

Evaluation of Nutritional Deficiency in Post-Earthquake Haiti: Assessment of Stunting and Wasting Among School Children from Gressier

Asad Patwary

Abstract

Background

Haiti, a developing nation in the Caribbean, has been struck by several natural disasters. Recently tropical storms, hurricanes, and most notably the January 2010 earthquake a 7.0 magnitude earthquake killed over 220,000 people and left uncountable natural resources destroyed. Reported by BusinessWeek, about half of the children in Haiti are unvaccinated. Another study reported that 90% of the Haitian children suffer from waterborne diseases and intestinal parasites. Approximately 75% of the households do not have running water making it a perfect scenario for higher incidence of infectious diseases, especially among children.

Objectives

This study comparing the prevalence stunting and wasting among children from 4 schools in Gressier, Haiti to the global population average from the World Health Population (WHO). The outcome of the study will help to identify nutritional deficiency in Haitian children to aid in international efforts to contribute resources to assure the health of future generations of Haiti. As a result, the findings will be shared among other public health officials in Haiti such that similar studies to investigate growth/health condition among children can be conducted in other regions.

Methods

Anthropometric measurements were collected from the clinic in Gressier, Haiti from 4 schools: Lassale, Tibouka, Tikouzen and Jan Jan. Data collection included assignment of a unique identification number to patient records to collect de-identified student data of height, weight, age, and, sex in order to calculate height for age, weight for age, and body mass index, which were then normalized and compared to the WHO 2007 global averages. Growth curves with plus or minus 4 standard deviations were used to assess the prevalence of stunting and wasting in the study population.

Results

Based on the Z-score calculation (ages 5-19), only 5-6% students were stunted and wasted. The number was much better than expected as in 2010 the number of children in Haiti was reported to be stunted and wasted was 19%. There were no significance difference of stunting when compared between male and female students. Also the comparison between the 4 schools did not show any major difference in stunting or wasting rate.

Discussion

Study results showed that the number of students among 4 schools were not afflicted by significant growth related issues like stunting and wasting. However, a major limitation is that

these schools were on a feeding program funded by KORE foundation in Christianville, which supports the local families with fish farming and poultry farms. Despite the lack of a control group, which could be the topic of future study, this assessment indicates that the children are getting their necessary protein that they need for adequate growth. However, this could not be generalized for the entire country and similar study should be conducted in other schools to find exact condition of the children and make appropriate interventions needed.