

Prevalence of Malnutrition among Preschool Children in Northeast of Iran, A Result of a Population Based Study

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Received: December 24, 2012 Accepted: January 19, 2013 Online Published: January 23, 2013

doi:10.5539/gjhs.v5n2p208 URL: <http://dx.doi.org/10.5539/gjhs.v5n2p208>

Abstract

Introduction: Malnutrition in preschool children is a significant problem and has been identified by the World Health Organization (WHO) as the most lethal form of malnutrition, indirectly or directly causes an annual death of at least 5 million children worldwide. The object of this study was to estimate the rate of underweight, stunting and wasting among preschool children in northeast of Iran. **Methods:** A cross sectional population based study was conducted and 70339 children; 35792 males and 34547 females were recruited. The primary outcome variables were; weight, height, age and gender of the children. The sex and age specific rate and overall rate of underweight, stunting, and wasting were calculated. **Results:** The rate of underweight, stunting, and wasting were 7.5%, 12.5% and 4.4% respectively. There were significant differences in stunting and wasting rate between boys and girls. The overall rate of stunting was significantly higher than the overall rates of underweight and wasting. The rate of malnutrition increased with child's age. **Conclusion:** In compare to WHO criteria, the rate of malnutrition among this study population was low. According to the higher rate of stunting, the main goal of future research and interventions must be finding the causes of deficiency in height growth and improving it.

Keywords: malnutrition, under weight, stunting, wasting, age specific rate

1. Introduction

The rate of malnutrition among children is an index of development. It also represent the socio- economic status of populations. Annually 5 million children were died worldwide directly or indirectly due to malnutrition. So the World Health Organization identified that the children malnutrition is the most lethal form of malnutrition (Sarraf, Goldberg, Shahbazi, Arbuckle, & Salehi, 2005). The worldwide malnutrition estimation rates indicate that 35.8% of preschool children in developing countries are underweight, 42.7% are stunted, and 9.2% are wasted (Onis, 1993). The rate of children malnutrition in the west of Asia has been reported to be 19% (Galal, 2003). A Survey in 1995 in Iran has estimated rates of stunting, underweight and wasting nationally to be 18.9%, 15.7% and 6.6%, respectively (Ghassemi, Harrison, & Mohammad, 2002). Another research in our country has revealed that 15.4% of the children suffered from moderate to severe nutritional stunting. According to the weight for height index, 4.9% of the children had wasting. Moderate to severe underweight recorded in 10.9% of children according to weight for age index (Sayari, 2001).

These children are at high risk of mortality and morbidity, and may carry adverse health and mental consequences in their lives. Most of them live in poor societies, and with impaired physical and mental capacities. They are bound to enter a vicious cycle of poverty and malnutrition for generations to come (Alasfoor et al., 2007; World Health Organization [WHO], 1983).

The present study which uses the national survey's data conducted in 2004 in Iran, aimed to estimate malnutrition indicators in children aged under 5 years old in northeast of Iran. Also comparing these estimates with the same studies and in different age groups identified in the following.