

# NUTRITIONAL STATUS AND ENVIRONMENTAL CHARACTERISTICS OF INFANTS FROM TETE (MOZAMBIQUE)

Autores: Irina Hernández Medina, Gloria González Azpeitia, Loida María García Cruz, Ana Moral Larraz, Desiderio Reyes Suárez

## INTRODUCTION

According to the 2015 Human Development Index of the United Nations Development Programme (UNDP) ranks Mozambique 180th out of 188 countries(1), being the least developed country in Southern Africa. It is also a largely rural country where 80 % of the population lives on agriculture(2).

The prevalence of CM is 43%, of AM is 6% and of low birth weight is 17%(3). It is estimated that of those affected by SAM only 27 % receive adequate attention(3).

Tete province is part of the northwest side of the country and the third province most populated, with 2.5 million of habitants. There are two provincial hospitals, four districtal hospitals and 107 health centers(4). The province is sparsely urbanized and only 8.7% of the population resides in its capital city, Tete(5), the town where our study is performed.

49,7% of the population is under 14 years old.



## METHODS

### Design and setting

It is a single cross-sectional epidemiological study with a sample of 123 children who were admitted into Tete Provincial Hospital and two health centres during September 2015.

### Sampling

The sample includes a total of 139 patients of whom 16 were excluded because their survey data was incomplete. Therefore, only 123 children were studied, selected by consecutive sampling, who came to control or health care at health centers No. 2 or No. 3 of Tete City or at Tete Provincial Hospital. Subjects are from 1 to 84 months old.

Exclusion criteria consisted in children under 28 days old and those whose mothers did not speak Portuguese nor local languages (Cinyungue and Cinyanja), because of the impossibility of conducting the interview.

### Statistical analysis

Information was processed and analyzed with the statistical package SPSS® for Windows v23.0. Simple statistical tests were performed.

## ABSTRACT

**Objectives:** To study the prevalence of malnutrition in Tete, Mozambique. Analyze the population in terms of perinatal history, patterns of parenting and health care, and access to clean water. Assess determinants in different forms of presentation of malnutrition.

**Methods:** single cross-sectional epidemiological study with a sample of 123 children who were admitted into Tete Provincial Hospital and two health centres during September 2015. A survey was complimented by their parents.

**Results:** 41.5 % of children had HAZ<-2SD, 18.7 % had WHZ<-2SD and 14.6 % had WAZ<-2 SD. Current age of the mother, her age during child pregnancy and housewife mother were statistically significant for malnutrition. Prophylactic deworming, low birth weight and duration of breastfeeding were associated with chronic malnutrition. There was no association with acute malnutrition. In exacerbated chronic malnutrition were significant gestational age, low birth weight and duration of breastfeeding.

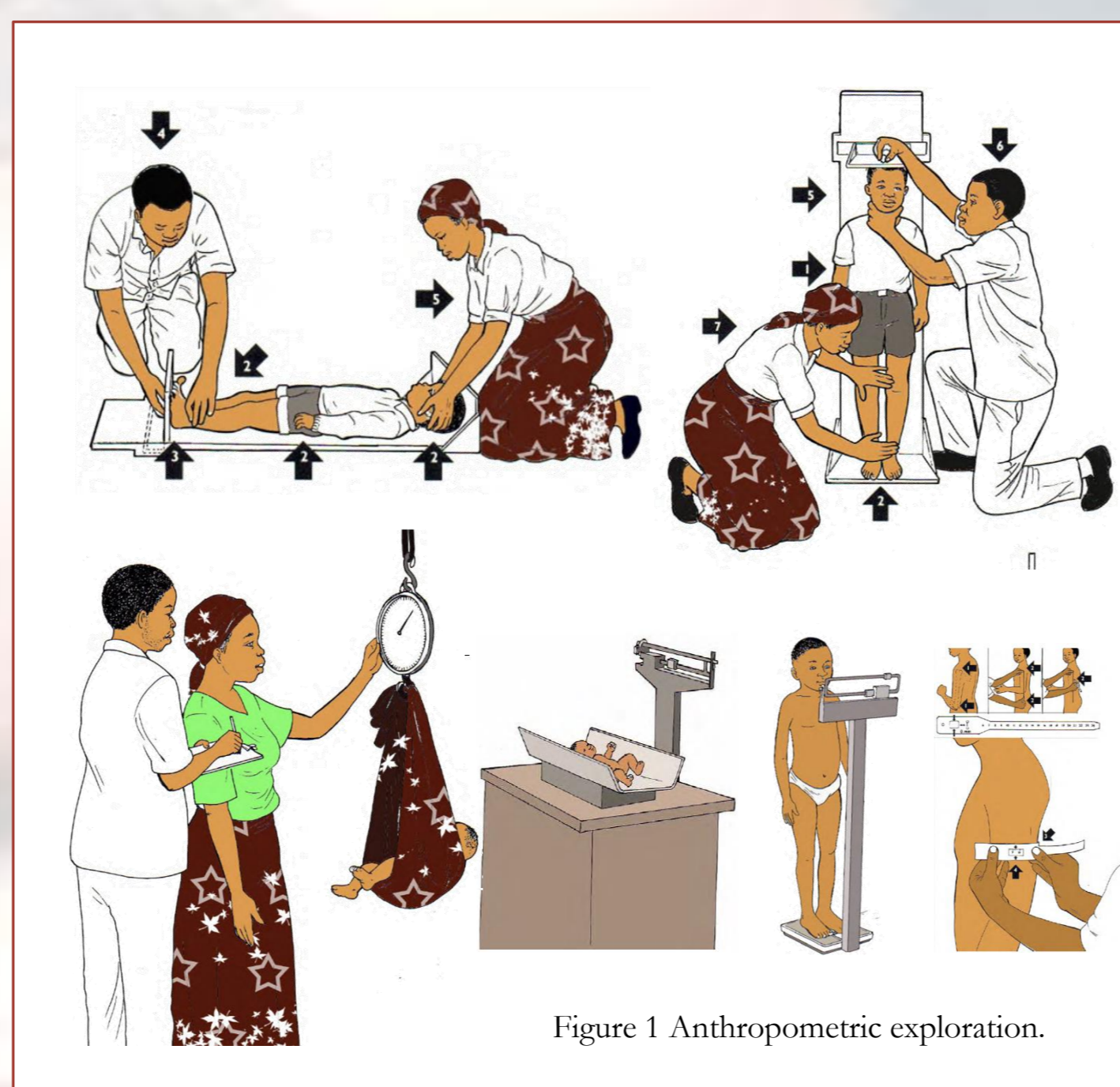
**Conclusions:** The prevalence of chronic malnutrition was 41.5 %, acute malnutrition of 23.6 %. Malnutrition was related in perinatal period with low birth weight and gestational age. The parenting pattern most determining was breastfeeding duration. In terms of health care emphasizes the prophylactic deworming. Drinking water coverage was 91.5

## OBJECTIVES

The overall objective of this work was to study the prevalence of child malnutrition in the province of Tete and the sociocultural environment and eating habits in order to be able to suggest some preventive measures in accordance with its own idiosyncrasies.

The specific objectives were:

- To study the prevalence of various forms of presentation of malnutrition.
- To analyze the study population in terms of perinatal history, patterns of parenting and health care and assessment of safe water supply.
- To assess determinants in different forms of presentation of malnutrition.



## CONCLUSIONS

- The prevalence of malnutrition was 52%. 41.5 % of patients met criteria for chronic malnutrition and 23.6 % criteria of acute malnutrition; 13% (included in both groups) met the criteria for both types of malnutrition.
- Malnutrition prevalence increases slightly in children between 7 and 18 months old, and from 2 years and on it beats normally nourished population.
- The factors that are associated with malnutrition are: housewife mother, her current age and her age at pregnancy of the child.
- Concerning feeding practices, it was observed in children between 6 and 17 months chronic and exacerbated chronic malnourished a shorter duration of breastfeeding. In children older than 24 months this relationship was only heightened with chronically undernourished.
- Chronic malnutrition and exacerbated chronic malnutrition share association with low birth weight
- There was association between prematurity and exacerbated chronic malnutrition.
- Deworming prophylactic treatment was associated with chronic malnutrition.

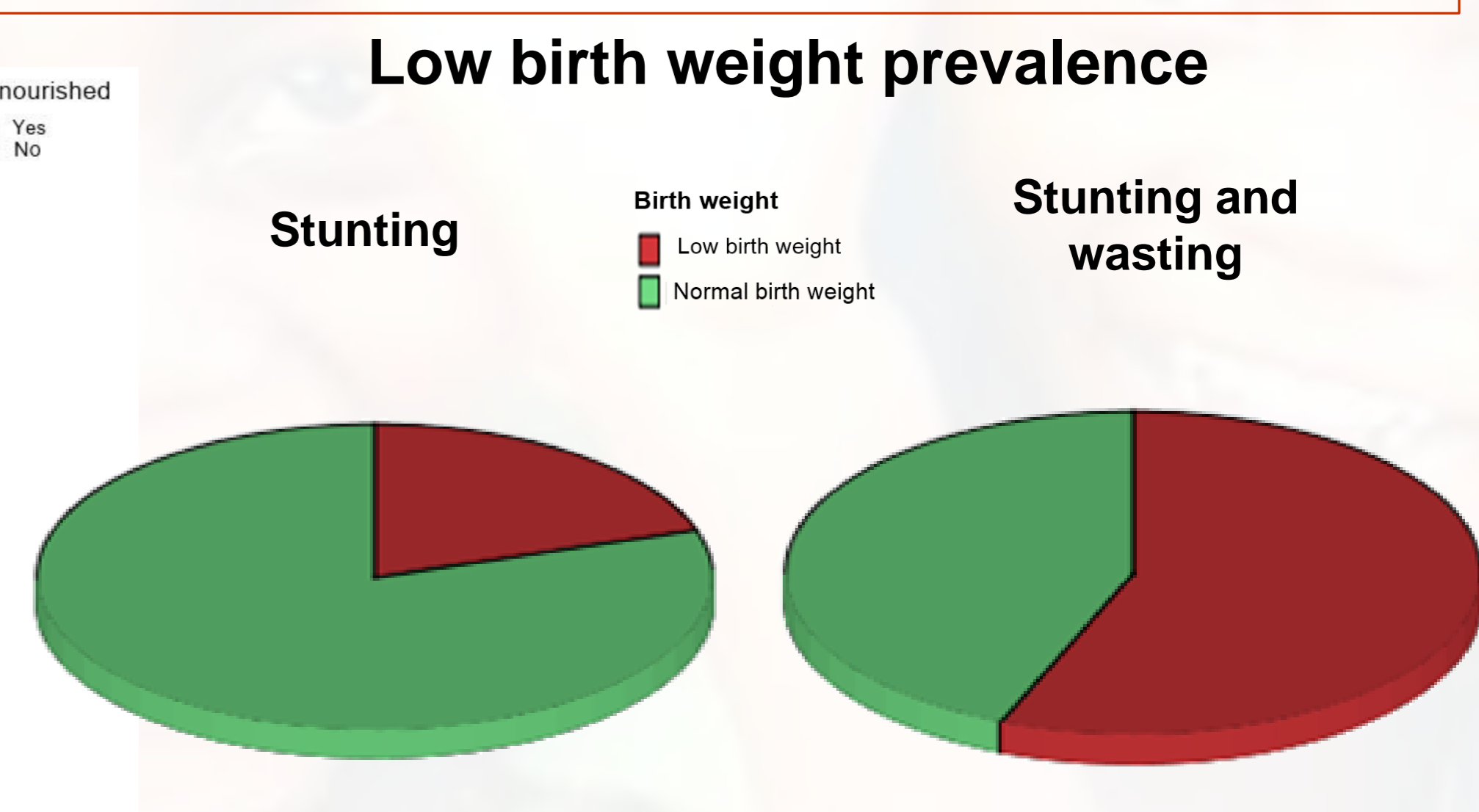
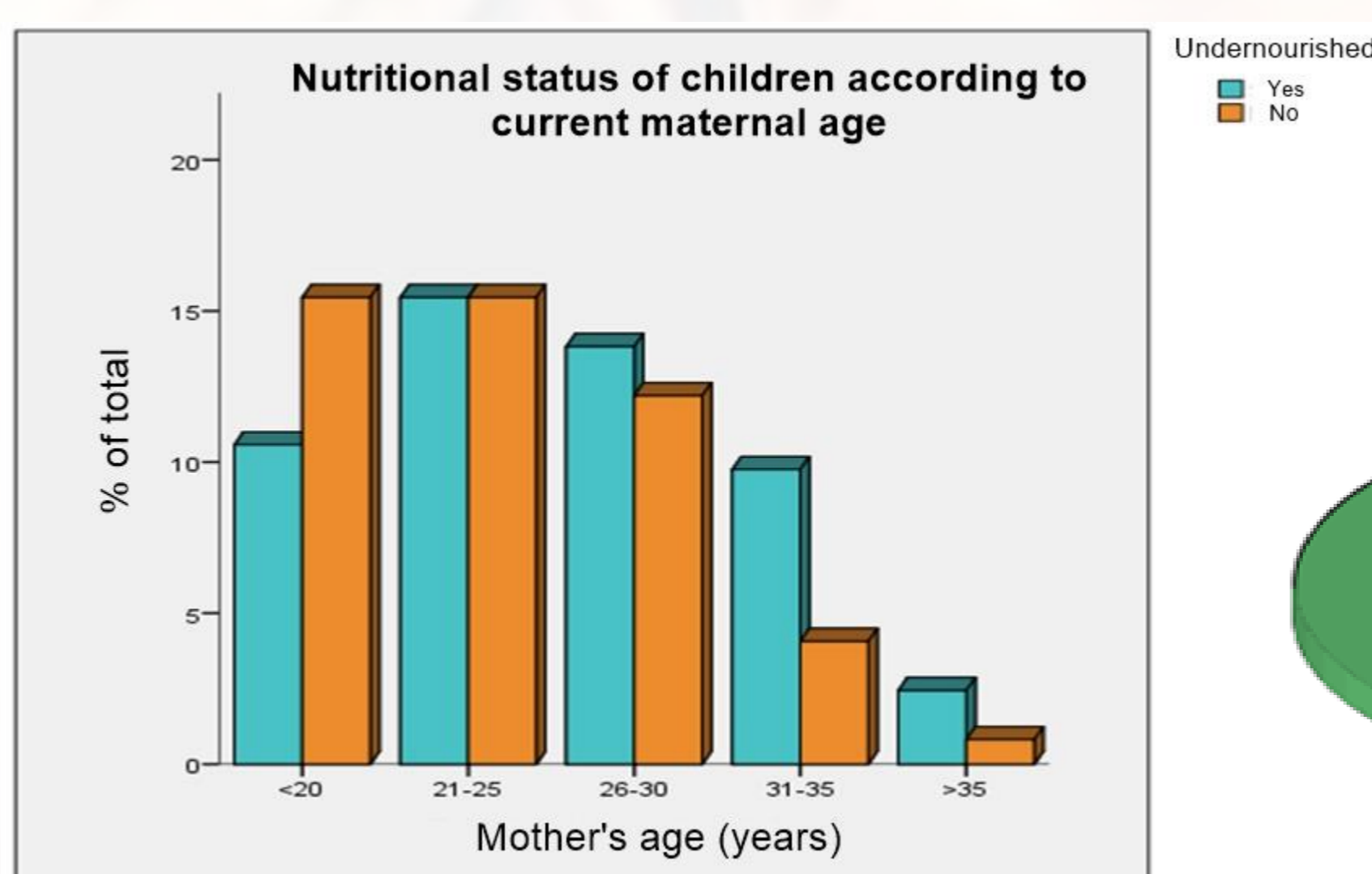
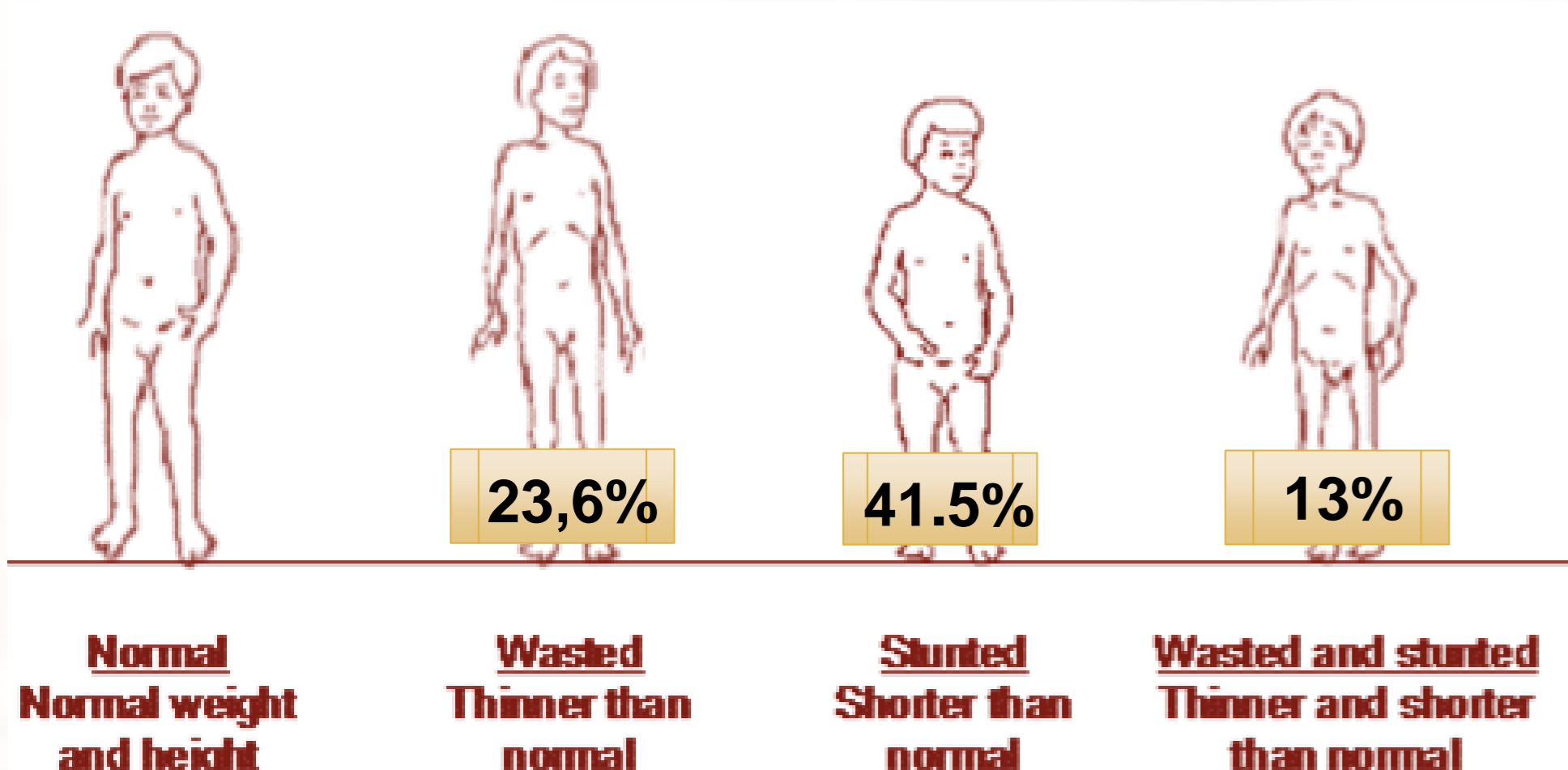
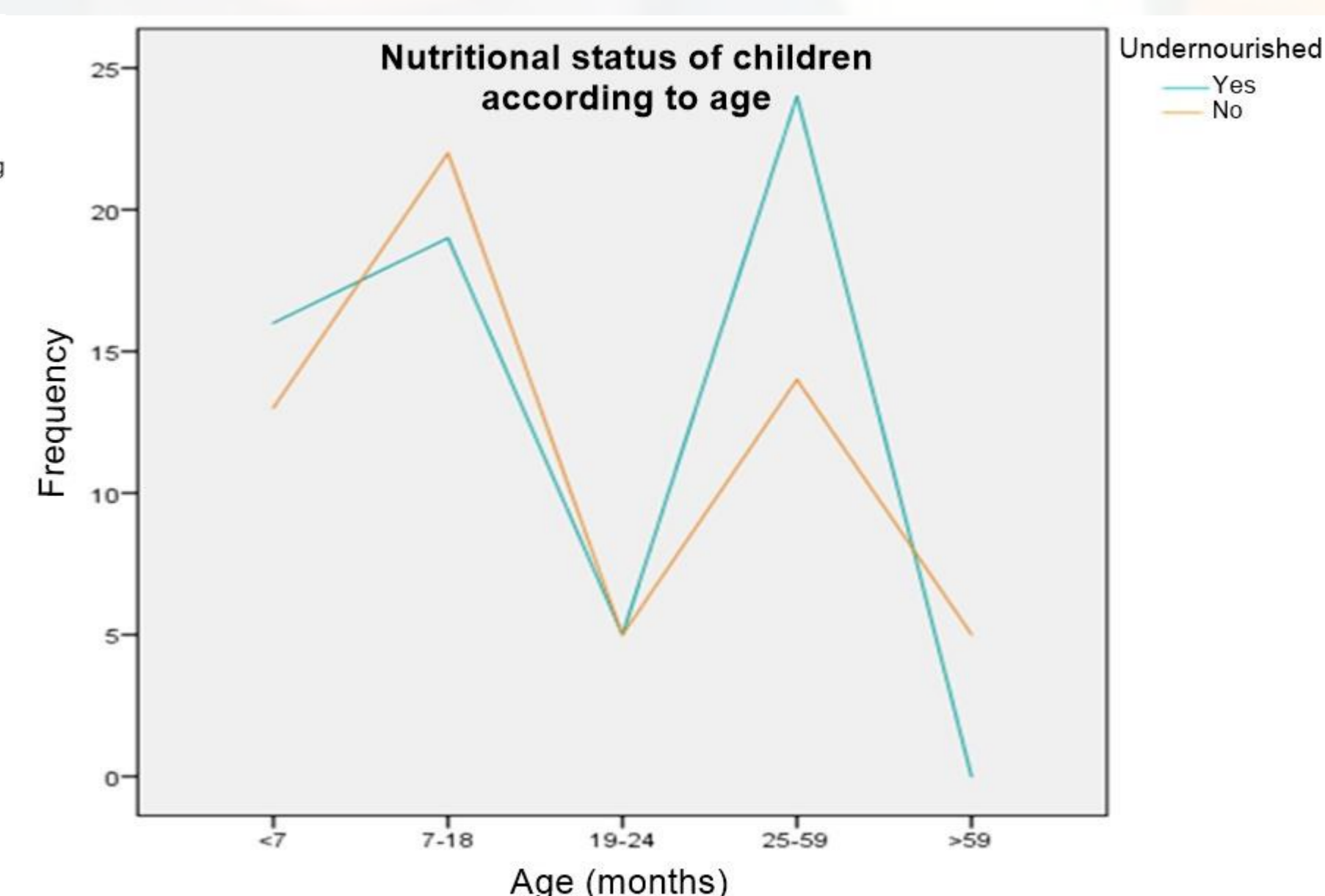
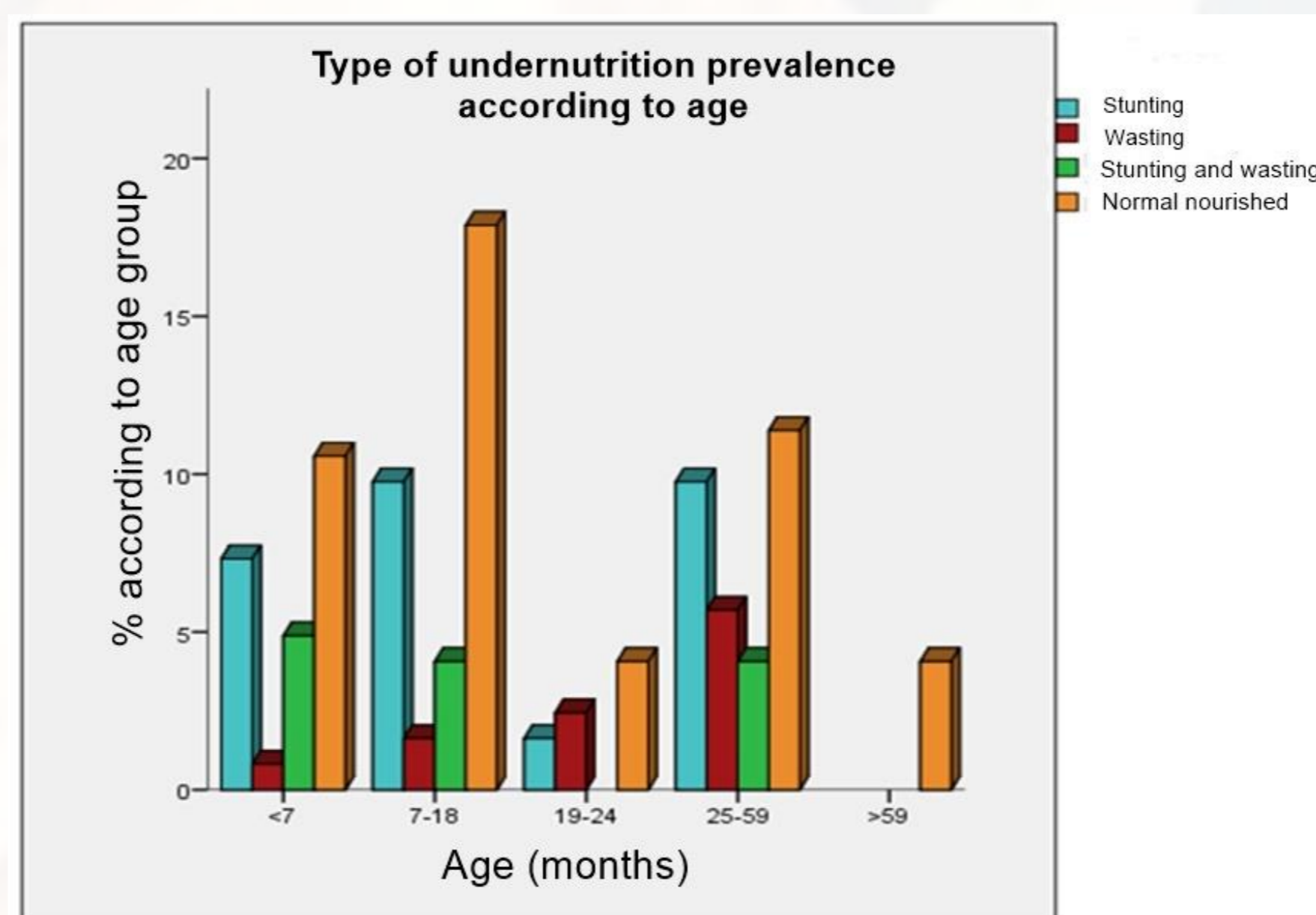
## RESULTS

Most of mothers were housewives (90.2 %), and had a mean number of living children of  $2.5 \pm 1.5$ . About the condition of malnourished children, they were statistically significant the fact that the mother is a housewife, current maternal age and age at pregnancy, but not age at first birth ( $p=0.06$ ), with a mean of  $18,8 \pm 3.1$  years.

In children whose households had no access to potable water the prevalence of malnutrition was 60 % versus 51.3 % in those who did have it, although it was not a statistically significant difference.

44.7 % of those children older than 12 months had received at least once, prophylactic treatment with mebendazole, which was statistically significant for the group of CM; and 91.5 % of those over 6 months Vitamin A supplementation, which was not.

About feeding practices, only two children started artificial feeding at birth, and breastfeeding duration was statistically significant in children between 6 and 17 months old for the group of chronic and chronic exacerbated malnutrition; and children older than 24 months only for the last group.



## REFERENCES

- UN. Programa de la Naciones Unidas para el Desarrollo. Informe sobre Desarrollo Humano 2015. [Internet] NY, Nueva York. 2015. Available in: [http://hdr.undp.org/sites/default/files/2015\\_human\\_development\\_report\\_overview\\_-\\_es.pdf](http://hdr.undp.org/sites/default/files/2015_human_development_report_overview_-_es.pdf)
- FAO Country Programming Framework. Within the UN Delivering as One –Mozambique 2012-2015 [Internet]. Maputo, Mozambique. 2015. Available in: <http://www.fao.org/3/a-au663e.pdf>
- IIFPRI. Global Nutrition Report. 2015 Nutrition Country Profile: Mozambique. [Internet] Rome, 2015. Available in: <https://www.ifpri.org/publication/nutrition-country-profile-mozambique>
- Instituto Nacional de Estatística. Ministério de Saúde. Inquérito Demográfico e de Saúde 2011. Maputo, Mozambique. March 2013.
- Instituto Nacional de Estatística. III Recenseamento geral da população e habitação 2007. Indicadores sócio-demográficos distritais-Provincia de Tete. Maputo, July 2012.

Background image: Africa Facts Copyright © 2016

## ACKNOWLEDGEMENTS

International Cooperation for Development University Center (CUCID)  
Spanish Agency for International Cooperation for Development (AECID)



Dr. Luis López Rivero  
Dra. Gloria González Azpeitia  
Fifth Year Medicine students of Zambeze University  
Dra. Loida María García Cruz  
Dr. Desiderio Reyes Suárez  
D. Jesús María González Martín

