SECTION 6
EDUCATION OF HOUSEHOLD HEAD, HOUSEHOLD SIZE AND ACCESS TO SERVICES

The living conditions in a household and the environment in which people live contribute to or detract from their health status. Safe drinking water promotes good health by reducing water-borne diseases. This affects, in particular, the survival of infants and children. Access to water near the dwelling also tends to reduce the time and physical burden on the collectors of water. Regulated garbage disposal and healthy sanitation practices reduce the breeding of disease-carrying animals and insects such as rats and flies near the areas where people live. Candles for lighting and paraffin for cooking are known sources of danger in the lives of many shack dwellers. The analysis below examines the extent to which access to better living conditions correlates with higher education levels and, in particular, the education level of the person named as head of household. As noted at the outset, such correlations, if they exist, need not imply direct causality. The patterns can, nevertheless, point to potential gaps and inequalities.

Instead of devising a single index to measure the household's situation, we have selected a few variables that give some indication of the living conditions of the population of South Africa as derived from the results of the 1996 census. We have cross-tabulated the people living in households with male and female heads with different levels of education against household size and against access to different sources of water, fuel for cooking and lighting, sanitation facilities and refuse disposal. We have also done comparisons between the situation of those living in urban and rural households.

EDUCATION OF HOUSEHOLD HEAD

The census revealed a total of 9 059 571 heads of household, of whom about three-fifths (62%) were men. The majority of the heads of households (86%) were in the age band 15-65 years of age, but the census also revealed a small number (0,4%) of heads in the age-group 10-14 years and 12% in the age category 65 years and above. In terms of educational qualifications, close on a quarter (24%) of heads had no formal education, 17% had not completed primary schooling, a further 38% had not completed secondary schooling, 12% had attained matric and the remaining 8% had a qualification higher than matric.

According to Census '96 documentation, the head of household is the person that the household regards as such, and is usually the person who assumes responsibility for decision-making in the household. In conducting the census, enumerators were instructed to leave the decision as to who was the household head to the informant.

Because the definition is left to informants, household head is an inexact concept. Often it will reflect cultural differences and perceptions rather than the more objective factors measured by most of the other variables collected in the census. In some households, age might be considered the determining factor. In others the household head will be the person who brings the highest income into the household. In the overwhelming majority of households, gender will be an important factor in determining who is considered the household head. Despite this weakness in the definition, the analysis below shows clear differences in the living conditions of households headed by men and those headed by women.

Above we noted the percentage of household heads with different levels of education. In the analysis that follows, we describe patterns in terms of the percentage of people living in households by educational level of household head. These percentages differ somewhat from the percentages for

household heads. One important reason, illustrated in Figure 22 below, is that the size of the household of less educated heads tends to be bigger than the size of the household of more educated heads.

Table 6 shows the overall breakdown of the population by both the sex and highest educational qualification of the household head. Overall, it shows that 29% of people were living in households whose head had no formal schooling, compared to only 7% in households with heads with more than a matric qualification. Amongst people living in female-headed households, 36% of the heads had no formal education, while 21% had not completed primary schooling. Amongst those living in male-headed households, 25% of the heads had no schooling and 17% had not completed primary school. At the other end of the spectrum, 9% of those living in female-headed households were in households where the head had completed matric or had achieved a higher education, compared to 21% of those living in male-headed households.

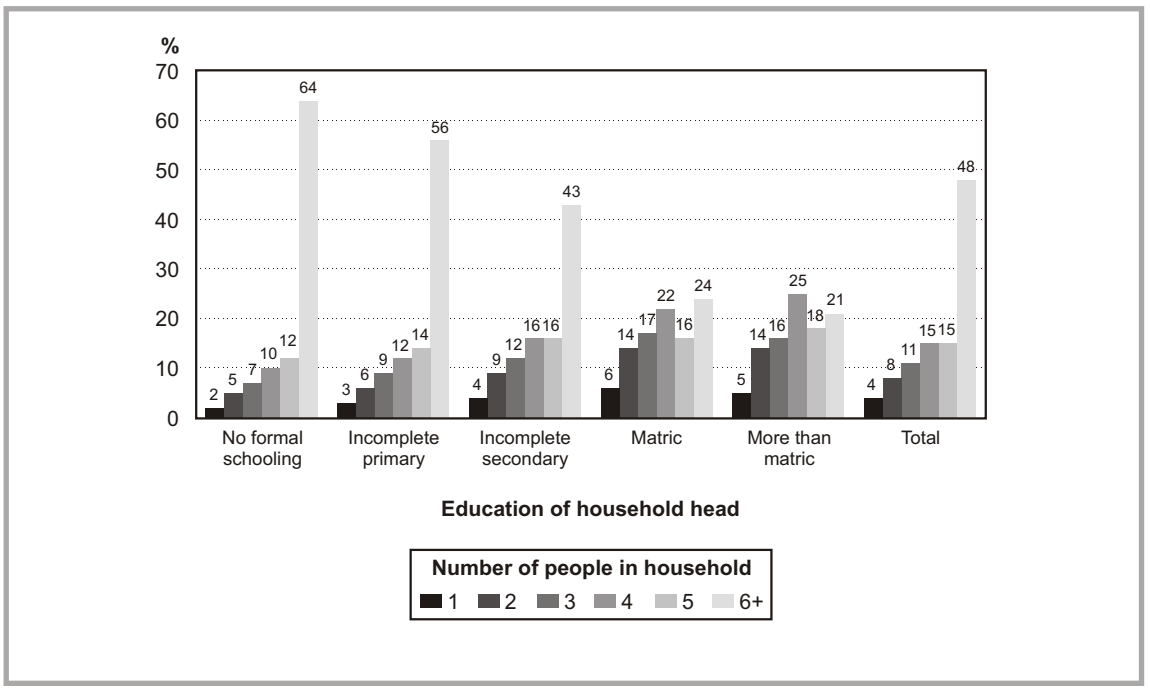
TABLE 6: POPULATION BY SEX AND HIGHEST EDUCATION LEVEL OF HOUSEHOLD HEAD

Highest educational level	Male	%	Female	%	Total	%
No schooling	5 612 691	25	5 447 093	36	11 059 784	29
Incomplete primary	3 968 437	17	3 137 937	21	7 106 374	19
Incomplete secondary	8 421 454	37	5 021 423	34	13 442 877	36
Matric only	2 755 686	12	850 477	6	3 606 163	10
Higher than matric	1 973 164	9	495 819	3	2 468 984	7
Total	**22 731 432**	**100**	**14 952 749**	**100**	**37 684 181**	**100**

EDUCATION AND HOUSEHOLD SIZE

In 1996, just under half (48%) of all people in South Africa were living in households with six or more members. This was true of 53% of those living in female-headed households and 45% of those living in male-headed households. Disaggregation by level of schooling of the household head, illustrated in Figure 22, shows that 64% of people in households where the head had no schooling were also in households of six or more persons. At the other end of the scale, only 21% of people living in households headed by a person with more than matric education were in households of this size. In general, then, the lower the level of education of the household head, the larger the size of the household.

FIGURE 22: PERCENTAGE OF PEOPLE IN HOUSEHOLDS OF DIFFERENT SIZES BY EDUCATION LEVEL OF HOUSEHOLD HEAD AND SIZE OF HOUSEHOLD



EDUCATION AND ACCESS TO SERVICES

WATER

Access to a clean and safe water supply is an important determinant of household well-being. In October 1996, 3 978 855 of the 9 059 571 households in the country had access to piped water in their dwelling. A further 1 491 228 had access to piped water on site. Overall, then, 60% of households had access to piped water either in the dwelling or on site. In the analysis below, piped water is taken as a proxy for a clean and safe water supply.

As with access to many other household services, geographical location affects the likelihood of a household having access to clean and safe water. Overall, in October 1996, 85% of people living in urban areas were in households with access to piped water, compared to only 22% in rural areas. Figure 23 reveals further differences in relation to the highest education level of the household head.

Figure 23 shows that in both urban and rural areas, the likelihood that a person is living in a household with access to piped water increased with an increase in the level of education of the household head. Thus, close on three-quarters of people living in urban households where the household head had either no schooling or had not completed primary schooling had access to piped water, compared to 99% of those in urban households where the head had more than a matric qualification. In rural areas, about a fifth of people living in households where the head had no schooling or had not completed primary schooling had access to piped water, compared to close on half (48%) in households where the head had a qualification higher than matric. For every level of education of the household head, people in urban households were more than twice as likely as those in rural households to have access to piped water.

FIGURE 23: PERCENTAGE OF PEOPLE IN HOUSEHOLDS WITH ACCESS TO CLEAN WATER BY LOCATION AND EDUCATION LEVEL OF HOUSEHOLD HEAD

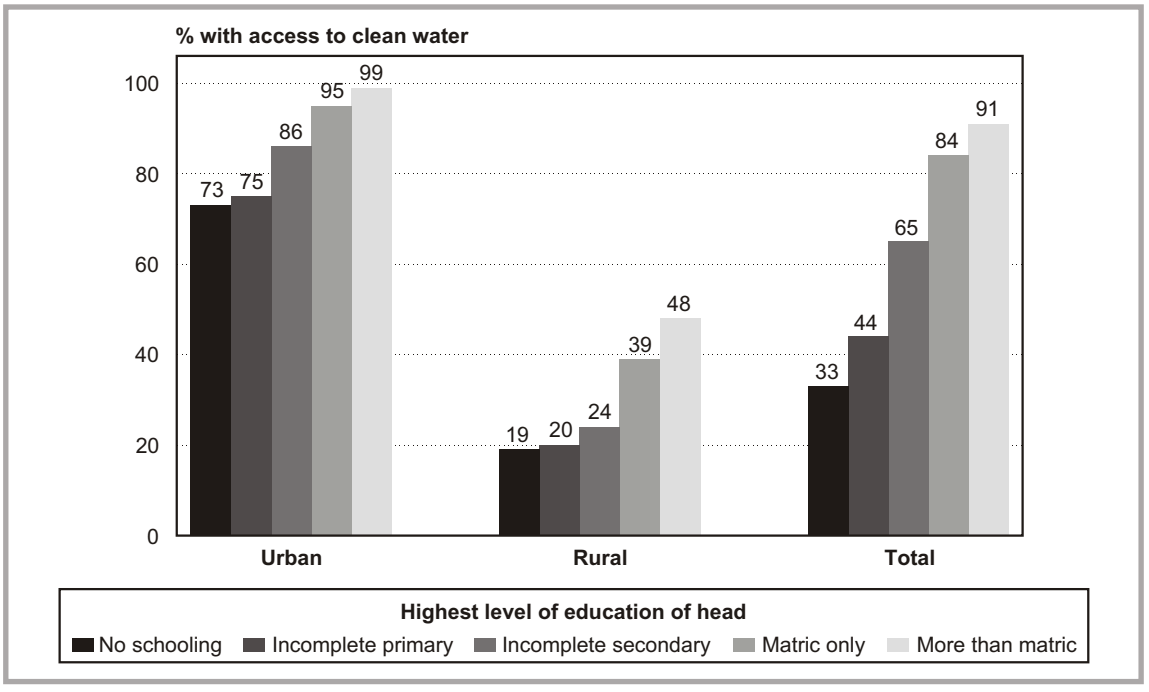
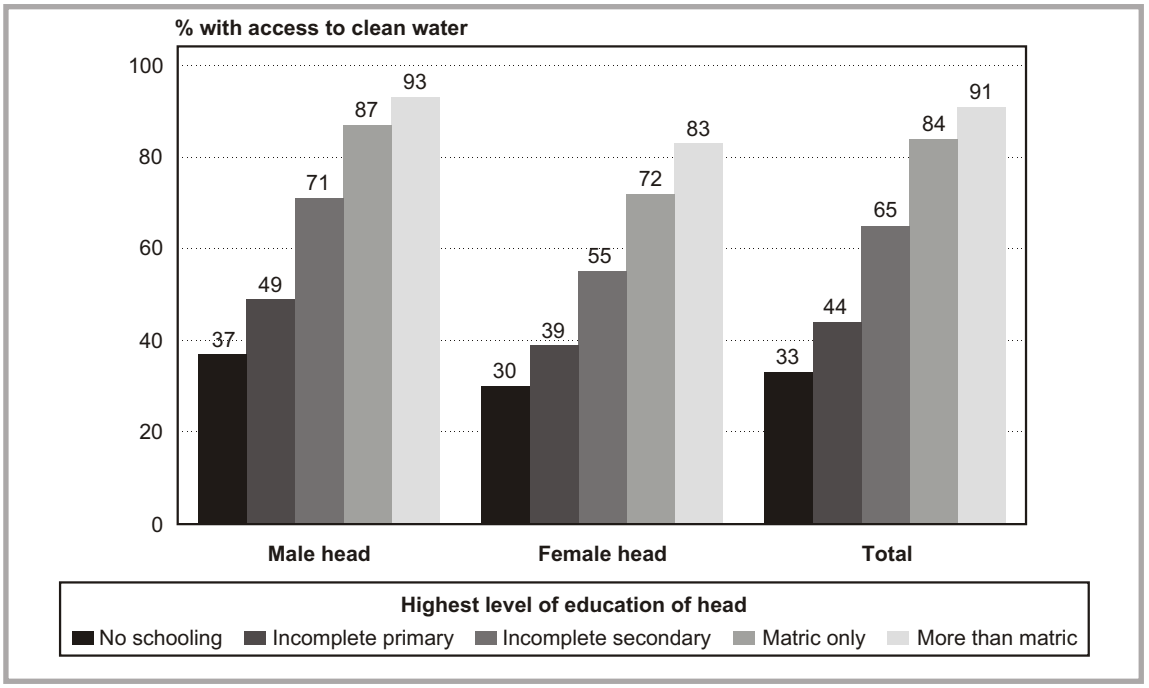


Figure 24 illustrates the relationship between the households' access to water and the sex and educational level of the household head. The figure shows a clear pattern of increasing access to what is likely to be a safe and clean water supply with increasing levels of education of the household head. It also shows consistently lower proportions of households with female heads than male heads with piped water in the household or on site. For example, of people living in households headed by men with education beyond matric, 93% had piped water, compared to 83% of households headed by women with comparable education. At the other end of the scale, 37% of people living in households headed by men with no schooling, and only 30% of those in households headed by women with no schooling, had access to piped water on site or in the dwelling.

FIGURE 24: PERCENTAGE OF PEOPLE IN HOUSEHOLDS WITH ACCESS TO CLEAN WATER BY EDUCATION LEVEL AND SEX OF HOUSEHOLD HEAD



SANITATION

Access to safe, functioning sanitation facilities is also an important determinant of household well-being. Census '96 revealed that the most commonly used sanitation facility was a flush or chemical toilet. Overall, 44% of people living in South Africa in 1996 were living in households with the use of a flush or chemical toilet, 37% were in households with use of a pit latrine, and 5% in dwellings with a bucket latrine. This left 14% in households without any of these sanitation facilities.

There are again significant differences in access to sanitation facilities between urban and rural areas. Overall, 3% of people living in urban areas, compared to 26% living in rural areas, were in households without access to sanitation facilities. Figure 25 illustrates a further relationship, within both urban and rural areas, between the highest level of education of the household head and access to sanitation facilities. In both urban and rural areas, the likelihood that a person was living in a household without sanitation facilities decreased with an increase in the education level of the household head. However, in urban areas, only 6% of those living in households where the head had no formal education did not have access to sanitation, compared to a third (33%) of people living in comparable rural households. It was only in rural households where the head had a qualification higher than matric that access to sanitation was marginally better than in urban households where the head had no formal schooling.

FIGURE 25: PERCENTAGE OF PEOPLE IN HOUSEHOLDS WITHOUT ACCESS TO SANITATION BY LOCATION AND EDUCATION LEVEL OF HOUSEHOLD HEAD

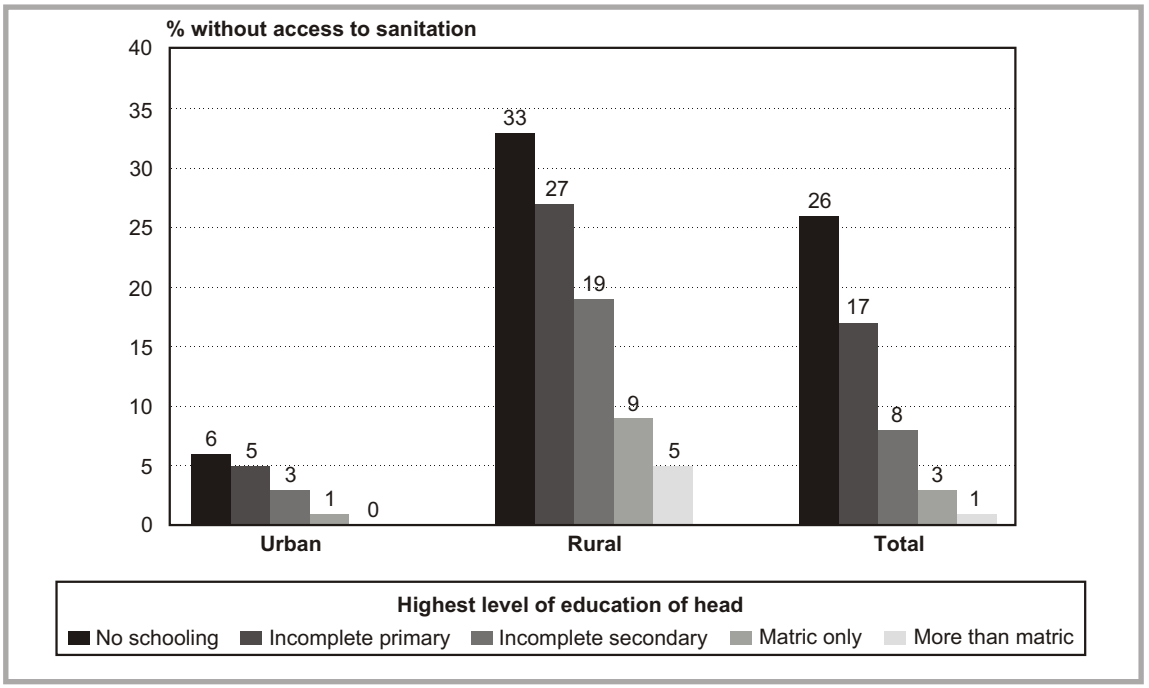
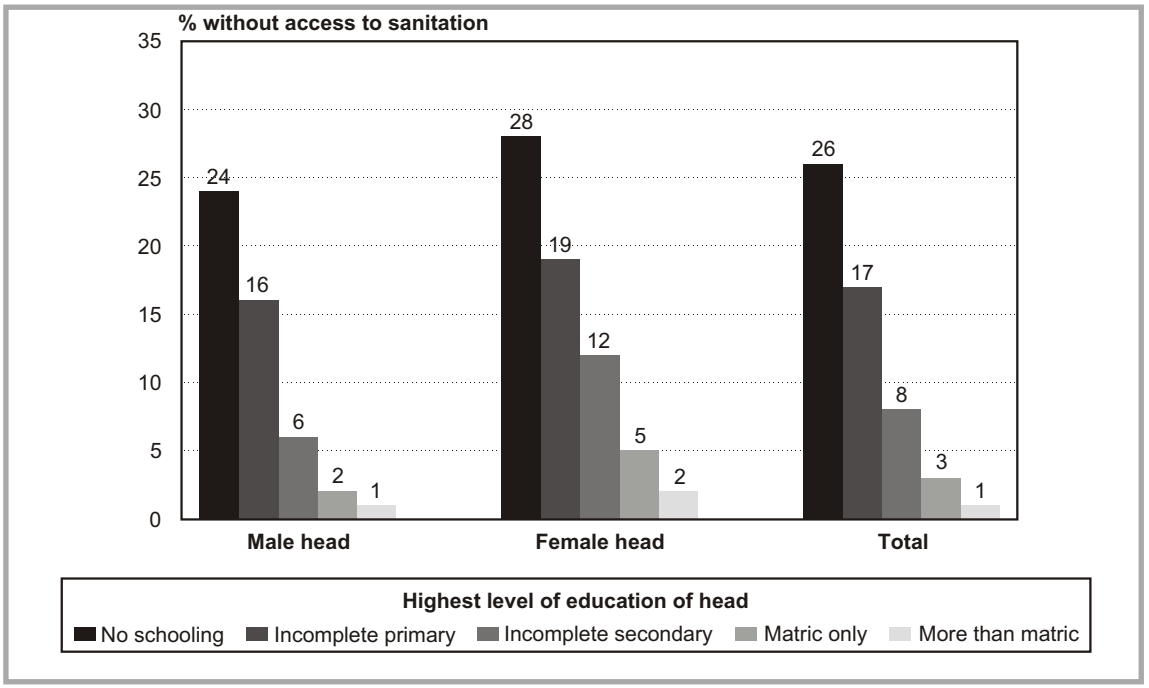


Figure 26 illustrates the differential access to sanitation facilities of people living in households headed by women and men with different levels of education. The differences between male- and female-headed households were much less stark than those between urban and rural. As before, those living in households headed by men were more likely than those living in households headed by women to have access to sanitation. Further, access to sanitation improved with the education of the household head, irrespective of the head's sex. However, there was never more than a six percentage point difference in the access to sanitation between those living in male-headed households and female-headed households at any level of education.

FIGURE 26: PERCENTAGE OF PEOPLE IN HOUSEHOLDS WITHOUT ACCESS TO SANITATION BY EDUCATION LEVEL AND SEX OF HOUSEHOLD HEAD



ELECTRICITY

Census '96 investigated the usage of different fuels for three purposes, namely cooking, lighting and heating. This section focuses on the main fuel used for cooking and lighting. Analysis of heating is more complicated, as some parts of the country are warm enough throughout the year to obviate the need for heating. In respect of cooking and lighting, we look at the percentage of people living in households that do not use electricity as their main fuel. Electricity is chosen as it is generally the most convenient and safest fuel for household purposes.

Overall, in October 1996, 58% of the population were living in households that were not using electricity as their main fuel for cooking. Fuel use patterns differed significantly between rural and urban areas. Under a third (32%) of urban residents were in households which were not using electricity for cooking, compared to 87% of rural residents. Figure 27 illustrates further differences in both locations according to the highest educational level of the household head. In urban areas, for example, less than half of those in households where the head had no formal education were using electricity for cooking, compared to 96% in households where the head had a qualification higher than matric. In rural areas, use of fuels other than electricity stood at 93% in households where the head had no formal education, compared to under half (45%) where the head had a qualification higher than matric.

FIGURE 27: PERCENTAGE OF PEOPLE IN HOUSEHOLDS USING COOKING FUEL OTHER THAN ELECTRICITY BY LOCATION AND EDUCATION LEVEL OF HOUSEHOLD HEAD

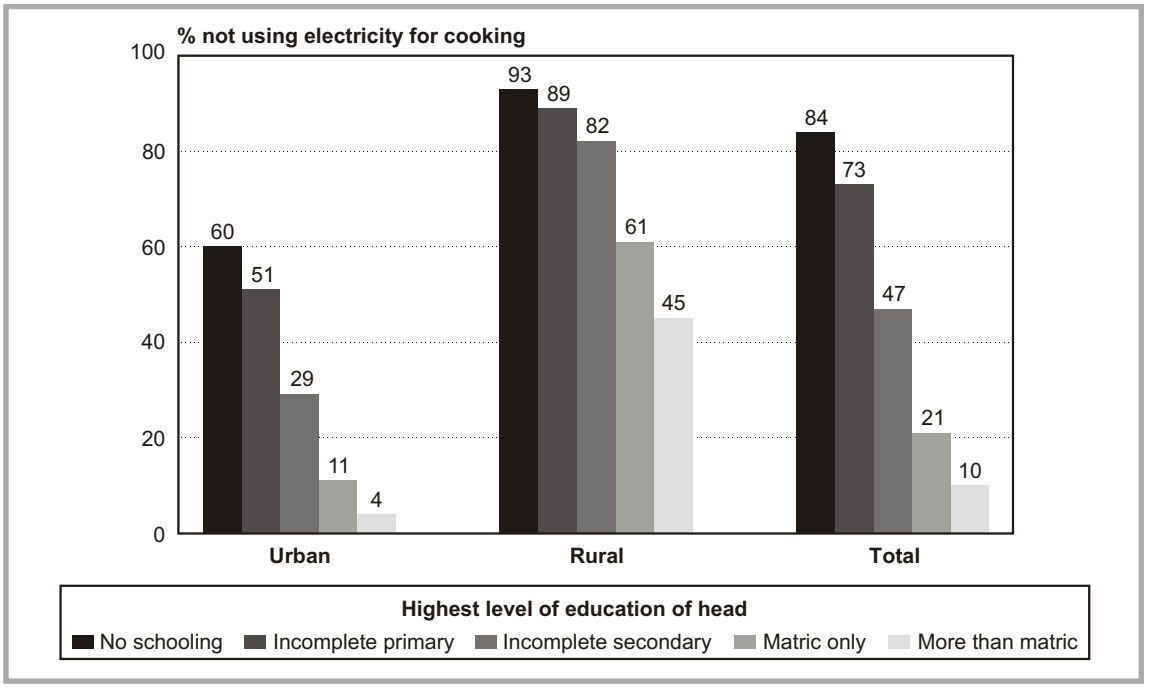
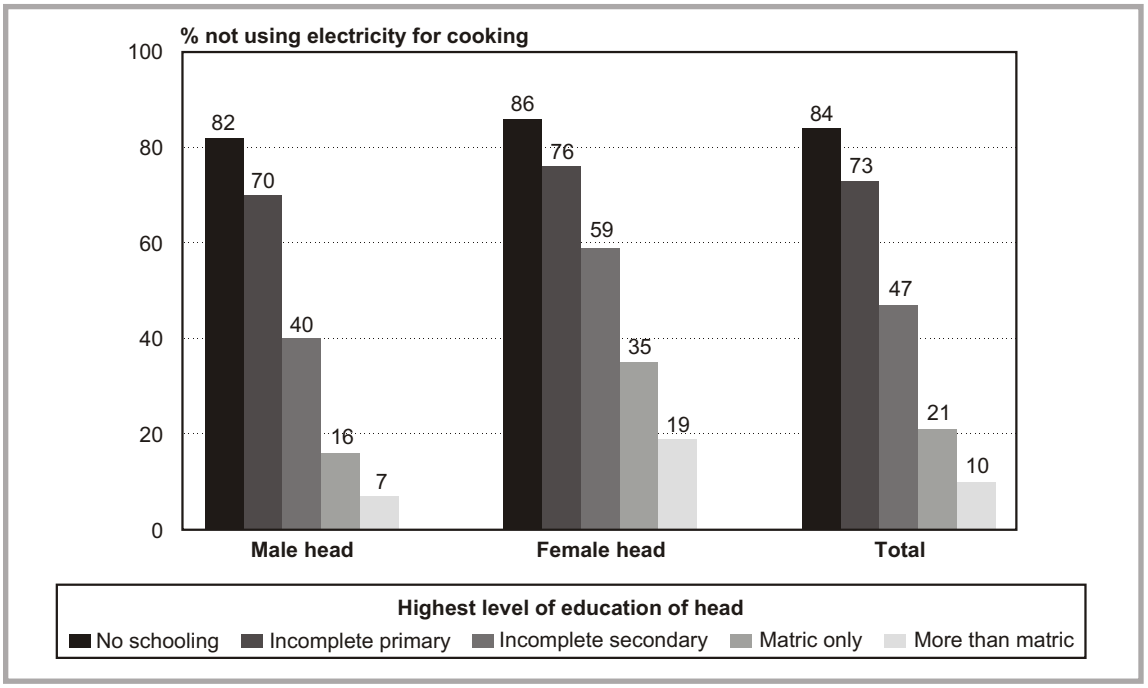


Figure 28 illustrates the use of a fuel other than electricity for cooking in relation to the sex and educational level of the household head. The figure shows familiar patterns. The use of electricity increased among both male- and female-headed households with increasing levels of education. Further, levels of access to this more convenient fuel were lower for female-headed than male-headed households at all levels of education. The differences between female- and male-headed households were small at lower levels of education. They became more marked for households where the head had incomplete secondary education or higher.

FIGURE 28: PERCENTAGE OF PEOPLE IN HOUSEHOLDS USING COOKING FUEL OTHER THAN ELECTRICITY BY EDUCATION LEVEL AND SEX OF HOUSEHOLD HEAD



In October 1996, households were somewhat more likely to be using electricity for lighting than for cooking. Overall, less than half (45%) of the population were in households that did not use electricity for lighting. However, close on three-quarters (73%) of rural residents were in such households, compared to a much lower 21% of urban residents.

Figure 29 illustrates graphically these stark urban–rural differences in the use of electricity for lighting, as well as further differences related to the education level of the household head. Use of fuels other than electricity for lighting decreased with increasing levels of education of the head. However, even in rural households where the household head had a qualification higher than matric, the situation was only more or less comparable to that of urban households where the head had no formal education. For all levels of education, urban households were more than twice as likely as rural to use electricity for lighting.

FIGURE 29: PERCENTAGE OF PEOPLE IN HOUSEHOLDS USING LIGHTING FUEL OTHER THAN ELECTRICITY BY LOCATION AND EDUCATION LEVEL OF HOUSEHOLD HEAD

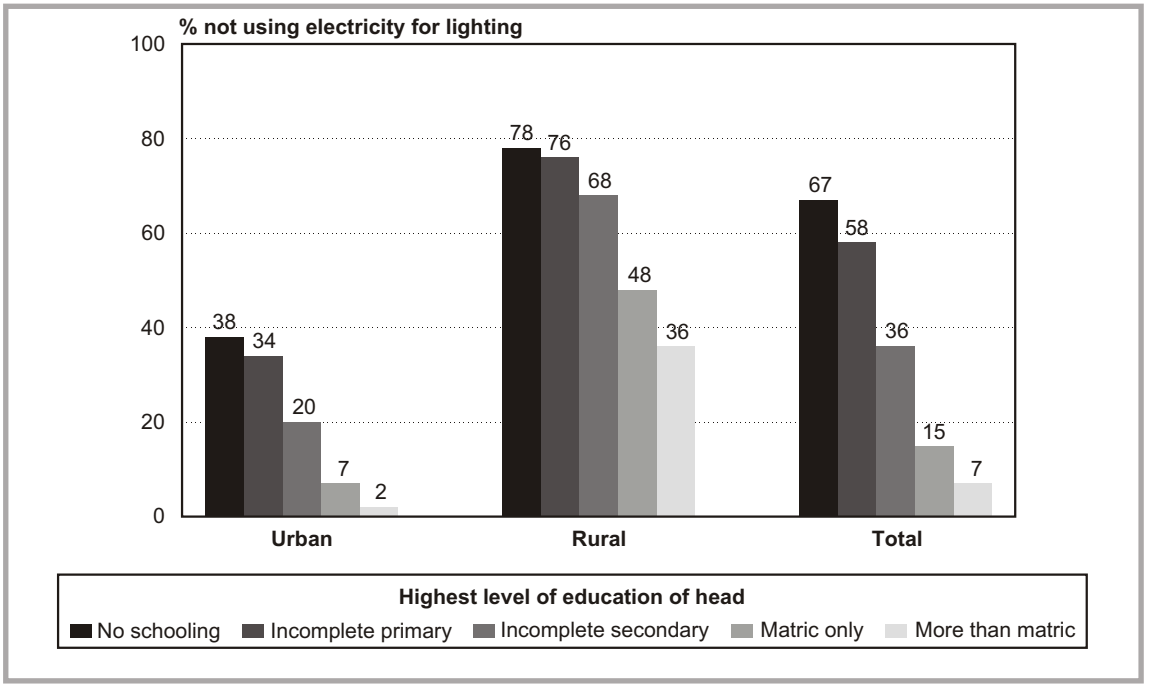
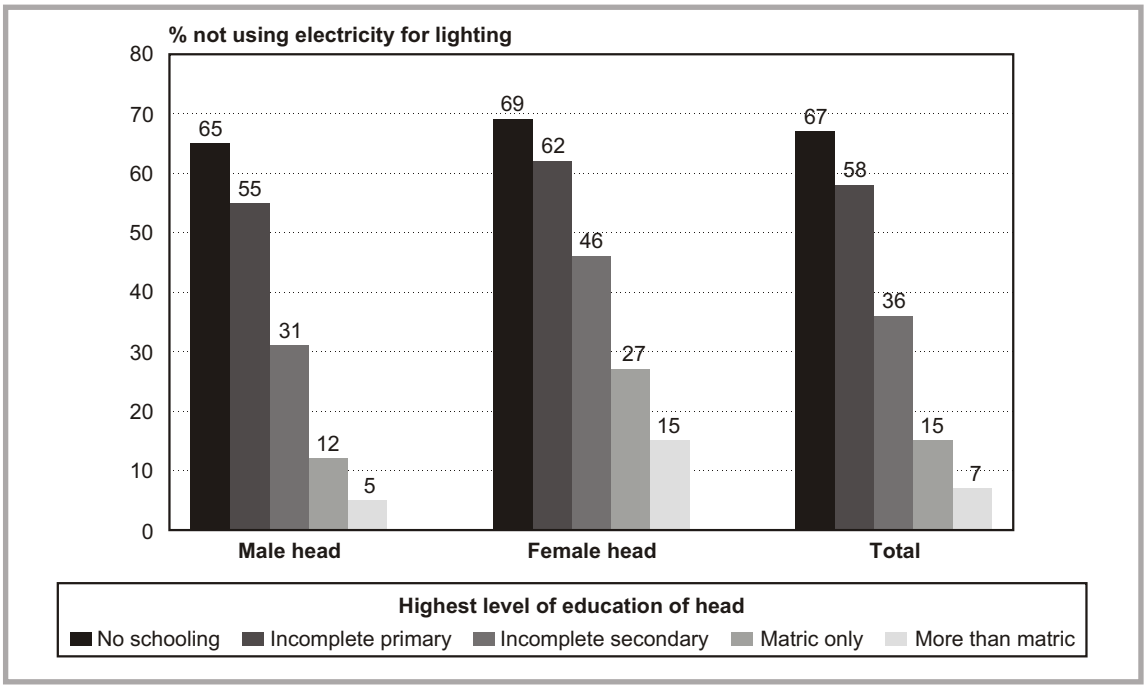


Figure 30 illustrates the situation in respect of male- and female-headed households. Overall, 56% of people living in female-headed households, compared to 39% of those living in male-headed households, were in households that did not use electricity for lighting. As usual, use of other fuels decreased with increasing levels of education in both male- and female-headed households. The gender differences were less stark than those between urban and rural areas. They were, nevertheless, significant, especially for households where the head had matric or higher qualifications. Unless households use a generator or solar power, use of electricity is dependant on access to the electricity grid. If a household is located far from a grid, neither education nor income can assist in obtaining access.

FIGURE 30: PERCENTAGE OF PEOPLE IN HOUSEHOLDS USING LIGHTING FUEL OTHER THAN ELECTRICITY BY EDUCATION LEVEL AND SEX OF HOUSEHOLD HEAD



REFUSE DISPOSAL

In enquiring about refuse removal, Census '96 distinguished between households whose refuse was removed by the local authority, those using a communal refuse dump, those with their own refuse dump, and those with no system of rubbish disposal. For those whose refuse was removed by the local authority, the census distinguished further between those for whom the service was performed at least once a week, and those for whom it was performed less frequently. In this section, we employ a simple distinction between those households whose refuse was removed by local authorities and those whose refuse was not disposed of in this way.

Overall, in October 1996, just over half (52%) of the population was living in households which did not have their refuse removed by the local authority. The situation was significantly worse for rural than urban areas. In the former, 97% of the population were in this position, while in the latter only 12% were in households where the local authority did not provide the service.

Figure 31 confirms that, while the education level of the household head correlates with the method of refuse removal, location is a far more significant determinant. Even among rural residents in households where the head had higher than matric, 87% were in households where the local authority did not remove the refuse. In urban areas, on the other hand, even among households where the household head had no formal education, only 21% did not benefit from refuse removal by the local authority.

FIGURE 31: PERCENTAGE OF PEOPLE IN HOUSEHOLDS IN WHICH REFUSE WAS NOT REMOVED BY THE LOCAL AUTHORITY BY LOCATION AND EDUCATION LEVEL OF HOUSEHOLD HEAD

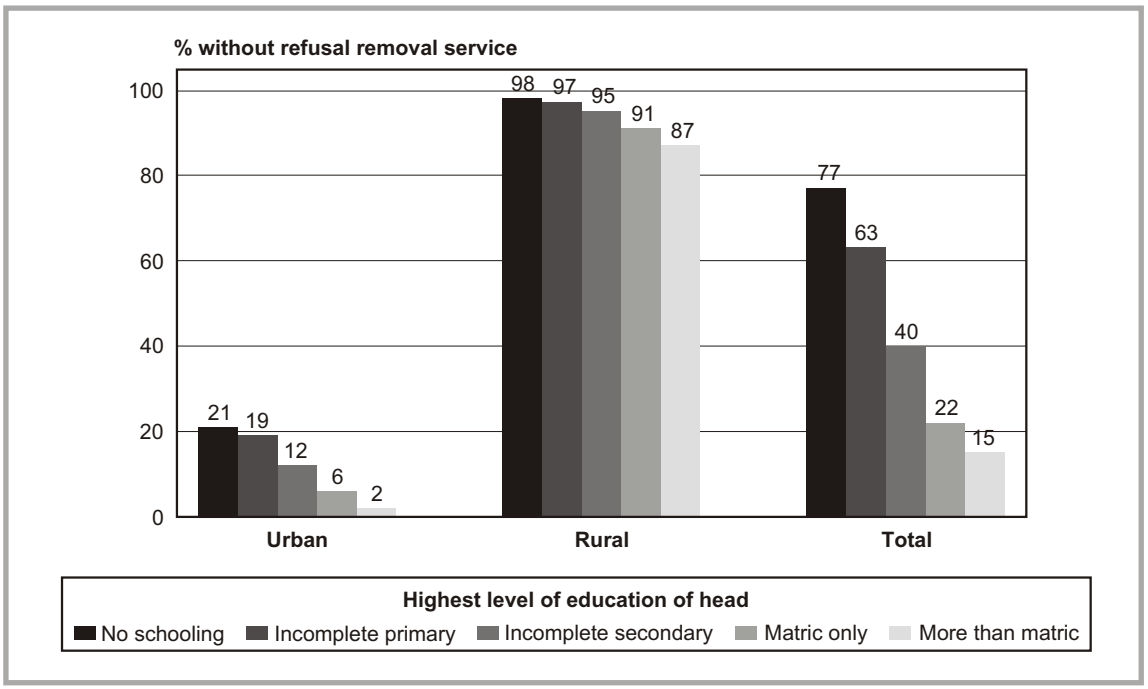


Figure 32 reflects the refuse removal situation in respect of people living in households headed by women and men with differing levels of education. As before, households where the head had a higher level of education were more likely to have access to local authority services. The differences were less marked between male- and female-headed households than between urban and rural. Nevertheless, in households where the head had matric or higher, female-headed households were nearly twice as likely as male-headed not to have local authority refuse removal services.

FIGURE 32: PERCENTAGE OF PEOPLE IN HOUSEHOLDS IN WHICH REFUSE WAS NOT REMOVED BY THE LOCAL AUTHORITY BY EDUCATION LEVEL AND SEX OF HOUSEHOLD HEAD