Asia

Nutrition transition in Bangladesh: is the country ready for this double burden

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Summary

Malnutrition has dominated Bangladesh development, encouraged by the Bangladesh Integrated Nutrition Programme under the first Sector-Wide Approach (SWAp) World Health Organization, and the United Nations Food and Agriculture Organization. To date, all the SWAps for health, nutrition and population well-being have identified malnutrition as a priority. Donors, United Nations organizations and non-governmental organizations provide extensive support to prevent and tackle malnutrition in the country. The government has delineated an effective policy response to the high prevalence of undernutrition. Bangladesh has a wide range of policies encouraging appropriate infant and young child feeding practices, 6 months of paid maternity leave in the public sector, school meals for vulnerable communities, micronutrient supplementation interventions and more. However, almost all of these efforts address the undernutrition aspect of malnutrition, neglecting the other form of malnutrition – overnutrition. Trend data from national surveys show steady increases in overweight and steady decreases in underweight among women of reproductive age. This paper sheds light on the trend data, showing the transition from under- to overnutrition and the double burden of malnutrition among Bangladeshi women of reproductive age. It also discusses the national policy and programme responses to overweight and obesity in Bangladesh among the same population.

Keywords: Bangladesh, nutrition, policy, strategy, transition.

Introduction

According to the World Health Report 2002 (1), obesity and overweight are among the 'top 10 risks to human health worldwide'. Because millions of people still suffer from undernutrition (2), the concept of millions suffering from overnutrition – overweight or obesity – is alien in many developing countries (3). In effect, this makes overnutrition one of the most visible yet neglected public health issues in the developing world, a potential crisis in countries where the double burden of under- and overnutrition exists. If immediate action is not taken, countless numbers of people will develop an array of serious, chronic and costly health disorders (4). Unlike undernutrition, overnutrition has multifaceted, clustered effects that result in disability and disease, which create significant burdens for families and the healthcare system (5). The experiences of developed countries clearly confirm that the costs of noncommunicable diseases (NCDs) associated with increasing overnutrition would be devastating for the healthcare systems in developing countries (6,7).

Regional evidence shows that the double burden of malnutrition (8,9) is present in Asia. India alone is home to one-third of the malnourished children of the world (10), and at the same time, almost one-half of the Indian adults living in urban areas are overweight or obese (11). Other
countries in this region, such as China (12) and Sri Lanka (13), are also experiencing nutritional, demographic, and socioeconomic transitions, including a shift in mortality and morbidity patterns in the last few decades (14). Recently in Bangladesh, malnutrition in the form of undernutrition has been one of the most talked about issues, marked by the presence of the global Scaling Up Nutrition initiative (15). Yet the issue of overnutrition remains a relatively low priority. This paper sheds light on both under- and overnutrition in Bangladesh and the country’s preparedness to tackle this silent epidemic.

Method

The data presented in this paper are the trend data from the Bangladesh Demographic and Health Survey (BDHS) from the last 10 years. The datasets of the national surveys were collected from Measure DHS of the U.S. Agency for International Development (USAID) and reanalysed using the Statistical Package for the Social Sciences (SPSS) 17 (SPSS Inc., Chicago, IL, USA). For this data reanalysis, the exact indicators, variables and cutoff points replicated the methods used by the BDHS. For the policy analysis portion of this paper, the authors collected information from all relevant national policies, strategies and plans of action to understand the country’s standpoint for tackling overnutrition. In analysing the policies, the authors used the criteria for policy evaluation cited by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) (16). In addition, the programme responses and fund allocations from donors, non-governmental organizations (NGOs), and the private sector, that is, the food and beverage and pharmaceutical industries, were also evaluated to assess the country’s preparedness in terms of programme design.

Nutrition transition in Bangladesh

The concern about Bangladesh bearing the double burden of undernutrition and overnutrition was voiced in 2006 at the eighth Commonwealth Congress on Diarrhoea and Malnutrition, where it was noted that the prevalence of overweight among poor urban women was quite high and almost double of that among rural women (17). After that conference, an original paper was published in the same year that included nationally representative data on reproductive age women from rural and urban Bangladesh. That paper showed the slow, but steadily increasing double burden of malnutrition (18). To understand the latest trends on this issue, we analysed the data from the BDHS covering the last 13 years.

According to the BDHS (19), in 2000, almost 45% of Bangladeshi women of reproductive age were suffering from undernutrition (body mass index [BMI] less than 18.5 kg m\(^{-2}\)). This dropped to 38% in 2004 (20), 30% in 2007 (21) and 24% in 2011 (22). This reduction indicates that between 2000 and 2011 there was a steady decrease in the number of chronically energy deficient or ‘thin’ and underweight women. However, among the same population from the same dataset, the prevalence of overweight (BMI equal to or more than 25 kg m\(^{-2}\)) increased from 5% in 2000 to 17% in 2011. The mean BMI increased from 20.2 in 2004 to 21.4 in 2011 (22), but the proportion of women who are overweight or obese almost doubled, increasing from 9% in 2004 to 17% in 2011. With this trend, it can be assumed that in the next BDHS, the proportions of the two faces of malnutrition will cross paths (Fig. 1).

Looking into the urban and rural distributions of the same population for the years 2007 and 2011, it has been observed that undernutrition in both urban and rural areas has decreased from 6.2 to 5.6%. At the same time overnutrition has increased from 3.9 to 4.7% in both urban and rural areas of Bangladesh among the same population (Fig. 2).

Unfortunately few nationally representative surveys provide data to examine the nutrition transition among Bangladeshi children. Currently around 40% of children younger than 5 years of age suffer from stunting, or chronic undernutrition (22). However, especially in urban areas, an increase in overweight among children is being observed (23). Unpublished data from a recent nationally representative survey (24) revealed that, of the children in urban areas of Bangladesh, 1 in 10 is overweight. This study also reports that among children aged 5-18 years there is a double burden of undernutrition and overnutrition. The findings show that the children are not involved in rigorous
physical activities. Because this study focused on urban children, at this stage it is not possible to evaluate the rates among rural children. However, the urban data alone substantiate that overnutrition is a particular public health concern for the nation, as overweight or obese children have a high risk of becoming overweight or obese adults (25,26).

The multisectoral response for tackling this epidemic

Like other developing countries, Bangladesh requires a multisectoral response to tackle health and development issues. The country has developed a national policy and health programmes funded through the government’s revenue allocations, and it also receives donor support. In addition there is a strong NGO-led health service delivery system across the country. Recently, the private sector has taken a keen interest in the health and development sectors with various directions. This section of the paper looks at different sectors’ responses to ‘nutrition’. As mentioned earlier, the governmental, donor and private sector components were analysed using the evaluation framework of the policy formulation and implementation process of the UNESCAP (Fig. 3).

We analysed 17 relevant national policies and 10 strategy and partnership papers from the main donors and UN bodies. Then we analysed both public- and private-sector programmes according to design and allocation of funds. Lastly, we analysed activities and initiatives of NGOs and the private sector, including the food and beverage industries and the pharmaceutical industries. The details of this analysis follow.

Policy responses

The National Strategy for Accelerated Poverty Reduction II (27) directs all Bangladesh policies focused on poverty reduction, including the issues of nutrition and undernutrition. It outlines programmes to address both of these issues; however, overnutrition is not mentioned in this vital policy document. A similar situation is observed in the country’s 65-year plan (28). The National Health Policy (29) identifies undernutrition as an issue and includes programme planning, but no programmes are identified to address overnutrition. The present National Plan of Action for Nutrition (30), formulated in 1997, also focuses on undernutrition, but this document is under revision, and the updated version does address overnutrition (Director of the National Nutrition Services, Unpublished). One of the most important documents for multisectoral involvement in nutrition actions, the Country Investment Plan: A Road Map Towards Investment in Agriculture, Food Security, and Nutrition, includes plans to address both under- and overnutrition, thereby providing the missing investment (31). The Bangladesh National Strategy for Maternal Health (32), the National Child Policy (33), the National Health Research Strategy (34), and the draft National Urban Sector Policy (35), however, do not mention actions on overnutrition. The Drug Policy (36), the Land Transport Policy (37), and the Population Policy (38) have indirect effects on health and nutrition, yet nothing concerning these issues is present in those documents.

Appropriate infant and young child feeding (IYCF) practices (39) can reduce the risk of developing obesity in later
life, so we examined the existing IYCF trends (40), policies and strategies. Three different action plans focus on IYCF issues in the country (41), which saw an increase of almost 20% (40) in the rate of exclusive breastfeeding between 2007 and 2011. However, a recent IYCF analysis (42) of 40 countries reports that Bangladesh’s score in the World Breast-feeding Trends Initiative decreased from 90 in 2005 to 87 in 2008.

The only strategies that significantly discuss overnutrition as a development challenge are the National Urban Health Strategy 2011 (43) and the Strategic Plan for Surveillance and Prevention of NCDs in Bangladesh (44). The former document identifies the issue in urban areas and outlines programme initiatives. The latter, the only national strategy that focuses entirely on NCDs and their risk factors, outlines the problem clearly, but is lacking in many other aspects (Fig. 4).

Donor, development partner and UN responses
The health, nutrition and population sectors of Bangladesh receive substantial support from major donors, development partners and UN organizations. Therefore we examined the responses of these entities and found that, except for the World Health Organization (WHO) (45), none focuses on overnutrition. The WHO pays specific attention to chronic NCDs and thus includes obesity and overnutrition as risk factors for developing NCDs. The WHO initiative reformulated and updated the national NCD strategy and the NCD Control (NCDC) unit under the Ministry of Health.

Most donor support comes through USAID (46) and the World Bank (47), and both organizations have programmes that address undernutrition in mothers and children. USAID supports the mothers and children of Bangladesh through its flagship programme Feed the Future (48) and the World Bank through Sector-Wide Approaches (SWAs). Similarly, the United Kingdom’s Department for International Development (49), the Canadian International Development Agency (50), the United Nations Food and Agriculture Organization (51), the United Nations Children’s Fund (UNICEF) (46) and the World Food Program (52) provide funding to alleviate undernutrition in mothers and children. The Asian Development Bank (53) and the Swedish International Development Cooperation Agency (54) support health service delivery, but none of the nutritional problems in Bangladesh.

SWA and programme responses
The most recent SWA in Bangladesh, the Health Population Nutrition Sector Development Program (HPNSDP), draws on the original SWA, the Health Population Sector Programme (HPSP; 1998–2003). The second SWA, the Health, Nutrition and Population Sector Programme (HNPSP), was implemented from 2003 to 2011. The HNPSDP began in July 2011 and will continue through June 2016. This programme’s strategic implementation document is the centerpiece of all health-related activities in the country, and fortunately it recognizes overnutrition and obesity as development...
challenges. The programme trains front line fieldworkers on NCD prevention aimed at early intervention to address obesity and its risk factors. However, this training programme amalgamates all NCD-related risk factors, including tobacco use, diabetes, heart disease, hypertension, cancer screening and others, with funding allocated at 499 million Bangladeshi takas (BDTs) over 5 years (55).

The HPNSDP is being implemented under the NCD Operational Plan (OP) (56), which also directs the Project Implementation Plan and the amalgamated training in prevention of NCD risk factors. The eight components of the OP, for which 380 million BDTs have been allocated, cover all conventional and nonconventional NCDs. However, we found no specific activities for obesity prevention. Nevertheless, the OP of the National Nutrition Services (NNS) (57) has identified obesity as an emerging problem in Bangladesh. That organization plans to publish diets that, with exercise, can keep a person’s weight under control while enjoying a healthy and active lifestyle. This OP has allocated 273 million BDTs for NCDs and emergency nutrition programmes together. However, neither the NNS nor the NCDC has implemented any of the planned activities (58). Although this nutrition transition is happening among women of reproductive age and among children, none of the other relevant OPs – Health Education and Promotion (59); Information, Education, and Communication (60); Maternal Neonatal Child and Adolescent Health (61) – addresses obesity or overnutrition.

Private sector and NGO responses

Many national and international NGOs implement nutrition-related activities through their nationwide networks, but in almost all cases they only cover the undernutrition issues of mothers and children (62,63). The Centre for Control of Chronic Diseases in Bangladeshis, housed in the International Centre for Diarrhoeal Disease Research, conducted an initial assessment of current chronic disease programmes throughout the country (64). It also collaborates with UnitedHealth and the National Heart, Lung, and Blood Institute of the U.S. National Institutes of Health as a Center of Excellence (65). Eminence, a national NGO, provides community-based activities through its NCD Prevention Program and counseling to support cardiac patients in body-weight management (66).

The private sector has recently shown interest in the country’s nutrition through a corporate social responsibilities approach and has partnered with NGOs to improve the health outcomes of the mothers and children living in vulnerable communities (67–69). The Bangladesh office of one of the largest food and beverage companies has provided stipends to students studying nutritional science at a university of Dhaka (70).

The way forward

Studies show that the burden of overnutrition is rising alarmingly in Bangladesh. This nationally representative evidence indicates the presence of both under- and overnutrition within the same populations. However, undernutrition is declining, and addressing overnutrition is equally if not more important, as the risks associated with overnutrition are much more costly (71).

Regrettably, the current Bangladeshi public health response to malnutrition is still primarily restricted to undernutrition. It is urgent that the public health policies begin to concurrently deal with both sides of malnutrition. This paper has identified a few responses to overnutrition. However, such isolated efforts might provide only sporadic successes. All stakeholders must recognize that the country is facing a double burden and not only among adults.

The call of the hour is an integrated public health response to this double burden with a life cycle approach. This integrated response requires vigilant implementation of strategies and interventions and a holistic, interdisciplinary approach involving the resources of health, women, child development, nutrition, education, agriculture, food processing, trade, architecture, water supply and sanitation. The community must be at the center, and it is imperative to involve civil society organizations and NGOs. The stakeholders need to keep in mind that only focusing on one aspect of malnutrition will result in further catastrophe and might unintentionally escalate the other. In urban areas, workplace-based and school-based interventions might prove beneficial, but for Bangladesh dietary diversification and changes might be appropriate. Cost-effective strategies that could result in health gains include (i) taxes on unhealthy foods and subsidies on healthy foods; (ii) strong regulatory and effective monitoring measures that restrict marketing of unhealthy foods, especially those targeting children; and (iii) effective implementation of the existing policies and strategies (72).

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Conflicts of interest

None.

References


