DIKGALE DSS
SOUTH AFRICA

UNIVERSITY OF THE NORTH

LOCATION OF DIKGALE DSS SITE, SOUTH AFRICA: Monitored Population 7,900

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1. DIKGALE DSS SITE DESCRIPTION

1.1 Physical Geography of the Dikgale Area

The Dikgale DSS site is located in the Central Region, Mankweng District, Northern Province of South Africa approximately 40 km from Pietersburg, the capital of the Northern Province and 15 km from the University of the North. The site covers an area of 71 square km and is 6 km long and 10.8 km. It is situated between 23.46°-23.48° south latitude and 29.42°-29.47° east longitude, and lies an average altitude of 1400m above mean sea level. Each village has a central residential area comprising demarcated housing stands with communal grazing land some distance away. The geo-ecological zone is open woodland-steppe with continental climate and the temperature ranges from an average minimum of 6°C in winter to an average maximum of 26°C in summer. The average rainfall is between 401-500 mm with most of the rain falling between November and April. Droughts are common and together with seasonality play a major role in the availability of fresh produce.

1.2 Population Characteristics of the DSS site

The total population consists of 7,956 people with a population density of 116 per square km. The site is peri-urban and the main ethnic group is Pedi. Most of the inhabitants belong to the Moria Zionist Church which has a combination of Christian and traditional beliefs, while others belong to the Lutheran or Anglican churches. The language spoken by all inhabitants of the site is Northern Sotho.

A large proportion of adults are migrant workers, while others work as farm labourers on neighbouring farms, or as domestic workers in nearby towns. Many are pensioners. The unemployment rate in the area is high.

There are four primary schools and three secondary schools in the DSS area. In all schools, the classrooms are overcrowded and few educational amenities are available. Most children attend primary school and the adult literacy rate is 79.8% and 73.6% in males and females respectively.

Dwelling units consist of a mixture of shacks, traditional mud huts and conventional brick houses. A few households have water taps in their yards, but most must fetch water from taps situated at strategic points in the villages. Most households have a pit latrine in their yards but there is no organized waste disposal. Infrastructure in the villages is poor and none of the roads are tarred. A bus service is available mornings and evenings during weekdays.

Free health care is given to children under six year of age, to pregnant women and to the elderly at a primary health care clinic in the field site. The service provided by the clinic includes family planning, antenatal care, growth monitoring and immunization in children and management of patients with chronic diseases. Mankweng Hospital situated 15-20 km from the field site serves as a referral hospital.

Both infectious and non-infectious diseases are prevalent in the area. According to records kept at the clinic the main health problems in children are respiratory and gastrointestinal diseases. Under nutrition is common and a large proportion of children are stunted. From a survey undertaken in the DSS site the health problems in adults include type 2 diabetes, hypertension, iron overload and obesity.

2. DIKGALE DSS PROCEDURES
2.1 Introduction to the Dikgale DSS site

The broad aim of the Dikgale DSS is to provide information to improve the health of the people of Northern Province and to assist the local government in making an effective health care policy. As no accurate data are available on the prevalence of diseases in rural and peri-urban areas of the Northern Province, the initial objective of the DSS was to establish a field site where the incidence and prevalence of diseases could be assessed.

Community leaders in Dikgale were approached regarding the possibility of conducting research on health status, and their cooperation was obtained. The site was subsequently established and the first census undertaken from August to November 1995. At that time the population was 8,001 and it has subsequently decreased to 7,956 in 1998. Every year an update is undertaken. A distinction is made between the total population in the study area, which comprise all who regard their home to be in the area, and the permanent population, which consists of those resident in the area for six months or more in the year preceding the census update.

Demographic variables measured routinely include births, migrations and deaths. Maternity histories are also conducted. Several special surveys have also been undertaken to determine the prevalence of specific diseases and disorders, such as iron and vitamin A status in pre-school children, vision defects and the prevalence of non-infectious diseases in the adult population.

An office for the use of the field workers is located in the field site. The coordinator of the Dikgale DSS is a staff member of the University of the North. Data collected at the DSS site is regularly forwarded to the Department of Health, Northern Province.

2.2 Dikgale DSS Data Collection and Processing

The Dikgale DSS site was chosen because of its proximity to the University of the North, and the presence of a Primary Health Care Clinic.

2.2.1 Field Procedures

a) Mapping

The field workers constructed a sketch map of each village, with all roads and landmarks such as schools, shops etc indicated. Each household was given a number.

b) Initial census

The initial census was undertaken during August to November 1995, during which field workers visited each household and recorded the name, age and education of each household member.

c) Regular update rounds

Updates are conducted annually. During the update fieldworkers visit each household with a printout of the census form. Any changes that have occurred since the last visit, are recorded on the form.

A full maternity history is taken from each woman in the household who has had a child. Particulars pertaining to date of birth, gender, live or still births are entered onto the maternity history form. All births that occurred since the last visit are recorded and birth weight, site of delivery and use of
contraceptives. Death forms are completed for each death that has occurred. Migration inquiries include information on origin or destination, and reasons for the change of locality.

d) Supervision and quality control:

The field site is visited regularly and quality checks are carried out coordinators on a random sample of 2.5% of households. Any problems encountered are discussed and solved.

2.2.2 Data management

The forms that have been completed by the field workers are manually checked before being processed. All data are entered into a custom designed Access database programme. The programme contains checks to limit entry errors. A series of validation routines are run and corrections made, with reference to the raw data and return visits to the field where indicated.

Data analysis is done in Microsoft Excel. Reports are produced on a regular basis and forwarded to the community and local authorities.

3. DIKGALE DSS BASIC OUTPUTS

3.1 Demographic Indicators generated by the Dikgale DSS site

The population size in 1998 was 7,956 and the proportion of the population less than one year of age was 1.6%, under five years was 11.2%, 5-14 years was 25.7%, 15-64 years was 57.8% and 65 years or older was 5.74%. The age dependency ratio is 0.74; the sex ratio 0.96, and the infant mortality rate is 38.9 per 1000 live births. The average household size is 6.33, and the household headship is 58% male and 42% female. The percent literate aged 15 and above is 79.8% in males and 73.6% in females.

Migration surveys are undertaken every year and indicates a complex pattern of migration. Most movement takes place either within the same village or to another village in the DSS site or to a neighbouring village. Very few move to urban areas. The largest proportion of subjects either leaving or in-migrating is in the age group 0-24 years. Few subjects above 40 years of age move away from their homes.
Figure 1. Population pyramid of person years observed in the Dikgale DSS Site, 1995-1999.

Table 1. Age and Sex Specific Mortality in the Dikgale DSS Site, 1995-1999.

** Omitted in WEB version **
4. REFERENCES


5. ACKNOWLEDGEMENTS

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