371	949
Residence								
Urban	2,423	958	100	521	772	1,191	598	236
Non-urban	1,582	519	194	387	445	869	705	55
Province								
Western Cape	2,594	749	187	374	562	2,031	562	187
Eastern Cape	1,810	507	65	787	867	1,309	1,474	0
Northern Cape	4,299	1,425	175	910	526	1,623	0	0
Free State	1,605	1,115	190	176	176	353	367	176
KwaZulu-Natal	2,195	659	188	476	382	864	964	94
North West	1,251	914	168	186	186	373	354	0
Gauteng	2,166	962	0	679	1,642	1,642	481	481
Mpumalanga	2,083	783	171	660	440	832	171	0
Northern	2,397	655	223	0	0	0	223	223
Education								
No education	2,564	1,025	488	44	236	799	1,898	207
Sub A - Std 3	2,265	930	172	265	822	1,714	550	0
Std 4 - Std 5	2,542	962	31	132	381	734	515	178
Std 6 - Std 9	1,910	522	146	307	523	716	552	115
Std 10	1,456	486	0	829	1,456	2,368	293	0
Higher	1,748	1,952	0	2,106	574	713	501	962
Population group								
African	1,819	535	143	134	419	595	682	121
Afr. urban	2,084	592	84	153	648	569	598	168
Afr. non-urban	1,485	463	216	109	131	627	787	61
Coloured	3,231	1,184	248	367	784	1,105	476	0
White	2,531	1,976	0	3,135	1,847	3,676	260	786
Asian	3,124	1,869	0	513	513	3,234	1,355	0
Total	2,122	795	135	471	651	1,071	638	169

Note: Incidence rates are based on the 12 months preceding the survey and are per 100,000 population.

Table 10.6 Choronic disease incidence among women

Self-reported annual incidence rate (per 100,000) of hypertension, ischaemic heart disease, strokes, hyperlipidaemia, diabetes, bronchitis, asthma and cancer in women according to background characteristics, South Africa 1998

Background characteristic	Hyper-tension	Ischaemic heart disease	Stroke	Hyperli-pidaemia	Diabetes	Emphysema/ Chronic bronchitis	Asthma	Cancer
Age								
15-24	1,989	500	150	64	238	1,147	238	0
25-34	3,553	1,869	0	171	900	690	527	0
35-44	5,533	1,613	274	148	590	1,927	322	181
45-54	7,819	2,449	218	978	1,453	1,383	1,090	281
55-64	10,364	2,691	526	412	1,562	1,503	1,025	100
65+	6,743	2,807	550	336	1,750	929	817	413
Residence								
Urban	5,468	1,522	297	420	1,085	1,465	651	195
Non-urban	4,755	2,095	134	96	645	882	468	15
Province								
Western Cape	2,821	1,156	507	507	676	2,767	507	0
Eastern Cape	5,141	1,853	219	245	1,144	1,341	1,137	160
Northern Cape	6,435	1,456	280	569	728	877	999	280
Free State	5,854	2,187	302	0	605	314	476	0
KwaZulu-Natal	5,824	2,156	187	249	1,324	568	374	0
North West	4,361	1,798	0	158	635	1,112	937	0
Gauteng	6,591	1,542	140	420	981	2,078	560	420
Mpumalanga	4,686	2,353	511	419	838	711	639	0
Northern	3,489	1,202	262	126	397	135	0	0
Education								
No education	6,139	2,880	525	84	1,908	980	1,221	242
Sub A - Std 3	7,710	3,176	310	173	828	880	815	0
Std 4 - Std 5	7,295	1,932	88	139	658	741	525	0
Std 6 - Std 9	4,623	1,142	166	399	932	1,163	421	123
Std 10	2,922	1,152	241	199	360	2,270	178	318
Higher	1,502	655	134	786	383	1,684	583	0
Population group								
African	5,565	1,822	238	90	905	646	618	92
Afr. urban	6,139	1,561	320	85	1,123	688	724	158
Afr. non-urban	4,907	2,122	145	95	654	599	497	16
Coloured	4,325	1,823	264	509	1,017	2,231	452	29
White	3,223	779	265	1,431	610	5,332	639	554
Asian	4,110	1,550	0	1,109	1,671	562	0	0
Total	5,192	1,744	234	294	915	1,239	580	125

Note: Incidence rates are based on the 12 months preceding the survey and are per 100,000 population.

10.4 Reported Cancer Pattern

In Tables 10.3 and 10.4 it is noted that less than one percent of men and women reported having cancer. Levels are higher among those with the highest level of education, white participants and by women in the Western Cape. The self-reported incidence rates for cancer shown in Tables 10.5 and Table 10.6 and they were 169/100 000 and 125/100 000 for men and women, respectively. These data suggest that the types of cancer suffered by men have a shorter prognosis than those for women.

Table 10.7 shows the pattern of cancers reported by the respondents. Despite the small number of cancer cases (13 men and 48 women), it is important to consider the data alongside other sources. Eighty-four percent of the men and 96 percent of the women were told what type of cancer they were suffering from.

For men, the most common cancer was prostate cancer followed by lung and skin cancers, while for women it was breast cancer followed by cervical cancers.

The self-reported incidence rates are compared with the most recently reported rates published by the South African Cancer Registry in 1992 (Sitas *et al.,* 1997) in Table 10.8. It can be seen that the SADHS rate for men is considerably higher than the minimal rate reported to the Registry, but similar to the estimated rate that has been corrected for under-reporting. For women, the SADHS rate lies between the minimal rate and the corrected one.

Table 10.7 Cancer pattern in adults

Percentage of men and women with cancer who had been told which cancer they had according to the most common sites, South Africa 1998

	Men N = 13	Women N = 48
Percentage who were told of which cancer they suffered	84	96
Lung cancer	17	1
Cervical cancer	0	27
Skin cancer	17	12
Breast cancer	0	34
Prostate cancer	28	0
Esophageal	7	0
Other cancers	14	18

Table 10.8 Comparative cancer incidence rates

Cancer incidence rates (per 100,000) according to population groups, and sex , South African Cancer Registry and SADHS 1998

	Men			Women		
	Cancer Registry 1992		SADHS 1998	Cancer Registry 1992		SADHS 1998
Population group	Minimal incidence rate	Corrected for under-reporting[1]	Self-reported	Minimal incidence rate	Corrected for under-reporting[1]	Self-reported
African	59.5	91.5	121	67.1	103	92
Coloured	85.3	106.0	0	86.4	108	29
White	258.0	322.5	786	264.6	330	554
Asian	82.4	103.0	0	120.0	150	0
Total[2]	97.1	163.0	169	105.3	162	125

[1] Level of reporting to the South African Cancer Registry is estimated to be 65 percent for the African population and 80 percent for the other groups (Sitas, *et al.*, 1997)
[2] Registry rates age-standardised against the South African population

10.5 Self-reported Prevalence and Incidence of Tuberculosis

Despite a major effort to control tuberculosis, it remains the most commonly reported notifiable disease in South Africa. Respondents were asked whether they had ever been told by a doctor or nurse that they had TB, whether this had occurred in the last 12 months, and on how many occasions they had been treated for the disease. The other important infectious diseases, with the exception of sexually transmitted diseases (STDs), are generally not sufficiently common to include in a sample survey.

Table 10.9 shows the self-reported prevalence and incidence of tuberculosis in adult South Africans along with the number of attacks suffered. Three percent of the men and 2 percent of the women reported having had the condition. Tuberculosis is reported more frequently in persons over the age of 34 years, in non-urban areas and most commonly in the Eastern Cape. The distribution across the educational levels of the participants illustrates clearly that tuberculosis is a condition suffered predominantly by those with low education levels and probably from a lower socio-economic standing. It is most frequently reported by coloured men and women and least frequently by white men and Asian women. The mean number of attacks reported for men was 3.5 and for women 2.6. The overall self-reported incidence rate of tuberculosis for men was 477/100,000 population and for women it was 362/100,000.

The incidence data in Table 10.9 provides us with a unique opportunity to evaluate the incidence rate based on notification of tuberculosis to the Department of Health, as required by the Health Act. In such a comparison it could be expected that the survey rate would be somewhat higher, since tuberculosis is more commonly reported in adults than in children and children form part of the denominator of the Department of Health notification data. A comparison of the incidence rates is given in Table 10.10. Where no incident cases were reported for a particular sex in a particular province, it has been assumed that this is a result of random sampling and the rate for that sex group has been estimated on the basis of the general female to male ratio of 1:1.47.

For many years the Western Cape province has had the country's highest notification rates, but this survey indicates that KwaZulu Natal has a higher incidence and that the incidence of tuberculosis in the Eastern Cape is more than double that of the Western Cape. In the Western Cape the notified and survey tuberculosis incidence rates are similar, suggesting that the notification system works well in this province. In other provinces such as the Northern Cape and Gauteng there is a moderate discrepancy in these two rates. In the Eastern Cape, KwaZulu-Natal, Mpumalanga and Northern Province a third or less of incident cases appear to be notified, a very serious discrepancy. Overall, it appears that only about 35 percent of incident cases of tuberculosis are notified to the Department of Health as is required by statute.

In 1998, the reported TB notification rate from the Department of Health suggests that 71,779 cases of TB were notified. Based on SADHS incidence rates and the estimated population over the age of 15, it is estimated that there were 127,798 cases of tuberculosis among persons over age 15. In its Global Report on the Tuberculosis Epidemic, the World Health Organisation estimated that 105,983 tuberculosis cases occurred in South Africa in 1996, compared to 91,578 officially reported cases. Tuberculosis rates have been clearly increased substantially in the last two years. This must at least be partially related to the rapid increase in the HIV/AIDS epidemic in the country. It is apparent that the statutory notification system operating is not reflecting this change.

Table 10.9 Prevalence and incidence of TB among adults

Percentage of participants who reported that they had been told by a doctor or nurse or staff member at a hospital or clinic that they had tuberculosis, the annual incidence rate (/100,000) and the average number of attacks according to background characteristics, South Africa 1998.

	Men			Men with TB			Women			Women with TB		
Background characteristic	Preva-lence	Inci-dence	Number	Mean number of attacks	SD	Total number of attacks	Preva-lence	Inci-dence	Number	Mean number of attacks	SD	Total number of attacks
Age												
15 - 24	0.8	386	1,812	*	*	14	1.1	312	2,080	(2.8)	(2.0)	25
25 - 34	2.1	565	1,120	*	*	23	1.8	429	1,716	(1.6)	(1.2)	28
35 - 44	4.1	747	1,003	(4.9)	(4.9)	34	2.0	149	1,454	(4.3)	(5.1)	28
45 - 54	5.2	420	700	(2.6)	(2.1)	28	2.6	400	1,113	(1.6)	(1.6)	28
55 - 64	4.1	227	514	*	*	20	2.2	342	914	*	*	18
65+	4.4	407	502	*	*	22	3.1	684	861	*	*	24
Residence												
Urban	2.6	408	3,569	3.7	3.9	81	1.6	294	4,999	2.4	2.6	73
Non-urban	3.3	594	2,102	3.3	3.0	59	2.6	469	3,157	2.7	3.1	76
Province												
Western Cape	3.2	562	721	*	*	16	2.3	311	799	*	*	16
Eastern Cape	5.8	1113	758	(2.3)	(1.5)	39	4.3	1026	1,161	(2.0)	(1.6)	49
Northern Cape	3.2	350	135	*	*	4	2.9	429	168	*	*	5
Free State	2.6	544	444	*	*	11	1.9	314	519	*	*	10
KwaZulu Natal	3.7	670	1,064	(5.8)	(6.2)	34	1.9	377	1,608	(4.2)	(6.7)	28
North West	1.2	168	551	*	*	6	1.3	430	647	*	*	9
Gauteng	1.7	0	1,099	*	*	16	1.1	140	1,887	*	*	19
Mpumalanga	2.1	343	378	*	*	8	1.9	255	507	*	*	8
Northern	1.8	446	521	*	*	6	1.1	0	857	*	*	7
Education												
No education	5.8	542	562	(3.7)	(3.0)	27	2.8	418	1,186	(2.8)	(2.6)	30
Sub A - Std 3	5.0	867	777	(3.6)	(3.4)	36	3.5	933	1,088	(3.1)	(4.1)	34
Std 4 - Std 5	3.5	995	755	*	*	21	2.2	693	1,136	*	*	24
Std 6 - Std 9	2.2	316	2,297	(3.7)	(4.3)	42	1.6	179	3,094	(2.5)	(2.5)	46
Std 10	1.5	313	801	*	*	10	1.0	89	1,120	*	*	10
Higher	0.4	0	440	*	*	2	0.7	0	495	*	*	4
Population Group												
African	3.0	549	4,257	3.8	3.7	110	2.0	408	6,269	2.7	3.0	116
Afr. urban	2.8	480	2,375	4.1	4.1	60	1.5	362	3,349	2.7	2.4	50
Afr. non-urban	3.3	637	1,882	3.5	3.1	50	2.5	459	2,921	2.8	3.3	67
Coloured	4.5	575	637	*	*	21	3.3	368	806	*	*	22
White	0.7	0	564	*	*	4	1.3	0	767	*	*	10
Asian	2.4	0	195	*	*	5	0.3	334	300	*	*	1
Total	2.9	477	5,671	3.5	3.5	140	2.0	362	8,156	2.6	2.9	149

Note: Parenthesis indicate that a figure is based on 25-49 respondents.
An asterisk indicates that a figure is based on fewer than 25 unweighted cases and has been suppressed.

Table 10.10 Comparative TB incidence rates

Annual incidence rate (per 100,000) according to the Department of Health TB notification data for 1998 and for adults from SADHS, 1998 by sex

Province	TB notification rates 1998	Incidence of TB, SADHS 1998			Ratio of notification to SADHS
		All adults	Men	Women	
Western Cape	464	430	562	311	108%
Eastern Cape	201	1,060	1,113	1,026	19%
Northern Cape	300	394	350	429	76%
Free State	245	421	544	314	58%
KwaZulu Natal	110	493	670	377	22%
North West	160	314	168	430	51%
Gauteng	123	(180)*	(205)*	140	(68%)*
Mpumalanga	106	292	343	255	36%
Northern	40	(357)*	446	(303)*	(11%)*
Total	169	477	593	404	35%

*Estimated value because of missing data - based on a female : male ratio for the occurrence of TB of 1 : 1.47

10.6 Injuries

The SADHS is the first survey to provide national level information about non-fatal injuries occurring in the community. Information gathered from 32,199 adults, via the Household Questionnaire, about the injuries they had experienced in the month prior to the survey, revealed that 372 adults (15 years and older) had sustained an injury severe enough to warrant medical attention. Table 10.11 presents the results, taking the sample weights into account. It can be seen that the overall *injury rate per month* for adults was 1,233 per 100,000 compared to 468 per 100,000 for children under the age of 15 years. The *annual injury rate* for adults in South Africa is thus estimated to be 14,796 per 100,000, i.e. 1 in 7 adults require medical attention for an injury every year. Previous estimates from local studies have shown that 1 in 10 people require medical attention for an injury annually (van der Spuy J, 1996).

Unintentional injuries accounted for 78 percent of all the reported non-fatal injuries (Figure 10.3). This is consistent with the pattern observed in the Cape Metropole in 1990 where it was found that unintentional injuries accounted for two-thirds of all non-fatal injuries which required medical attention (Van der Spuy J, 1996). However, the proportion of adults injured as a result of 'accidents at work' was much higher than the 9 percent previously recorded in South Africa (van der Spuy J, 1996). The difference is possibly because injuries that occurred during casual work or among the self-employed were included in this category in SADHS but are not usually included when assessing occupational injuries. The annual non-fatal unintentional injury rate was calculated to be 11,592 per 100,000 adults (1 in 9).

Less than 25 percent of adults reported an intentional injury. The majority of these intentional injuries were due to assaults outside the home, while just under 25 percent of intentional injuries were the result of violence in the home (including domestic violence). Very few people reported that they had been injured as a result of political violence (Figure 10.3). The annual non-fatal violence rate was 3,204 per 100,000 adults (1 in 31). The annual attempted suicide rate was 492 per 100,000 adults.

The data in Table 10.11 show that injured adults were predominantly male (64 percent). The overall injury rate for women was found to be 805 per 100,000 with a median age of 42 years while for men the rate was

1,754 per 100,000 population. The data showed an unusually high rate of unintentional injuries among males aged 45 to 54 years. This trend spans all types of unintentional injures, i.e. traffic collisions, occupational injuries and other ‘accidents’ and has not been documented in South Africa before.

The injury rate in urban areas was almost twice as high as in the non-urban areas. The rate of adult injuries was highest in the Western Cape followed by Gauteng and Mpumalanga (Figure 10.4). The Western Cape, Mpumalanga and the Northern Province had the highest levels of intentional injuries. KwaZulu-Natal reported unusually low levels of violence which may reflect a systematic bias in the collection of this data in the province.

These data on injuries show that one in seven adults require medical attention annually for an injury and that although the majority of these injuries are unintentional in nature, nearly one quarter are the result of interpersonal violence or self-inflicted injuries. Most injuries occur among males aged 45-54 years, particularly in urban areas. The Western Cape, Gauteng and Mpumalanga record the highest injury rates.

Table 10.11 Injury rates

Monthly injury rates per 100,000 adult men and women, according to whether injury was intentional or unintentional and by background characteristics, South Africa 1998

	Intentional injury		Unintentional injury		All injuries		Number	
Characteristic	Male	Female	Male	Female	Male	Female	Male	Female
Age								
15-24	406.5	150.8	757.3	443.3	1,163.8	5,94.1	4,827	4,640
25-34	396.8	205.1	1,251.4	408.6	1,648.2	6,13.7	2,977	3,756
35-44	774.3	174.4	1,673.3	807.6	2,447.6	9,82.0	2,531	3,122
45-54	79.8	138.2	2,987.0	830.5	3,066.8	9,68.7	1,740	2,431
55-64	216.0	239.1	1,260.5	776.1	1,476.5	10,15.2	1,223	1,920
65+	0.0	155.6	1,290.6	836.2	1,290.6	991.8	1,160	1,871
Residence								
Urban	443.8	161.6	1,578.3	844.6	2,022.1	1,006.2	8,888	10,382
Non-urban	280.4	193.4	1,045.8	328.5	1,326.2	521.9	5,571	7,358
Province								
Western Cape	977.2	137.6	2,352.1	862.4	3,329.3	1,000.0	1,725	1,790
Eastern Cape	430.8	264.6	1,095.1	476.0	1,525.9	740.6	1,992	2,641
Northern Cape	241.8	399.6	1,292.9	330.1	1,534.7	729.7	318	384
Free State	170.5	217.8	687.0	298.8	857.5	516.6	997	1,138
KwaZulu-Natal	109.1	87.1	1327.1	332.9	1,436.2	420.0	2,905	3,639
North West	235.8	138.0	630.2	778.1	866.0	916.1	1,263	1,412
Gauteng	287.2	120.0	1,962.7	1,400.6	2,249.9	1,520.6	3,020	3,613
Mpumalanga	530.4	274.3	1,555.1	154.9	2,085.5	429.2	930	1,149
Northern	565.5	250.0	377.0	187.5	942.5	437.5	1,309	1,974
Education								
No education	205.3	193.8	1,302.6	264.4	1,507.9	458.2	1,376	2,629
Sub A - Std 3	415.7	198.4	1,655.2	788.8	2,070.9	987.2	1,969	2,364
Std 4 - Std 5	356.6	350.5	1,416.9	508.9	1,773.5	859.4	1,963	2,402
Std 6 - Std 9	404.7	141.0	1190.6	639.3	1,595.3	780.3	5,628	6,601
Std 10	429.4	146.3	1,842.0	761.2	2,271.4	907.5	2,208	2,387
Higher	433.5	0.0	889.8	933.4	1,323.3	933.4	1,108	1,175
Total	380.8	174.8	1,373.1	630.6	1,753.9	805.4	14,459	17,740

Note: The number of injuries in some cells is very small; consequently the rates are subject to high levels of sampling error and should be interpreted cautiously.

Figure 10.3 Types of injury, South Africa 1998

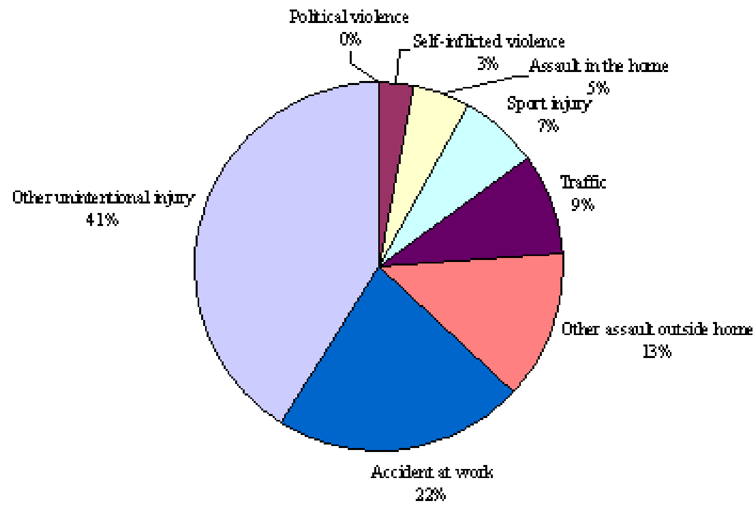
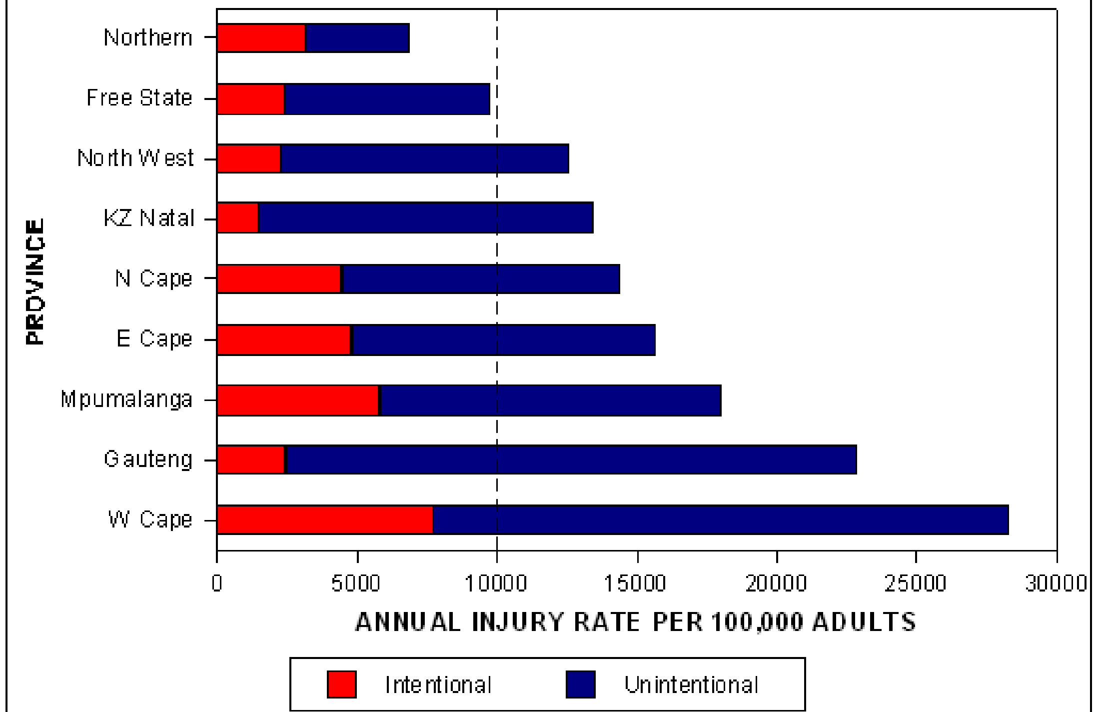


Figure 10.4 Annual unintentional and intentional injury rates per province, South Africa 1998



10.7 Occupational Health: Disease and Injury in Working Adults

Working adult respondents (i.e. those who were 15 years and older and who had earned money in the 12 months prior to interview) were asked whether they had a disease or injury related to or aggravated by work, and whether they had had to take time off work as a consequence. As shown in Table 10.12, 35 percent of respondents had worked for payment in the previous 12 months. More men (45 percent) than women (29 percent) had earned money. Nearly 8 percent of the workers reported an injury or disease related to work, and almost 6 percent reported disease or injury aggravated by work. Thus 13 percent of adult working respondents reported that their health had been affected by work. Not unexpectedly, injuries were more frequently reported than disease, in both related and aggravated categories. Injuries are more easily recognised and attributed to work than occupational diseases, which are difficult to diagnose and often have a long latent period between first exposure and disease.

Work-related diseases and injuries (i.e. related and aggravated) resulted in absenteeism from work in 9 percent of working respondents. If this rate is projected to the estimated 8 - 9 million South African workers then 712,000 to 801,000 workers may be absent from work in a year due to a condition which may be largely preventable. These data do not provide information on severity of illness or injury, or duration of absenteeism, so precise estimates of the impact on the economy cannot be derived but the costs are likely to be substantial.

The data in Tables 10.13-10.15 show the incidence of illness or injuries “related to”, “aggravated by”, and “related to or aggravated by” work, respectively. These have been calculated from the total reported cases and are grouped by the background characteristics of age, residence (urban/non-urban), province, education level, and population group, for each gender. The data are stratified by gender since there are marked differences in pattern of disease and employment between women and men.

Table 10.13 shows that work-related health problems increased with age in women and men and the highest proportion was observed in 45-54 age-group. This trend was expected as age and duration of work are closely associated. Thereafter the proportion of workers with work-related health problems decreased. This does not mean that older people are at lower risk of contracting work-related illnesses, but reflects limitations of the data. Chronic occupational diseases have long latencies, for example, usually at least 10 years of silica exposure is needed for clinical manifestation of silicosis, and disease may progress despite cessation of exposure. In contrast, work-related injuries are independent of time and duration of exposure. The pattern of work-related injuries varied with characteristics. Women were less likely to sustain injuries than men, and men were less susceptible to injuries between 35 and 54 years of age and over 65, than when younger. Both working men and women in non-urban areas had higher proportions with health problems than urban workers. For men the highest injury rate, 9 percent, occurred in the Northern Cape, and the lowest, 2 percent, in the North West province. The incidence of diseases related to work was highest for men in the Northern Province and KwaZulu-Natal (4 percent), but highest for women in the Western Cape (5 percent). The level of education was inversely associated with injuries in men, but not for women, although lack of formal education carried the highest risk for both genders. Rates varied among population groups; work-related illness was highest in white males and white females, in contrast to injuries, where the incidence was highest among coloured men (9 percent), and non-urban African women (2 percent).

Table 10.12 Work-related illness

Frequency of self-reported conditions related to or aggravated by work in the last 12 months, South Africa 1998

Respondents by work status and conditions	Number	%
Work status of respondents		
Worked[1]	4,761	35.1
Had not worked	8,791	64.1
Total	13,552	100.1
Conditions related to work:		
Disease	121	2.6
Injury	214	4.5
Unknown conditions [2]	37	0.8
Total	372	7.8
Conditions aggravated by work:		
Disease		
Injury	118	2.5
Total	147	3.1
	265	5.6
Work absence due to condition:		
Related to work		
Aggravated by work	230	4.8
Total	173	4.1
	403	8.9

1. Respondents who had earned money in the 12 months prior to survey.
2. Unknown conditions are unspecified diseases or injuries or missing data.

Table 10.13 Incidence of health problems and injuries related to work

Among adult men and women who work for pay, percentage who report having a health problem or injury related to work in the 12 months before the survey, according to background characteristics, South Africa 1998

Background characteristic	MALE				FEMALE			
	Health problem	Injury	Health problem and injury	Number of working adults	Health problem	Injury	Health problem and injury	Number of working adults
Age								
15-24	1.3	7.5	8.8	422	3.0	2.1	5.1	354
25-34	3.0	7.3	10.3	686	3.4	1.5	4.9	668
35-44	2.3	5.7	8.0	690	1.3	1.5	2.8	700
45-54	4.5	6.4	10.9	462	4.9	3.6	8.5	421
55-64	1.3	7.8	9.1	223	4.7	2.1	6.8	193
65+	2.0	3.1	5.1	64	0.0	6.0	6.0	35
Residence								
Urban	1.9	5.8	7.7	1,780	2.8	2.0	4.8	1,776
Non-urban	4.7	8.3	13.0	766	3.4	2.5	5.9	594
Province								
Western Cape	2.6	7.3	9.9	439	5.1	1.2	6.3	381
Eastern Cape	3.0	4.6	7.6	241	2.7	1.6	4.3	208
Northern Cape	1.2	8.8	10.0	71	0.0	3.6	3.6	47
Free State	1.2	5.5	6.7	206	0.0	2.7	2.7	181
KwaZulu-Natal	4.2	7.6	11.8	486	3.6	2.3	5.9	403
North West	1.5	1.5	3.0	254	0.5	1.1	1.6	185
Gauteng	3.1	7.8	10.9	507	3.5	2.5	6.0	698
Mpumalanga	1.6	5.4	7.0	193	2.2	3.7	5.9	121
Northern	4.2	8.4	12.6	150	2.7	1.3	4.0	145
Education								
No education	2.0	11.4	13.4	198	0.9	3.5	4.4	191
Sub A - Std 3	3.2	7.6	10.8	328	4.4	1.0	5.4	257
Std 4 - Std 5	3.5	8.4	11.9	294	4.4	2.3	6.7	296
Std 6 - Std 9	2.6	7.1	9.7	914	2.6	2.3	4.9	794
Std 10	3.8	3.7	7.5	479	1.9	2.6	4.5	537
Higher	0.0	4.0	4.0	319	4.3	1.1	5.4	276
Population group								
African	2.1	6.4	8.5	1,627	2.2	2.1	4.3	1,498
Afr. urban	1.2	5.5	6.7	1,003	1.6	1.9	3.5	1,014
Afr. non-urban	3.5	7.9	11.4	624	3.4	2.4	5.8	483
Coloured	2.6	9.3	11.9	381	3.7	1.5	5.2	362
White	6.3	3.5	9.8	399	6.3	1.8	8.1	398
Asian	4.1	5.5	9.6	138	2.0	0.0	2.0	102
Total	2.8	6.4	9.4	2,547	3.0	2.1	5.1	2,371

Table 10.14 shows the incidence of health problems aggravated by work to be similar to that related to work, but fewer injuries to men are described as work-aggravated. There are similar patterns (in this table and in Table 10.15) for age, residence, province, education level and population group and in the overall picture of disease and injuries reportedly affected by work.

Health problems related to or aggravated by work reported by respondents who had worked are presented in Table 10.16 and 10.17 according to the major disease categories (using the ICD-10 codes). In addition, some diseases of special interest are listed as sub-categories in the table. Musculo-skeletal disorders related to or aggravated by work were most frequently reported, accounting for 30 percent of all health problems. Back pain (classified as dorsalgia) predominated. The next largest category was respiratory disease at 23 percent. Asthma was prominent at 8 percent, followed by bronchitis (5 percent) and pneumoconiosis (0.4 percent). Not shown in the table are non-specific symptoms, which accounted for 5 percent of the respiratory category. Thirteen percent of diseases were classified as general symptoms and signs, the third largest category. Mental disorders were quite common at 6 percent, and the majority are assumed to be stress-related.

As shown in Table 10.17, the majority of work-related injuries were in category A: sprains, dislocations, fractures and lacerations, (73 percent), with injuries to limbs prominent. Other injuries (category B) made up 24 percent of the reported injuries with transport accidents (6 percent), machinery accidents (5 percent), burns (4 percent) and falls (4 percent) most common. Of the 361 injuries reported as related to or aggravated by work 10 (3 percent) were not specified.

Self-reported work-related health problems and injury patterns are presented in Figure 10.5. This bar chart shows incident cases related to or aggravated by work per 10,000 workers in order of magnitude. The most frequently reported condition was back pain, with about 126 combined work-related and aggravated cases per 10,000 workers in a year. Extrapolating the back pain rate to the estimated 9 million South African workers would result in about 113, 400 cases per year. Skin conditions were less commonly reported than expected, less than 10 cases/10,000 workers, and not even one case of noise-induced hearing loss (NIHL) was reported. One case of aggravated disease of other ear disorders was reported.

Work absenteeism was usually associated with the commonly reported conditions. For example, 92 percent of respondents with respiratory complaints related to or aggravated by work missed at least one work day, as did 73 percent of workers with back pain related to work. Work absence was reported by 100 percent of asthma cases related to work and 71 percent of those aggravated by work.

Table 10.14 Incidence of health problems and injuries aggravated by work

Among adult men and women who work for pay, percentage who report having a health problem or injury aggravated by work in the 12 months before the survey, according to background characteristics, South Africa 1998

Background characteristic	MALE				FEMALE			
	Health problem	Injury	Health problem and injury	Number of working adults	Health problem	Injury	Health problem and injury	Number of working adults
Age								
15-24	0.8	3.9	4.7	422	2.7	1.1	3.8	354
25-34	2.0	3.3	5.3	686	2.0	1.7	3.7	668
35-44	3.7	3.3	7.0	690	2.2	0.9	3.1	700
45-54	5.1	3.0	8.1	462	5.5	2.9	8.4	421
55-64	1.8	7.1	8.9	223	3.3	14.0	17.3	193
65+	4.9	0.0	4.9	64	0.0	0.0	0.0	35
Residence								
Urban	2.4	2.6	5.0	1,780	3.1	1.9	5.0	1,776
Non-urban	4.0	5.2	9.2	766	2.1	2.1	4.2	594
Province								
Western Cape	3.1	0.9	4.0	439	2.1	1.4	3.5	381
Eastern Cape	2.1	1.4	3.5	241	2.1	1.3	3.4	208
Northern Cape	2.4	6.3	8.7	71	1.5	1.6	3.1	47
Free State	2.8	0.0	2.8	206	1.2	2.5	3.7	181
KwaZulu-Natal	4.4	5.3	9.7	486	3.4	2.2	5.6	403
North West	1.5	1.5	3.0	254	1.5	0.0	1.5	185
Gauteng	3.2	7.4	10.6	507	4.3	3.1	7.4	698
Mpumalanga	2.8	1.8	4.6	193	2.1	1.0	3.1	121
Northern	2.6	3.7	6.3	150	1.6	0.8	2.4	145
Education								
No education	1.6	4.8	6.4	198	4.1	3.5	7.6	191
Sub A - Std 3	2.9	3.0	5.9	328	2.5	1.0	3.5	257
Std 4 - Std 5	2.9	5.3	8.2	294	3.2	1.0	4.2	296
Std 6 - Std 9	3.0	3.3	6.3	914	2.2	1.9	4.1	794
Std 10	2.7	2.9	5.6	479	1.8	2.6	4.4	537
Higher	2.6	4.5	7.1	319	6.0	1.5	7.5	276
Population group								
African	2.0	3.2	5.2	1,627	2.5	2.0	4.5	1,498
Afr. urban	1.5	2.3	3.8	1,003	2.5	2.2	4.7	1,014
Afr. non-urban	2.9	4.5	7.4	624	2.7	1.4	4.1	483
Coloured	3.4	1.6	5.0	381	2.3	1.3	3.6	362
White	7.0	5.6	12.6	399	5.2	3.0	8.2	398
Asian	2.5	5.3	7.8	138	0.0	0.0	0.0	102
Total	2.9	3.7	6.7	2,547	2.8	2.0	5.0	2,371

Table 10.15 Incidence of health problems or injury related to or aggravated by work

Among adults who work for pay, percentage who report having a health problem or injury related to or aggravated by their work in the 12 months before the survey, according to sex and background characteristics, South Africa 1998

Background characteristic	MALE		FEMALE		TOTAL	
	Health problem or injury	Number of working adults	Health problem or injury	Number of working adults	Health problem or injury	Number of working adults
Age						
15-24	12.4	422	8.0	354	10.4	776
25-34	12.5	686	6.4	668	9.5	1,354
35-44	12.6	690	5.1	700	8.8	1,390
45-54	13.9	462	13.7	421	13.8	883
55-64	14.0	223	14.1	193	14.1	416
65+	9.9	64	5.9	35	8.5	99
Residence						
Urban	10.9	1,780	8.2	1,776	9.5	3,557
Non-urban	17.4	766	8.2	594	13.4	1,361
Province						
Western Cape	12.5	439	8.7	381	10.7	820
Eastern Cape	10.4	241	5.8	208	8.4	449
Northern Cape	16.2	71	6.1	47	12.2	118
Free State	9.3	206	5.9	181	7.7	387
KwaZulu-Natal	14.7	486	8.8	403	12.0	889
North West	6.4	254	2.6	185	4.8	439
Gauteng	18.0	507	10.9	698	13.9	1,205
Mpumalanga	9.4	193	8.4	121	9.0	314
Northern	13.0	150	5.6	145	9.4	295
Education						
No education	17.1	198	10.9	191	14.0	389
Sub A - Std 3	15.2	328	6.6	257	11.4	586
Std 4 - Std 5	15.6	294	8.5	296	12.1	590
Std 6 - Std 9	12.5	914	8.2	794	10.5	1,708
Std 10	10.0	479	6.8	537	8.4	1,016
Higher	10.4	319	10.0	276	10.2	595
Population group						
African	11.0	1,627	7.2	1,498	9.2	3,124
Afr. urban	9.0	1,003	6.5	1,014	7.7	2,017
Afr. non-urban	14.4	624	8.5	483	11.9	1,107
Coloured	15.5	381	8.0	362	11.8	742
White	17.5	399	12.7	398	15.1	797
Asian	13.5	138	2.0	102	8.6	240
Total	12.9	2,547	8.2	2,371	10.6	4,918

Table 10.16 Type of work-related health problems

Among adults who worked in the 12 months preceding the survey and had a work-related health problem, percent distribution by specific problem, according to whether problem was related to or aggravated by work, South Africa 1998

Health problem	ICD Code	Related to work	Aggravated by work	Related and aggravated
Infectious and parasitic	A00-B99	5.7	4.2	5.0
Metabolic	D50-D89, E00-90	0.0	2.5	1.2
Mental disorders	F00-F99	6.6	5.9	6.3
Nervous system	G00-G99	2.5	1.7	2.1
Eye and adnexa	H00-H59	1.6	5.1	3.3
Ear and mastoid process	H60-H95	0.0	0.0	0.0
Circulatory	I00-I99	5.7	5.1	5.4
Respiratory	J00-J99	21.5	24.6	23.0
Bronchitis	J40, J42	5.0	4.2	4.6
Asthma	J45	9.1	5.9	7.5
Pneumoconiosis	J78	0.8	0.0	0.4
Digestive System	K00-93	5.7	8.5	7.1
Skin and subcutaneous tissue	L00-L99	1.6	1.7	1.7
Musculo-skeletal	M00-99	31.4	28.0	29.7
Dorsalgia	M54	24.8	25.4	25.1
Genito-urinary system	N00-99	1.6	1.7	1.7
Pregnancy and related	O00-O99	0.0	0.8	0.4
Symptoms and signs	R00-99	15.7	10.2	13.0
Total		100.0	100.0	100.0
Percentage missing		23.4	14.5	19.2
Number		158	138	296

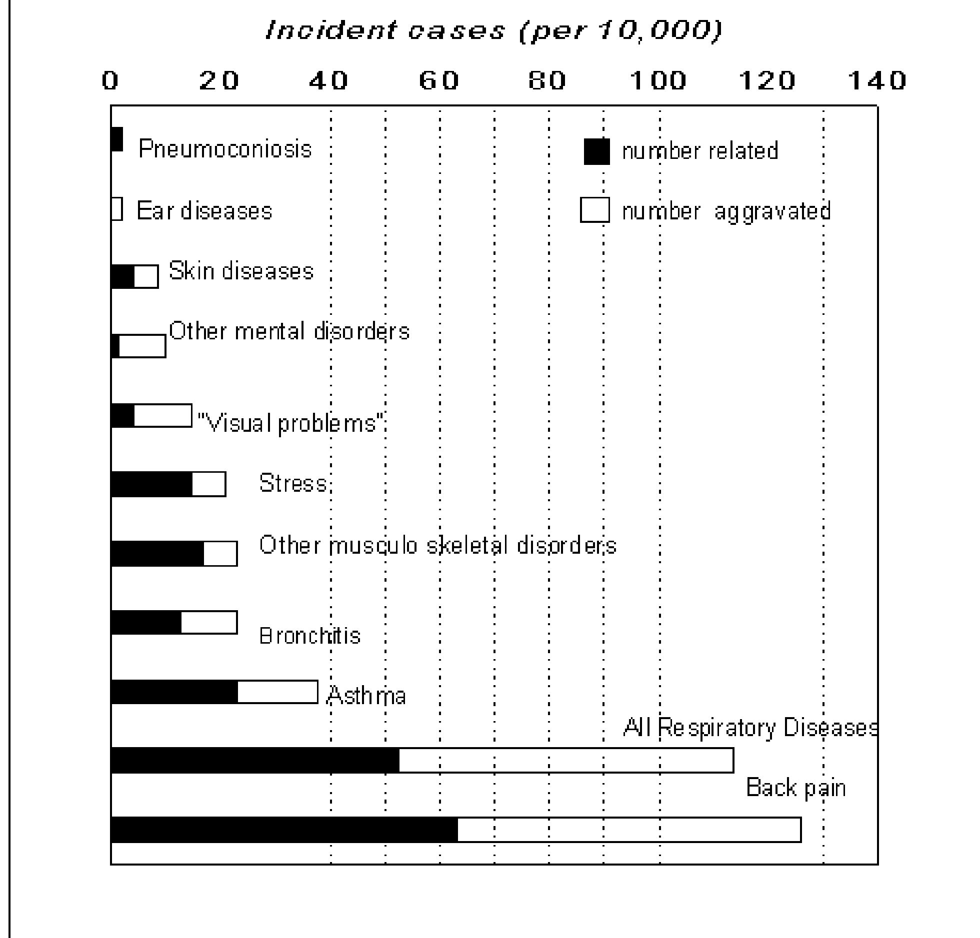
Table 10.17 Type of work-related injuries

Among adults who worked in the 12 months preceding the survey and had a work-related injury, percent distribution by specific injuries, according to whether injury was related to or aggravated by work, South Africa 1998

Injury	ICD Code	Related to work	Aggravated by work	Related and aggravated by work
Sprains, dislocation, fractures, lacerations				
Head	S00-S09	3.3	2.7	3.0
Neck	S10-S19	2.9	0.0	1.7
Thorax	S20-29	0.0	2.0	0.8
Abdomen, spine and pelvis	S30-39	3.9	19.0	10.0
Upper limbs:	S40-69	16.0	15.6	15.5
Shoulder, arm		2.4	4.1	3.0
Elbow, forearm		1.4	2.0	1.7
Wrist, hand		12.1	9.5	10.8
Lower limbs	S70-99	32.0	29.2	41.1
Hip, thigh		1.0	2.7	1.7
Ankle and foot		9.8	11.6	10.5
Multiple body parts affected	T00-07	3.9	2.0	3.0
Unspecified injury	T08-14	10.2	8.1	9.1
Total sprains, dislocations, etc.		72.3	78.9	73.4
Number		149	116	265
Other injuries				
Accidents	T15-X84			
Foreign object through orifice	T15-19	0.5	0.0	0.2
Burns	T20-32	6.8	0.0	3.9
Transport	V01-99	5.8	6.8	6.1
Falls	W00-19	5.8	2.0	4.1
Machinery	W 20-31,36-53, 56-74	5.3	5.4	5.3
Firearm discharge	W32-34	0.5	1.4	0.8
Bitten by animals	W34-55	1.0	0.7	0.8
Assaults	X85-Y09	1.5	0.7	1.1
Other	Y10-Z99	0.5	2.7	1.4
Total other injuries		27.6	19.7	23.8
Number		57	29	86
Total		100.0	100.0	100.0
Percentage missing		3.7	1.3	2.8
Number		214	147	361

In conclusion, over 13 percent of adult respondents who had earned money in the past year thought that their health had been affected by their work. Bias introduced by the household survey methodology may have contributed to this high rate, however the survey has provided the most broadly based indication of work-related health concerns available to date for South Africa. These data on diseases and injuries related to work obviously depend on workers' perceptions of medical matters. Whatever the limitations, it is clear that health services at all levels can expect a substantial proportion of their adult working patients to present with complaints that require a consideration of workplace conditions.

Figure 10.5 Self-reported incidence of work-related diseases and injuries,South Africa 1998



10.8 Prevalence of Symptoms of Sexually-transmitted Diseases among Men

The prevalence of sexually-transmitted diseases (STDs) is very high in South Africa. In order to obtain a very rough proxy measure of the prevalence of these disease, all adult men interviewed were asked if they had symptoms of STDs in the three months prior to the survey. Because STDs are likely to be asymptomatic in women, the questions were only asked of men. The symptoms asked about were painful urination or penile discharge (associated with gonorrhoea) and sores in the genital area (symptoms similar to those of syphilis).

Table 10.18 shows that 12 percent of adult men in South Africa report having recently had symptoms associated with STDs. Ten percent report having had painful urination or a discharge from the penis, while five percent have had genital sores in the three months before the survey. Levels are higher among non-urban men, those in KwaZulu-Natal and Mpumalanga, and among African men. STD-type symptoms are also more prevalent among less well-educated men than among those with matric or higher level of education.

Table 10.18 Symptoms of sexually transmitted diseases in men

Percentage of men aged 15 and over who report having had painful urination or penile discharge, genital sores or either in the three months preceding the survey, according to background characteristics, South Africa 1998

Background characteristics	Percent with painful urination/ discharge	Percent with genital sores	Percent with either	Number of men
Age				
15-24	10.4	5.6	12.1	1,816
25-34	11.7	6.0	13.9	1,123
35-44	10.4	5.3	12.0	1,005
45-54	9.2	*5.0*	10.6	701
55-64	10.1	2.6	10.3	518
65+	9.2	3.2	10.1	507
Residence				
Urban	8.1	3.4	9.1	3,569
Non-urban	14.3	7.9	16.6	2,102
Province				
Western Cape	4.8	1.4	5.6	721
Eastern Cape	13.8	3.6	15.1	758
Northern Cape	6.1	1.1	6.7	135
Free State	13.4	6.0	15.2	444
KwaZulu-Natal	16.6	10.5	18.9	1,064
North West	6.6	5.0	8.4	*551*
Gauteng	4.8	1.9	5.5	1,099
Mpumalanga	17.1	8.6	20.1	377
Northern	9.5	5.3	11.5	521
Education				
No education	12.8	6.3	13.5	562
Sub A Std 3	16.3	7.7	18.5	777
Std4-Std5	11.1	6.3	13.0	755
Std 6- Std 9	10.3	4.6	11.9	2,297
Std 10	5.9	3.4	7.0	801
Higher	4.0	2.2	5.0	440
Population Group				
African	12.6	6.5	14.6	4,257
Afr. urban	10.6	4.8	12.1	2,375
Afr. non-urban	15.2	8.6	17.7	1,882
Coloured	4.8	1.3	5.6	637
White	1.7	0.1	1.7	564
Asian	3.4	0.4	3.8	195
Total	10.4	5.0	11.9	5,671

Total includes cases with education and ethnic group not stated