

# Factors affecting the nutrition status of preterm children in Benin

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## Abstract

### Introduction

Malnutrition is a major cause of infant death in Sub-Saharan Africa, and children born prematurely are at high risk for death. This study aimed to evaluate the initial nutrition status and explore the factors affecting subsequent nutritional status of prematurely born children up to 5 years in Cotonou, Benin.

### Methods

Participants included 300 mother-child pairs who visited the University Hospital of Mother and Child Cotonou Lagoon for vaccinations. Mothers' were interviewed using a structured questionnaire and 260 subjects' gestational weeks at birth were confirmed referring the maternal and child handbook. Child height/length and weight measurements were determined and Z-scores were calculated using the World Health Organization Child Growth Standards 2006. Children with Z-score < -2 were identified as stunting or in the underweight category.

To determine the relation between malnutrition and each item on the questionnaire, participants were categorized into two groups: full-term and preterm birth based on the number of gestational weeks at birth. Analyses was performed using Student t-test and Fisher's exact test. Preterm children up to 1 year old were corrected for age.

### Results

Results indicated that 55 children (21.2%) were born prematurely. In the preterm birth group, 13 (23.6%) displayed stunting and 18 (32.7%) were categorized as underweight. Moreover, preterm children's malnutrition indicated negative association among birth weight  $\geq$  2500g, high mother's education level, and refrigerated storage of food.

### Conclusion

Previous studies have reported the relation between birth-weight and mother's education level. Refrigerated storage of food can be considered a function of an economic factor combined with mother's food hygiene behavior. In this study, children whose mothers stored food in the refrigerator

indicated significantly low malnutrition even when prematurely born. These findings suggest that mother's food hygiene behavior could play a pivotal role in deciding the nutritional status of the child after birth.

**keywords** : malnutrition、 child、 preterm birth、 food hygiene behavior