SECOND CARNEGIE INQUIRY INTO POVERTY
AND DEVELOPMENT IN SOUTHERN AFRICA

Motor and ocular impairment in
rural KwaZulu: A prevalence study

by

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KWAZULU.
Introduction.

A recent study has highlighted the problem of physical impairment amongst rural blacks in South Africa. Mseleni Joint Disease (MJD) which is a chronic progressive "arthritis" involving hips, knees, ankles or wrists was found to be prevalent in north eastern Kwa Zulu. The overall prevalence rate was reported to be 5.1% with 7.1% of women and 3.6% of men being affected. (1)

The study under discussion was done as a follow-up to this MJD survey by the Medical Research Council. Maputaland in the magisterial district of Ingwavuma, is characterized by a number of vegetation zones. The Manguzi Health Ward, is situated in Maputaland. It stretches from the Pongola River in the west to the Indian Ocean in the east and is bordered to the north by Mocambique. (Map).

It covers an area of 4200 sq km and has a population of 32,000. This population lives in scattered homesteads and is dependent upon migrant labour, some local employment opportunities and a subsistence economy for survival.

The infrastructure in the ward is poor. There is one hospital, Manguzi, staffed by 4 doctors and appropriate nursing personnel and administers 15 mobile clinics and one fixed clinic. Distances are great, roads are poor and 4-wheel drive vehicles are essential. Public transport is non-existant north of the main east-west road where about 50% of the population live. Although there are 15 schools, distances are great, and only two of these are senior secondary schools.

Objective.

This was to investigate the prevalence of motor and ocular impairment in the Manguzi Health Ward and to describe the socio-economic status of the community.

Definitions.

Impairment: An impairment is any loss or abnormality of psychological physiological or anatomical structure or function. (2)


Motor impairment, in this study, was considered to be present if an individual was reported as having difficulty with movement of the upper limbs, the lower limbs or the body.

Ocular impairment, in this study, was considered to be present if an individual was reported as having difficulty with seeing.

Study population was defined as the de jure population of the 4 western areas of the Manguzi Health Ward namely Tete Pan, Makani's Drift, Sihangwane and Ngutshana. In all analyses relating to impairment the de facto population was used.

Methodology

A 10% random cluster sample of the 2469 homesteads in the 4 areas was taken yielding 25 clusters of 10 homesteads each.

Homesteads were visited and a respondent, preferably a senior member of the homestead, was interviewed by one of two health workers using a "closed" questionnaire in the vernacular. Information sought included an enumeration of the homestead, age and sex structure, educational and work status, presence or absence of motor and/or ocular impairment and economic status including pensions.

A "topping up" technique was built into the protocol to ensure a final sample of 250 homesteads.

Results.

Of the 250 homesteads initially identified 71% were interviewed. The 29% deficit was made up by interviewing the nearest homestead. The de jure population yielded was 2179 and the de facto population 1683.

The age and sex profile of the de jure population is shown in figure 1. The median age was 18 years. There were an average 8.7 and 6.7 people per homestead by de jure and de facto population respectively.

FIGURE 1.
EDUCATION

The proportion of children not attending school for each of the 4 areas is shown in figure 2.

FIGURE 2.

In the 4 areas only 35% of children of school going age were at school. Tete Pan showed the lowest school non-attendances (52%) Ngutshana (65%) Sihangwane (73%) and Makanisdrift the highest (81%).
EMPLOYMENT

The male and female employment categories by area are shown in figure 3 and 4 respectively.

FIGURE 3.

male employment category by area

<table>
<thead>
<tr>
<th>Area</th>
<th>Non-remunerative</th>
<th>Remunerative</th>
<th>Migrant</th>
<th>Seeking</th>
<th>School</th>
<th>Under 14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tete Pan</td>
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<td>30</td>
<td>20</td>
<td>10</td>
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<td>10</td>
</tr>
<tr>
<td>Makanis Drift</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Sihangwane</td>
<td>30</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Ngutshana</td>
<td>50</td>
<td>30</td>
<td>20</td>
<td>10</td>
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</table>

FIGURE 4.

female employment category by area

<table>
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<tr>
<th>Area</th>
<th>Non-remunerative</th>
<th>Remunerative</th>
<th>Migrant</th>
<th>Seeking</th>
<th>School</th>
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<td>Ngutshana</td>
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</tbody>
</table>
IMPURMENT.

Impairment is reported using the de facto population. 13% of people (218/1683) were found to be impaired, 11% had motor impairment, 5% had ocular impairment and 3% had both.

MOTOR IMPAIRMENT.

The male and female age-specific motor impairment rates are given in Figure 5 and 6.

FIGURE 5

![Male age-specific motor impairment rate](image)

FIGURE 6

![Female age-specific motor impairment rate](image)
About 70% of motor impairment is related to lower limb difficulties. The degree of impairment, as reflected by walking ability is shown in figure 7.

**FIGURE 7.**

![Assessment of walking ability](image)

Mseleni Joint Disease (MJD)

3.8% of the population in the 4 areas were recorded as having M.J.D. (confirmed radiologically).

The overall female prevalence rate for MJD was 5.5%.

The female prevalence rates for M.J.D. for the 4 areas was as follows:

- Tete Pan 5.5%
- Makanisdrift 2.4%
- Sihangwane 5.9%
- Ngutshana 8.1%

This is the first time M.J.D. has been described in the Tete Pan and Makanisdrift areas.
Ocular Impairment.

The male and female age-specific ocular impairment rates are shown in figure 8.

FIGURE 8.

The sex-specific distribution of ocular impairment is given in Figure 9.

FIGURE 9.
DISABILITY GRANTS AND PENSIONS.

Of the 218 found to have impairment, 142 have been formally studied in hospital. 47% (67/142) have severe impairment and therefore are eligible for a disability grant. However only 12% (8/67) currently receive such grants.

Of the elderly de jure population eligible for old age pensions only 17% (28/168) currently receive these.

Discussion.

The findings of the study confirm that this already socio-economically deprived community have an additional burden of physical and ocular impairment. This is compounded by problems with access to health care, a poor level of education and failure to apply for legitimate financial assistance.

It confirms the need for a more comprehensive health card system for disabled people in a rural environment; it emphasises the importance of assisting the disabled and aged in applying for disability grants and pensions; and it underlines the necessity for more research to be done into the social and economic effects of impairment and resultant disability in particular with regard to the cause and extent of Mseleni Joint Disease.

Conclusion.

It is clear from the study that the extent and nature of motor and ocular impairment in the Manguzi Health Ward warrants the specific attention of the South African and KwaZulu health authorities particularly in the field of disability grants and pensions.

In addition, a disability prevention programme is necessary throughout South Africa and especially in the rural areas where the causes of severe impairment abound. Disabilities are for the most part preventable. When impairment does occur the absence of appropriate rehabilitation measures hastens its transformation into serious disability and social handicap.

Undeveloped rural areas confront a paradox. They must meet the challenge of a high proportion of disability in an area with the fewest available resources.

As the prevalence of disability is highly correlated with poverty and social disadvantage it is a priority that positive action be taken to ensure that the incidence of impairment/disability/handicap in rural areas be reduced to minimize this effect.
REFERENCES.


MANN, D. 'Aspects of the Social Effects of Mseleni Joint Disease' (Unpublished)


McLAREN P.A. 'Factors influencing the employability of Black unilateral traumatic amputees between the ages of 16 and 60 years living in the Witwatersrand area' Master's Dissertation Witwatersrand University 1978 (Unpublished).


HAMMERMAN, S.R. 'Dealing with Disability in the Developing World' Rehabilitation International Review.

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MAP OF MANGUZI HEALTH WARD AND STUDY AREA.

MAP OF 25 CLUSTERS IN STUDY AREA.
These papers constitute the preliminary findings of the Second Carnegie Inquiry into Poverty and Development in Southern Africa, and were prepared for presentation at a Conference at the University of Cape Town from 13-19 April, 1984.

The Second Carnegie Inquiry into Poverty and Development in Southern Africa was launched in April 1982, and is scheduled to run until June 1985.

Quoting (in context) from these preliminary papers with due acknowledgement is of course allowed, but for permission to reprint any material, or for further information about the Inquiry, please write to:

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