

SECOND CARNEGIE INQUIRY INTO POVERTY  
AND DEVELOPMENT IN SOUTHERN AFRICA

The nutritional status of infants  
and children under the age of five  
in Esikhawini Township and  
Mpukunyoni

by

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THE NUTRITIONAL STATUS OF INFANTS AND CHILDREN UNDER THE AGE OF FIVE IN  
ESIKHAWINI TOWNSHIP AND MPUKUNYONI

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1. Introduction

This comparative study of the nutritional status of children from an urban and a rural area was undertaken to find out whether they are well-nourished or not and how the community can be assisted to combat malnutrition and other diseases which are related to it. The evidence of the incidence of malnutrition in children can be an indication for further investigation into the nutritional status of the whole community, the types of malnutrition and its causes. Once facts about the situation have been discovered it is hoped that the assessment of the nutritional status of children would guide action intended to improve nutrition and health by preventative programmes.

2. Objectives

The objectives of the study were the following:

- 2.1 To investigate the incidence of malnutrition at Esikhawini township and Mpukunyoni, realising that both intake and deficit levels can vary markedly across regions or between urban and rural areas.
- 2.2 To identify nutrient deficiencies from the infant's and children's diets because malnutrition may result from a lack, excess or imbalance of nutrients.
- 2.3 To discover problems that may be prevented, controlled or cured with proper diets.
- 2.4 To investigate the feeding habits in the area in terms of:
  - ages when children are fed;
  - Mode of feeding;
  - Utensils used and their care;
  - Types of milk and food used for feeding infants and children;
  - Age when specific solids are introduced;
  - Approximate amount of food consumed by each child per meal;
  - Ways in which food is allocated among family members and reasons for pursuing certain feeding patterns;
  - Mothers' attitudes towards breastfeeding.
- 2.5 To establish:
  - The presence of organised health facilities and services or child care and guidance centres;
  - Acquisition of food;

Ownership of/.....

## 2.

Ownership of arable plots in which to grow edible crops and types of crops grown.

- 2.6 To counsel, especially mothers on individual or group basis by adapting nutrition information to the local needs of the people and to encourage them to produce more subsistence crops that could contribute to a more balanced diet.

## 3. Sampling

Different sampling methods were pursued at Esikhawini township and Mpukunyoni.

### 3.1 Esikhawini township

A table of random numbers was used to select 100 household from the official list of plots in Esikhawini, as provided by the manager's office. Those households which did not have any children under the age of five or whose occupants were not present and could not be contacted by the interviewer were substituted by the next occupied house having the highest plot number.

### 3.2 Mpukunyoni

The sample was drawn from 10 Shikishela and 10 Nkodibe ward households that were visited by the interviewer, 15 mothers were interviewed on Baby Clinic day at KwaMsane, 10 mothers who are members of Macambini Garden Club and 10 mothers from a group that gathered at induna's kraal in Mapheleni.

Mothers who had infants and children under the age of 5 with them at home or at the venues for interviews were eligible. Baby sitters and relatives were not interviewed unless they had been responsible for looking after the baby since birth.

In both areas the questionnaires were administered by the author and a matured and experienced nursing sister who was thoroughly briefed on the interviewing schedule. Information on a total of 155 and 90 children from Esikhawini and Mpukunyoni respectively, was gathered.

## 4. Technique

The nutritional status of children was assessed from their dietary histories and anthropometric measurements for which the Harvard Standard Tables for weight, height and arm circumference were employed.

## 5. Results

### 5.1 The incidence of malnutrition

Anthropometric evaluation was one of the essential parameters used to assess the nutritional status of children in this study. Weight-for-age, height-for-age and weight-for-height measures were compared to Harvard Growth Standards which have been shown to be applicable to well-fed african children in this country. The arm circumference measurements were compared to the Wolanski Standard Reference. The prevalence of malnutrition was assessed by classification of infants and children into percentage groups. Eighty percent of the expected Harvard Growth Standard for weight and height is an adequate limit between the adequately nourished and the malnourished as described by Keller et al. (1976).

#### 5.1.1 Weight for age

Table 1 Assessment of weight for age: Percentage below 80% of the Harvard Standard

Area	No in sample	% below 80%
Mpukunyoni	90	43
Esikhawini	155	29

#### 5.1.2 Height for age

Table 2 Assessment of height for age: Percentage below 80% of the Harvard Standard

Area	No in sampe	% below 80%
Mpukunyoni	90	6
Esikhawini	155	4

#### 5.1.3 Weight for height

Table 3 Assessment of weight for height: Percentage below 80% of the Harvard Standard

Area	No in sample	% below 80%
Mpukunyoni	90	26
Esikhawini	155	5

#### 5.1.4 Arm Circumference

Jelliffe and Jelliffe (1969) stated that in the case of arm circumference the first level of malnutrition below standard is 85% which corresponds statistically to the 3rd centile.

The findings showed that 26% of Mpukunyoni children had arm circumferences below 3rd centile while only 5% of Esikhawini children were in the same category.

#### 5.2 Discussion

The research findings highlight a high degree of subclinical levels of malnutrition at Mpukunyoni and Esikhawini township. Although the cases in the study may not be regarded as random selection of the population they represent, the results may be reviewed as indicating the nature of nutritional conditions in both areas. It has been taken into consideration that both samples tended to be biased towards unemployed mothers. Another essential factor that has an influence on the findings is that the Mpukunyoni sample, consisted of women who belonged to women's garden clubs and those who took their children to baby clinics regularly. Such women could be expected to have better nourished children as they seem to be interested in the health and welfare of their children.

As it has been tabulated in the previous section, the anthropometric evaluation indicates evidence of malnutrition across all measures that were employed to assess the nutritional status of children but the percentage of malnourished children is greater at Mpukunyoni than Esikhawini township. A number of children with distinct signs and symptoms of kwashiorkor, marasmus, dental caries and skin lesions were observed by the researcher mainly at Mpukunyoni. A correlation was noted between weight for age and weight for height measures and the 24 hour dietary recall information which indicated that the majority of children's diet were inadequate in terms of quality and quantity.

The nutritional status of Esikhawini township children is better than that of Mpukunyoni people because urban people are at a greater advantage in terms of available income per family, variety of food, fuel, household utensils and health services when compared with rural populations. The results therefore indicate that Africans who have left the rural areas adopt a semi-Western feeding and dietary patterns. Urban respondents take their children to the under-fives clinics regularly which are ideal places for mothers to learn about methods of child care and improvement of feeding habits. The majority of urban mothers also appreciate the need for health supervision of their children as they are aware of

some connection/.....

some connection between food, health and nutrition. Another essential factor is that they have discarded some harmful customs related to child nutrition, for example, fear of feeding children eggs and the habit of reserving the best high protein foods for male adults. In general responses of Esikhawini mothers indicated that they have been taught to take a positive attitude towards the feeding of their children.

The situation related to nutrition and child care at Mpukunyoni is different from that of Esikhawini township. The responses of Mpukunyoni respondents gave a clear picture of people who are victims of ignorance, poverty and general rural deprivation since all resources are limited. In addition the influence of some African customs that are detrimental to the health of children still prevails in responses of Mpukunyoni mothers like prejudice against feeding children eggs and sharing of food in one container. In spite of all adverse circumstances under which people live in rural areas Mpukunyoni respondents need to be credited for retaining one of the best traditional practice, breastfeeding. Amongst the many beliefs and mistakes that should be corrected is a fatalistic attitude towards life at Mpukunyoni. Surprisingly a large number of respondents took it for granted that a certain number of their children would die and they do not link illness and disease with lack of food and inadequate child-care. Such negative attitudes towards life can only be removed by breaking the poverty-ignorance cycle.

Perhaps in conclusion it is essential to mention that although malnutrition or undernutrition is in evidence in both Mpukunyoni and Esikhawini township, the nutritional status of the urban children is more likely to improve than that of the children from rural areas where poverty, ignorance and drought are rife. Poverty caused by the social and economic structures remains a fundamental cause of malnutrition, but above a certain poverty threshold most of malnutrition associated with the weaning age results from improper feeding practices and not from absolute lack of food at the family level. Preventive measures would play a significant role in fighting against malnutrition.

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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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