



SCIENCE & SOCIETY

Perspectives on obesity, health and nutrition in developing countries

Sarah M. Maina and Mwangi M.

Biosciences Communications Unit, F.A.C.T. P.O. Box 967 Post Code 00217 Kenya

¹Corresponding author email: sarah@elewa.org; Tel. +254.710.873.341.

Introduction

As literacy levels increase around the world communities become more conscious of their health status as affected by food uptake, working habits and other lifestyle aspects. Obesity is a disease of complex, multiple causes leading to an imbalance between energy intake and output and to the accumulation of large amounts of body fat (Reynaldo, 2001). In a simple sense, obesity can be assessed by comparing weight to height of an individual. More specifically, the condition can be parametrically measured using the body mass index (BMI), considering weight in kilograms (kg) over height squared (m^2). By this scale the World Health Organization (WHO) describes individuals with between 25 - 29.9 kg/m^2 as overweight, while those with a BMI greater than 30.0 kg/m^2 are obese. As nations and their citizens prosper in more regions globally, the number of overweight or obese people has been noted to be on the increase. The affected individuals are not only likely to be less productive; they also add a strain on public health resources, since a majority needs some kind of medical attention.

Citation: Sarah M. Maina & Mwangi M., 2008. Perspectives on obesity, health and nutrition in developing countries. *Journal of Applied Biosciences* 1(2): 64 - 66.

In adults, obesity is linked to occurrence of various diseases, e.g. diabetes, hypertension, stroke, cardiovascular disease, and could also accelerate development of some cancers. In children, obesity is also a serious problem, and more importantly, it can be used as a predictor of adult obesity. It is estimated that about 30% of children that are obese in preschool turn out to be obese adults (Reynaldo, 2001). Much more critically, about 50% of children that are obese at school age turn out to be obese adults. However, it is not always the case that obese adults were also obese children. Obese children face an increased risk of hyperlipidemia, hypertension, and abnormal glucose tolerance, among other afflictions. In addition to general poor health, obesity can have psychosocial consequences, e.g. obese children can become frequent targets of systemic discrimination, leading to low esteem by the time they reach adolescence.

WHO has recently issued information on the alarming rates of obesity in both developed and developing countries. A recent study by Grummer-Strawn et al. (2000) has compared overweight and obesity rates in women from 38 developing countries with rates in the US. This study reported overweight and obesity rates were extremely low in South Asia and in poor countries of Sub-Saharan Africa. The study further noted that obesity levels were higher among urban and educated women.

An analysis of data on obesity in children aged 12 - 60 months from 50 countries found that the prevalence of obesity in the reference population is 2.3% with the exception of Pakistan, where 2.6% of children were obese. Child obesity was rare in South Asia (including India) and in Thailand. Children in Sub-Saharan Africa had low levels of obesity, except Malawi with 5.2%. In Latin

America and the Caribbean, as well as the Middle East and North Africa, children obesity exceeded 2.3% as compared to 3.1% in the USA. Other interesting findings of these studies are that obesity is more common in urban areas; and it is more prevalent in girls and in children of mothers with higher education. In individual countries, child obesity is usually positively related to gross national product, and as would be expected, it is negatively related to stunting.

The results of these studies, however, should be interpreted with caution since they are often based on inadequate data and data obtained using non-exhaustive methods. The reference population used in most studies that assess obesity in children is derived from measurements of US children, who may have higher than desired levels of fatness (Reynaldo, 2001). In addition, no consensus has been reached on how best to measure obesity in children. The seemingly imbalanced interpretation of weight for height indices in populations with significant levels of stunting has also been questioned. There is consensus, however, that a BMI over 30 in adults represents a serious clinical concern, which starts at the overweight range of BMI index (25 - 29.9).

Rather controversially, some countries with high levels of obesity also report significant rates of childhood stunting and nutritional deficiencies. This situation is likely to be more prevalent where income inequalities are high. In such scenarios, government should pursue policies that advocate maintenance of a dual nutrition agenda, preventing obesity and chronic diseases on the one side, while eliminating nutritional deficiencies on the other. For countries in Sub-Saharan Africa, this is a daunting challenge considering current resource limitations. The situation is further compounded by lack of information on the occurrence of obesity and related chronic diseases in the population, which means these issues escape notice as public health problems. As of now, many countries continue to focus on malnutrition.

Preventing obesity and associated health challenges

Obesity in developing countries appears to increase in tandem with increases in income and socioeconomic wellbeing. To effectively deal with

this condition, information systems need to be built to collect data to support advocacy activities and to help define policies and programs. The efforts should be tailored and driven in such a way to be inclusive and get buy-in from all sectors of society including school children, elderly women, and men. Care should be taken to avoid focusing only on women of reproductive age and young children.

Activities could include addressing nutrition and healthy lifestyles, possibly through school curriculum, and promoting physical activity in schools and in the general population. An apt example in this case is that of Singapore. There, a comprehensive 10 year program dubbed 'Trim and Fit scheme' was started in 1992 targeting education and training of teachers and students, reduction of sugar in children's beverages, and more physical activity for children during school. This program led to remarkable improvements in fitness and reduction of obesity. To enhance the success of such programs, urban planners could build recreational facilities, such as parks and playgrounds, walk or jogging lanes along highways as well as safe bicycle lanes. Aggressive public education programs should be carried out, similar to commercial advertisements, in promoting healthy diets and lifestyles.

Governments can also enact policies that stimulate consumption of healthy diets. Industries and food manufacturers can also play a significant role, e.g. by nutrition labeling, developing healthier food products, and in promoting public health and nutrition. A reward scheme could be designed to show recognition of commercially oriented enterprises that are also conscious of public health issues. In addition to these measures, agricultural research can help in developing nutritionally enriched and well balanced foods. Recent efforts to raise micronutrient levels through breeding of key crops grown in Sub-Saharan Africa, e.g. vitamin A, iron, Zinc, etc, will greatly help to address nutritional disorders. In the US livestock sector, for example, food processing modifications combined with changes in breeding, feeding and meat trimming practices have contributed to lower fat meat. In almost all developing countries, preventing obesity and the associated illnesses needs to be given more recognition as a priority of government and other development actors' intervention programs.

References

Grummer-Strawn L, Hughes M, Khan LK, Martorell R., 2000. Obesity in women from developing countries. *European Journal of Clinical Nutrition* 54: 247 – 252.

Reynaldo Martorell, 2001. In, 'The Unfinished Agenda'. Perspectives on overcoming hunger, poverty, and environmental degradation. Per Pinstrip-Andersen, Rajul Pandya-Lorch (Ed.). International Food Policy Research Institute, Washington, DC. Chapter 8: 49 – 53.