7.3 CURRENT ISSUES AND CHALLENGES IN FOOD AND NUTRITION IN SOUTH EAST ASIA

E-SIONG TEE*

INTRODUCTION

Southeast Asia has witnessed tremendous socio-economic developments over the past thirty years, bringing about significant changes in the lifestyles of communities, including food consumption patterns. There has therefore been a significant change in the food and nutrition issues facing countries in the region. Most countries reported marked declines in morbidity and mortality and decreases in nutrient deficiencies, although the extent of the undernutrition problem is still large. Of growing concern is that significant proportions of the population are now faced with the other facet of the malnutrition problem, the diet-related chronic diseases such as obesity, diabetes, cardiovascular diseases, hypertension and certain cancers. Because of the different stages of development, the extent of the under and overnutrition problems varies considerably between the different countries in the region. This paper summarises some data available on the nutritional status of communities in the region and highlights the challenges faced in ensuring that intervention programmes are effectively implemented and the acquired knowledge is translated into healthy eating practices.

In recent years, various food and nutrition products have been promoted to improve health and nutritional well-being and be beneficial against diet related chronic diseases. These include dietary supplements and a whole host of healthier food alternatives, including functional foods. The paper also discusses various aspects related to these products including sales and marketing, nutrition labelling and claims, advertisement, impact on the dietary pattern of communities and regulatory control.

UNDERNUTRITION : A HUGE AND PERSISTENT PROBLEM

In spite of the economic advances in the region for the past thirty years, the problem of undernutrition, including underweight and stunting, remains a significant problem amongst many Southeast Asian communities. Micronutrient deficiencies, especially those that result in iron deficiency anaemia, iodine deficiency disorders, and vitamin A deficiency disorders, afflict large population groups, especially young children.

Asia has the greater share of the malnutrition problem, where the number of malnourished children is huge. In 1980 there were 173 million stunted pre-school children in the region, constituting more than three-quarters (78.3%) of the stunted children in all developing countries. In 2000, this total declined to 128 million, but Asia still had two-thirds (70%) of the developing countries' stunted pre-school children. Out of this total, about 15% of the stunted pre-school children were in Southeast Asia. In absolute numbers, there were 28 million stunted pre-school children in 1980 in this sub-region and this declined to 19% in 2000[1].

In 1980, 52% of Asian pre-school children were estimated to be stunted—the highest rate of any region in the world. This figure has steadily declined, and in 2000, 34% of Asian pre-school children were stunted. The rates for Southeast Asia are not too different from these

*President, Nutrition Society of Malaysia, c/o Div Human Nutrition, Institute for Medical Research, 50588 Kuala Lumpur, Malaysia

figures: 52% in 1980 and 32.8% in 2000[1,2]. Recent data from national and sub-national surveys in some countries in this sub-region showed that the prevalence of stunting among pre-school children ranged from 28% in rural Malaysia[3] to 32% in the Philippines[4] and close to 40% for Vietnam[5] and Laos[6].

A similar picture is presented for underweight pre-school children in the region. A total of 146 million pre-school children were estimated to be underweight in Asia in 1980, making up 83% of underweight children in all developing countries. This number declined steadily such that by the year 2000, the total number of underweight pre-school children was 108 million, a decline of up to 26% . Out of this total in Asia, 23 million pre-school children were in Southeast Asia in 1985, and this declined to 16.7 million in 2000, a drop of 27%[2].

With regard to prevalence of underweight, 43.9% of the pre-school children in Asia were underweight in 1985. The rate in Southeast Asia, 43.5%, was lower than the 58.1% for South Central Asia. These rates declined to 29% for Asia in 2000 and 28.9% for Southeast Asia. Individual sub-national and national nutrition surveys in the region showed higher prevalences: 31% in Philippines, 34% in rural Malaysia, 36.7% in Vietnam, and about 40% in Laos[6].

Iron deficiency anaemia also affects large numbers of Asians. Among pre-school children, anaemia prevalence is reported to be highest in Africa and Asia. In Asia, the most affected sub-region is South Central Asia, where the prevalence can be as high as 60%. Among pregnant women, Africa and Asia again have the highest prevalence of anaemia. In Asia, anaemia prevalences are as high as 75% in South Central Asia. Among school-age children, the prevalence of anaemia is highest in Southeast Asia, where as many as 60% of children may be affected[2].

Huge numbers are similarly affected by iodine deficiency disorders in Asia. In the Southeast Asian region alone, nine countries have been recognized as having iodine deficiency disorders as a public health problem. A total of 172 million people in Southeast Asia, or 12% of the population, are affected by goitre, and another 41% are at risk for the disorder. Vitamin A deficiency, too, remains a problem of immense magnitude although data are not available to make good estimates of the extent of the problem[2]. It is clear, however, that subclinical vitamin A deficiency in Asia should not be ignored.

As the extent of the undernutrition problem remains huge, it is vital that actions be undertaken to tackle undernutrition-related issues. More thought should be given to implementing programmes and activities relevant to local communities. Food fortification, supplementation in some cases, and efforts to increase food availability have all been tried in Asia with varying success. Nutrition education efforts have been going on in the region for three decades. Other factors related to malnutrition should be tackled at the same time, specifically environmental sanitation. The importance of infection should not be neglected.

OVERNUTRITION : AN EMERGING PROBLEM

Dramatic socio-economic developments over the past thirty years have brought about increased nutrient availability in many countries in the region as well as improved health facilities. There have also been marked changes in the sources of nutrients and the composition of diets. Cereal consumption decreased in most countries, except in the low-income countries, where average consumption has remained more or less stable. There have also been increases in the percentage energy from fat, and there has been an increased consumption of added fats in most countries. The most affluent countries show an increase in vegetable and fruit

consumption. Meat consumption (and thus the consumption of saturated animal fat) increased markedly in some countries. Milk and dairy product consumption increased in only a few countries[7].

There have also been other changes in dietary behaviour. More families eat out, and the consumption of fried foods is increasing. Overeating is a concern among some population groups. Other significant lifestyle changes have also taken place, including decreased physical activity, even in rural areas.

The combined effect of these changes in lifestyle behaviour is resulting in a significant change in the food and nutrition issues facing Asian countries. Of growing concern are the significant proportions of the population now faced with the other facet of the malnutrition problem: the chronic diseases associated with overnutrition. The increased prominence of these diseases is evident in the mortality and epidemiologic data, which vary markedly among countries in the region. These new dimensions in the nutrition situation in developing countries pose great challenges to nutritionists and other health workers.

OVERWEIGHT AND OBESITY AMONG CHILDREN

There is sufficient data to indicate that there is an emerging problem of overweight among children in the region. Estimates of overweight by WHO among pre-school children in Asia in 1995 was 2.9%, with a higher prevalence of 4.3% in Eastern Asia and 2.4% in Southeast Asia[8]. A total of 17.6 million pre-school children in all developing countries were considered overweight. Of this total, 61% or 10.6 million were in Asia and 1.3 million of these were in Southeast Asia.

Data extracted from selected studies in individual Southeast Asian countries show much higher prevalences. A 1997 national survey of children under 5 years of age in Brunei Darussalam showed a high prevalence of overweight ranging from 7.7 to 10.2% in different parts of the country and averaging 9.1% for the whole country[9]. In a study of almost 6,000 primary school children (7-10 years old) in almost all schools in Kuala Lumpur, the prevalence of overweight was observed to be 8.4%, with the prevalence among boys almost 1.4 times that among the girls[10].

In the 4th National Nutrition Survey 1995 of Thailand[11], the prevalence of overweight among children 0-5 years of age was reported to be 17.6%, whereas 5.4% of the children were reported to be obese. In the 6-14 age group, the prevalence of overweight and obesity were both lower (10.0% and 5.2% respectively). It is to be noted that direct comparison of these prevalence rates with reports from other countries should be done with caution as this report had used different criteria for classifying overweight and obesity and had also used the Thai growth reference.

In several other developing countries in the region, the prevalence is probably very low. Survey data from Vietnam[5], Laos[12]and the Philippines reported prevalences of <1% among children[13].

ADULT OVERWEIGHT AND OBESITY

The problem of increasing overweight and obesity among adults in Southeast Asia has been highlighted for more than a decade. As in the case of children, the database on the extent of the problem is far from comprehensive, but various studies point to the severity of the problem. In the studies cited below, unless otherwise mentioned, overweight refers to BMI [expressed in kg/m^2] between 25.0 to 29.9 and obesity is BMI >30.

In Malaysia, the National Morbidity Survey of 1996 reported an overall nationwide prevalence of overweight among adults of 20.7% and of obesity of 5.8%. There was a slightly higher prevalence of overweight among women whereas the problem of obesity among women (7.2%) was twice that of men (3.8%). Among urban adults, isolated studies have reported higher prevalences of around 29% for overweight and 12% for obesity[14]. High prevalences of 19.8% overweight among men and 28% among women have also been reported for selected rural population groups in a study in the mid-1990s[13]. The prevalence of obesity among men and women was 4.2% and 11.1% respectively. The combined prevalence of overweight and obesity (body mass index >25) in Malaysia probably ranged from 26% to 53%, with an overall mean of 39%[15].

In a study of a small number of urban subjects in twelve Asian cities, the prevalence of overweight and obesity (BMI >25) was found to be high (more than 23%) in five of them: Beijing, Hong Kong, Kuala Lumpur, Manila, and Bangkok. It was also noted that the most affluent societies in the study, for example, Seoul and Tokyo, did not have the highest prevalence of overweight[16].

The 1998 National Health Survey of Singapore reported similar prevalences of 24.4% for overweight and 6% for obesity, with considerable variation among the three major ethnic groups. The prevalence of overweight was higher among the men, whereas there was a slightly higher proportion of obese women[17]. The report also pointed out that the prevalence of obesity in the Republic in the 1992 survey six years ago was very similar, at 5.1%.

The prevalence of overweight ranged from 12.1% amongst elderly subjects to 40.2% among adults 40-49 years of age, according to the 1995 National Survey of Thailand[11]. The mean national average was 26.1%. It is to be noted that these data are for BMI >25.0, and the prevalence of obesity was not separately reported. Prevalences of overweight for women of all age groups were higher than that for the men. Prevalences among urban dwellers were generally higher than those among rural subjects, but the problem was also rather high among the latter group, with a national average of 25.1%.

The severity of the problem appears to be less in the Philippines. Results from the 5th Philippines National Survey of 1998 showed that the prevalence of overweight was 16.9% and that of obesity, 3.3%. Both overweight and obesity were higher among women[18]. The combined prevalence of BMI >25 in 20.2% of the population for the 1998 survey was observed to be 3.6% higher than that of the 4th National Survey (1993) of 16.6%.

It is imperative that the problems associated with diet-related chronic diseases be identified and recognized early enough for firm action to be taken immediately. It is indeed a challenge for governments to formulate intervention programmes to tackle both facets of the malnutrition problem. Several governments in Asia have carried out interventions focusing on healthier lifestyles, including healthy eating. Some communities are earnestly seeking ways to achieve healthy eating, including healthier food alternatives and health supplements, whereas others are not. The extent of the diseases is certainly not decreasing. Thus, what works and what does not, and what works where, are going to be important questions to answer.

THE "NEW" FOOD SCENARIO

In recent years, various food and nutrition products have been promoted to improve health and nutritional well-being and be beneficial against diet- related chronic diseases. These include dietary supplements and a whole host of healthier food alternatives, including functional foods.

Consumers in the Southeast Asian region are now more health conscious and there is generally greater awareness of the importance of nutrition in overall well-being. In recent years, many consumers also rely on a variety of dietary supplements to improve their health. These supplements (sometimes referred to as "health foods") comprise a diverse group of products. Vitamins, both single vitamin and multivitamin preparations, make up the major category of dietary supplements. But sale of herbals and botanicals have increased rapidly in recent years. These products are now freely available through myriad outlets including direct sale. The personnel involved in the sale of dietary supplements through some of these channels have no formal qualification in nutrition and have superficial knowledge about dietary supplements.

Benefits to be derived from supplements vary a great deal among various products and many of these effects are ill-defined. Much of the current evidence for dietary supplements lacks well-designed clinical trials. Some of the products have evidence from animal studies or experimental *in vitro* laboratory studies. The proliferation of such products is expected to continue and even increase in countries in the region. The potential for misuse by and confusion to the consumer is therefore very real. It is therefore extremely important for appropriate regulatory measures to be in place to regulate the sale and marketing of dietary supplements in the country[19].

Foods are traditionally recognized as providing essential nutrients for nourishing the human body. The content of these nutrients varies greatly amongst the various foods and every person is encouraged to eat a variety of foods to meet his nutritional needs. In recent years, a great deal of attention has been given to components other than nutrients that are found in foods. A great deal of research has been undertaken on the potential health significance of these components. Foods containing such components may be termed "functional foods". There is as yet no unanimously accepted definition of functional foods globally although several definitions have been proposed. Nevertheless, it has been generally agreed that functional foods are defined as foods that, by virtue of physiologically active food components, provide health benefits beyond basic nutrition. This would include fruits and vegetables such as mangoes, carrot and tomatoes. Scientific evidence supporting health benefits of functional foods varies greatly. For some of these foods, the evidence is limited, incomplete or unsubstantiated whilst for others, there are more concrete data available.

There is an urgent need for the region to look into various aspects related to these products including sales and marketing, nutrition labelling and claims, advertisement, impact on the dietary pattern of communities and regulatory control.

Countries in the region will continue to strive for economic progress which will, in turn, continue to be accompanied by lifestyle changes. It is therefore of the utmost importance to continue to monitor nutritional status. Systems to periodically collect data on nutritional status and dietary intakes should be in place in all countries. Indeed, comprehensive data specific to the communities concerned should be made available through systematic research programmes to permit the formulation and effective implementation of intervention programs in developing countries. All countries in the region need to develop a national plan of action for nutrition, jointly formulated and implemented by all of the relevant sectors, including food, health, and education. Such plans should be periodically reviewed.

The challenges in implementation of nutrition intervention programmes have become even greater in recent years. The over-dependence of the consumer on nutrient supplements, the belief in quick solutions to health problems and magic-bullets is to prevent and treat

chronic diseases is becoming even more worrying. The consumer now has access to a great deal of nutrition information (and often times nutrition misinformation as well) through a variety of media. Effective nutrition education remains a challenge to nutritionists, with the continuous search for better strategies and approaches. The challenge is to be equipped to implement the nutrition education programmes.

There is a need for closer collaboration between countries in the region in all nutrition activities. In view of the limited resources available to these countries, it would be beneficial to share resources, and experiences and learn from the mistakes of others. There should be strengthening of regional nutrition networks, for example through WHO, FAO and the ILSI (Southeast Asia Region). Such networking would then enhance efforts in harmonisation of approaches in nutrition activities in the region. Current efforts include harmonisation of recommended dietary allowances (RDA), nutritional status assessment methodologies, dietary guidelines and nutrition labelling and claims.

REFERENCES

1. de Onis, M, Frongillo, EA, Blossner, M (2000). Is Malnutrition Declining? An Analysis of Changes in Levels of Child Malnutrition since 1980. *Bull World Health Organ* 78(10):1222–1233.
2. ACC/SCN (2000). 4th Report on the World Nutrition Situation: Nutrition throughout the Life Cycle. United Nations Administrative Committee on Coordination/Sub-Committee on Nutrition, Geneva.
3. Khor GL, Azmi MY, Tee ES, Kandiah, M and Huang MSL (1999). Prevalence of overweight among Malaysian adults from rural communities. *Asia Pacific Journal of Clinical Nutrition* 8(4): 272-279.
4. Lana RD, Villavieja GM and Cerdeña CM (2001). A comparison of the nutritional status of 0-59 month-old Filipino children using Philippine and international reference standards. *Philippines Journal of Nutrition* 48(3&4): 117-130.
5. Ha Huy Khoi, Nguyen Cong Khan, Le Danh Tuyen, Tu Ngu, Tran Thi Xuan (2000). *Vietnam Child Nutrition Situation*. Medical Publishing House, Hanoi, Vietnam.
6. MOH Laos (2001). Report on National Health Survey: Health Status of the People in Lao PDR. Ministry of Health, *Lao PDR*; pp 72-90.
7. WCRF/AICR (1997). Patterns of diet and cancer. In: *Food, Nutrition and the Prevention of Cancer: a Global Perspective*. Banta Book Group, Menasha, WI, World Cancer Research Fund/American Institute for Cancer Research; pp 20–52.
8. de Onis, M and Blossner, M (2000). Prevalence and Trends of Overweight among Preschool Children in Developing Countries. *American Journal of Clinical Nutrition* 72:1032-1039.
9. MOH Brunei (1999). Nutritional status of children under five years old and pregnant women in Brunei Darussalam. Report of the Ministry of Health Brunei Darussalam.
10. Tee ES, Khor SC, Ooi HE, Young SI, Zakiyah O, Zulkafli H (2002). Regional study of nutritional status of urban primary school children. 3. Kuala Lumpur, Malaysia. *Food and Nutrition Bulletin* 33(1):41-47.
11. MPH Thailand (1995). The Fourth National Nutrition Survey of Thailand 1995. Department of Health, Ministry of Public Health, Thailand.
12. Phimmasone K, Akkhavong S, Oudom M, Fauveau V, Depaepe A and Pholsena P (1994). Women and children in the Lao DPR. Results from the Lao Social Indicator Survey. Mother and Child Health Institute, Ministry of Public Health, Lao PDR.
13. Barba CVC (2002). Compilation of national nutrition surveys in the Philippines comprising data from the 1989-90 update, 1992 update, 4th National Survey in 1993, 1996 update and the 1998 update. Food and Nutrition Research Institute, Manila, Philippines.
14. Lim TO, Goh BL, Zaki M, Suleiman AB, Fatimah S, Siti S, Tahir A, Maimunah AH (2000). Distribution of body weight, height and body mass index in a national sample of Malaysian adults. *Med J Mal* 55:108-128.
15. Tee ES (1999). Nutrition of Malaysians: where are we heading? *Malays J Nutr* 5(1&2):87–109.
16. Sakamoto M, Ishii S, Kashiwazaki H, Chiu PC, Chen CM, Chang NS, Leung SF, Rabuco LB, Tee ES, Winarno FG, Tontisirin K, Howden J, Saldanha LG (1997). A collaborative study of nutritional knowledge, attitude and food practices among urban adults in the Asian region. In: 2nd International Workshop on Nutritional Problems and Strategies in the Asian Region, 29–30 September, Kuala Lumpur.
17. MOH Singapore (1999). National Health Survey 1998, Singapore. Epidemiology and Disease Control Department, Ministry of Health, Singapore.
18. Villavieja GM, Constantino AS, Laña RD, Nones CA, España N, Pine CR (2001). Anthropometric assessment of adolescents, adults, pregnant and lactating women: Philippines, 1998. Reports of the Fifth National Nutrition Survey, 1998. *Philippines Journal of Nutrition* 48(1&2):15-27
19. Tee ES (2001). Dietary supplements from a nutritionist point of view. National Regulatory Seminar 2001, National Pharmaceutical Control Bureau, Ministry of Health, Malaysia, 17-18 July, Subang Jaya.

Nutrition Goals for Asia - Vision 2020

Proceedings : IX Asian Congress of Nutrition

Editors-in-Chief

Malini Seshadri Anupa Siddhu

Editorial Board

Pushpa Sundararaj
Sushma Kashyap
Sakshi Kapoor
Anshu Sharma
Shilpa S Wadhwa
Deepti Khanna

Organised by:

Nutrition Society of India

Nutrition Foundation of India

Under the Auspicious of

Federation of Asian Nutrition Societies

Price : Rs 650/- (within India)
US$ 60 (outside India)

First Edition : 2003

ISBN 81-901922-0-5

Published by

Nutrition Foundation of India
C-13, Qutab Institutional Area,
New Delhi-110016, India
Phone : 011-26857814 / 26962615
Email : nfi@ren02.nic. in
Website : nutritionfoundationofindia.org

Printed by:

Natural Impression
1797, First Floor, Parsadi Gali,
Kotla Mubarak, South Extn-I
New Delhi-110003, India
Phone : 011-51647223
Email : anii9@yahoo.co.in