

Malnutrition and nutrition programs in malaysia



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CHAPTER 1 : INTRODUCTION

Malnutrition in all its forms is defined as all forms of poor nutrition. It relates to imbalances in energy, and specific macro and micronutrients- as well as in dietary patterns. Conventionally, the emphasis has been in relation to inadequacy, but it also applies to excess intake or inappropriate dietary patterns. It is a wide term commonly used as alternative to under-nutrition but technically it also refers over-nutrition. Child malnutrition was associated

with 54% of child death (10.8 million children) in developing countries in 2001, although it is rarely the direct cause of death.

Undernutrition is the direct result of inadequate dietary intake, the presence of disease, or the interaction of these two factors. The risk of dying from a disease is twice as high for mildly malnourished children, 5 times as high for those moderately malnourished and 8 times greater for children classified as severely malnourished when compared to normal children (UNICEF 1996).

Underlying causes for malnutrition are varied. Infections among children, including helminthiasis can contribute to malnutrition, manifested as anaemia, stunting and/or impaired childhood development. Recurrent sickness and diarrhoea among infants who are not breastfed can result in malnutrition and eventually impact their normal growth and development. Tuberculosis among young people and adults is linked to poor nutrition. On the other hand, dietary patterns are shifting from traditional diets to diets in which predominantly processed foods are consumed. These foods are of limited nutritional quality, in many cases rich in saturated fats, sugar and salt.

While the burden of undernutrition among children and chronic energy deficiency (CED) in adults continue to be major nutritional concerns in many parts of Asia, the burden of overweight and obesity is becoming increasingly widespread in the region (Khor 2008). Overweight and obesity are defined as abnormal and excessive fat accumulation that present a risk of health. They are associated with non-communicable diseases such as stroke, hypertension, cardiovascular disease, type 2 diabetes and certain forms of cancer.

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Apart from that, recent research showed that undernutrition during early life can later lead to overweight or obesity by prompting energy conservation mechanism in the body that can persist into adulthood. Severe nutritional deprivation in fetal and early post-natal period followed by a rapid catch-up growth in early childhood is now known to increase the risk of overweight and obesity (Florentino 2014). WHO (2008) estimates more than 1.4 billion adults, 20 and older, were overweight which over 200 million men and nearly 300 million women were obese. Overall, more than 10% of the world's adult population was obese. The global prevalence of overweight and obesity in children aged five to 19 years is 10% (Kipping et al. 2008). It was also reported that worldwide prevalence of overweight and obesity in preschool children increased from 4.2% in 1990 to 6.7% in 2010 and the prevalence in Asia is 4.9%, with the number of affected children was about 18 million and this trend is expected to reach 9.1%, or 60 million, in 2020 (Onis et al. 2010).

CHAPTER 2: BURDEN OF MALNUTRITION IN MALAYSIA

From the period before and after several years of independence, Malaysia was an underdeveloped country with high rate of poverty and hunger.

Poverty is closely associated with limited access to healthy food and poor access to health care leading to problems such as undernutrition and other related illnesses.

Recent National Health and Morbidity Survey (NHMS) IV has revealed that the prevalence of underweight and wasting for children aged below 18 years is 16.1 and 17.8% respectively and it was reported 6.1% children were

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obese. Study by Poh et al. (2013) among children 6 months to 12 years showed that the prevalence of overweight (9.8 %) and obesity (11.8 %) was higher than that of thinness (5.4 %) and stunting (8.4 %). It would appear that the results of the NHMS 2011 indicated a higher prevalence of undernutrition than that of overnutrition, while Poh et al. (2013) reported the opposite was true. It may be due to different cut-off point as NHMS using CDC (2000) while Poh et al. (2013) using WHO growth chart or could be due to the different sampling protocol. We can conclude that Malaysia still shows higher prevalence of undernutrition and at the same time increasing trend of overweight and obesity.

Developing countries including Malaysia are in a state of rapid economic transition as a result of generally improving incomes, increasing industrialization, urbanization and globalization. This has given rise to changing lifestyle and diet from one with high level physical of activity and diets based mostly on plant food, to one with higher level of sedentary lifestyle and diet of increasing energy based such as high carbohydrate, high sugar and high in fat. The excess energy from these foods may affect adult and children within the family differently. For instance, young children may easily use up the excess energy and still be underweight while adults may end up gaining weight. These changes in consumption and physical activity lead to rising prevalence of overweight and obesity especially in adults consequently increasing in NCD.

The changes in socio-economic developments over the years in Malaysia have brought an improvement in the overall nutritional status of the country. However, pockets of malnutrition still exist, particularly among the rural

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areas. Therefore, Malaysia now has to face double burden of malnutrition (DBM) as the new trend emerge in.

CHAPTER 3: CURRENT MALNUTRITION INTERVENTION PROGRAMMES-The aims, strategy and evaluation

The aim of nutrition program is to plan, implement and develop nutrition services to achieve and maintain the nutritional well-being of the population and promote healthy eating practices. The program aims to monitor and evaluate the nutritional status of Malaysian population and assist in nutritional surveillance. It also to plan, implement and evaluate the nutrition health programs, activities and promotion.

Nutrition interventions to improve the nutritional well-being of the Malaysian population have been implemented by the Ministry of Health in collaboration with other ministries. The programs and activities that have been carried out include alleviation of macronutrient and micronutrient deficiencies, nutrition promotion and improving household food security.

3. 1 Breastfeeding program

Malaysia has outlined a few strategies in order to combat malnutrition in children and adolescents. It starts from birth of the baby by promoting exclusive breastfeeding up to six months of age as according to National Breastfeeding Policy. The aim is to ensure the baby get the benefits and nutrient from breast milk. Study shows that breastfeeding is protective against infections and Sudden Infant Death Syndrome (SIDS) and this effect is stronger when breastfeeding is exclusive (Fern R. Hauck 2011).

In 1993, the Ministry of Health (MOH) Malaysia adopted the WHO/UNICEF Baby Friendly Hospital Initiative (BFHI). This initiative aims to increase breastfeeding among all women in Malaysia in line with the WHO recommendation of at least six months of exclusive breastfeeding, to empower women to make right choices on feeding their babies and to create conducive conditions in hospital and thereafter for women who wish to breastfeed.

In addition, MOH initiated Baby Friendly Clinic project in 2006 targeting health clinics and rural clinics in Malaysia. It aims to encourage mothers to breastfeed their babies exclusively from birth up to the first six months and continue until two years old.

Study by Tan (2011) showed the prevalence of exclusive breastfeeding among mothers with infants aged between one and six months was 43.1% (95% CI: 39.4, 46.8). Prevalence of timely initiation was 63.7% (CI: 61.4 – 65.9) and the continued prevalence of breastfeeding up to two years was 37.4% (CI: 32.9 – 42.2) (Fatimah Jr et al. 2010). The findings suggest that the programmes implemented in the last ten years were effective in improving the prevalence of ever breastfeeding, timely initiation of breastfeeding and continued breastfeeding up to two years

3.2 Rehabilitation Program for Malnourished Children

The main macronutrient deficiency problem among Malaysian children is protein and energy malnutrition. This is manifested in children of being underweight for their age. Rehabilitation Program for Malnourished Children, better known as “ Food Basket Program” has been started by Ministry of

Health in 1989 as an effort government to increase the health and nutritional status among children under 6 years old (Ministry of Health 2009). In these program children that fulfilled the criteria will be given “ food basket” to help them have a balanced and nutritious diet so that they could have optimum physical and mental growth. The children were also given close attention and appropriate treatment on any sickness, health education and proper health care.

The criteria for eligibility are children aged between 6 months to 6 years old who are severe underweight (weight-for-age less than $-3SD$ of the median) or moderate underweight (weight-for-age between $-2SD$ and $-3SD$) and from hardcore poor families (household income less than RM430 or RM110 per capita for Peninsular Malaysia; less than RM540 or RM115 per capita for Sabah and less than RM520 or RM115 per capita for Sarawak).

The objectives of the programme are to improve health and nutritional status through food and micronutrient supplementation, to improve health through provision of sanitary facilities and clean water supply and to improve health through providing education on health and nutrition.

They are given foods and multivitamin supplement every month until they are recovered, with the minimum period if six months of supplements. The basic food items include rice, wheat flour, anchovies, cooking oil, dry green bean, biscuits and full cream milk. These food supply approximately 102% to 140% of the child's Recommended Daily Allowance (RDA) for calorie and 204% to 222% RDA for protein. There were 13 choices of food basket available to qualified children for an estimated price of RM150 for each

basket. The number of recipient for this programme has decreased since it began, from 12, 690 children in 1989 to 5157 in 2009 (Ministry of Health 2011).

In 2010, under the National Key Results Areas (NKRA), this programme was extended to the poor and vulnerable poor family (household income less than RM2000 a month) through the 1Azam Programme. Meanwhile, in 2012, under the Government Transformation Programme, this programme was also extended to the natives in Perak, Pahang and Kelantan through the Community Feeding Programme (PCF) and the provision of food baskets (PEMANDU 2012).

3. 3 Other Main Nutrition Intervention Programs

Full cream milk powder is distributed through the Maternal and Child Health Clinics to underweight children aged 6 months to 7 years, pregnant women who have not gained adequate weight, and low income lactating mothers with multiple births. One kg of milk powder for each underweight child is given per month for 3 consecutive months, after which each case is reviewed and supplementation is continued if necessary.

The School Supplementary Feeding Program (SSFP) of the Ministry of Education provides a free meal to primary schoolchildren from poor families. Each meal is estimated to provide one-quarter to one-third of the recommended daily allowances (RDA) for energy and protein. The main objective of SSFP is to improve the health and nutritional status of children, especially those from the rural areas, through a provision of a wholesome and balanced meal. Other objectives are to improve health and food habits

and to prevent the occurrence of malnutrition among school children, to educate children on food selection, to encourage the participation of parents, teachers and public in the welfare of the school and to strengthen health and nutrition programs in schools.

The Ministry of Education also provides milk in 200-mL packages to primary schoolchildren. The School Milk Programme (SMP) runs simultaneously with the Supplementary Food Scheme. The programme is targeted for poor students whose family income is below the poverty level. Besides, to ensure students receive a well-balanced diet in school, the programme is also aimed at increasing the quality of health and nutritional value of food for primary students for better physical growth, mental health and general well-being. The SMP also encourages students to consume milk early in their life. In 2010, this programme has been rebranded to 1Malaysia Milk Programme.

CHAPTER 4: DISCUSSION

Many developed and developing countries showing reducing trend of undernutrition but increasing trend of overweight and obesity. However, rising in overweight is not necessarily associated with a fall of underweight or stunting. Developed countries mainly facing overnutrition problems and the focus of nutritional programme is to combat overweight and obesity especially among children as it becoming one of the most significant challenges in public health.

However, in most developing countries especially in Malaysia, we can still see higher prevalence of underweight and stunting especially among children but with gradual decreasing trend. With the ongoing socio-economic

transition in Malaysia, accompanied by the demographic and health transition and changing food supply and consumption patterns, overweight and obesity especially among adult and adolescent has becoming a public health epidemic. Increasing trend of obesity among adult and with high prevalence of underweight among children gives rise to DBM phenomenon and this phenomenon affects many developing countries.

The co-existence of under and overnutrition not only occurred within the country as a whole, but also within households. Study by Ihab et al. (2013) among sample in rural area found that the prevalence of overweight mother/underweight child (OWM/UWC) pairs was 29.6%, whereas the prevalence of normal weight mother/normal weight child (NWM/NWC) pairs was 15.2%. A household with an underweight child and an overweight or obese adult is the typical dual burden household for developing countries undergoing rapid transitions. This phenomenon will be a big challenge especially for food intervention programs to be implemented in the future. Undernutrition affects physical and mental health and performance throughout the lifespan, while overnutrition gives rise to an increasing rate of chronic diseases occurring at earlier and earlier ages.

Though known interventions exist for undernutrition and overweight/obesity independently, clear, evidence-based recommendations for the prevention of DBM have not yet emerged. Thus, new and innovative strategies will be required to counter the rise of the DBM in Malaysia. Collaboration across sectors, accompanied by an effective coordination mechanism, should join the efforts of those within and outside the nutrition community to address the DBM. Improving country-level capacity to coordinate nutrition actions is

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critical. Countries with both child stunting and women's obesity rarely implement comprehensive interventions, and in 2010 only one quarter of countries with the DBM had coordination mechanisms to address both problems (WHO 2013).

Current nutrition interventional programmes should be continued and at the same time there is an urgent need to come out with new strategies to tackle both side of malnutrition. Country need to engage and coordinate new stakeholders, combining multi-sectoral and intersectoral approaches, including engaging private sector to address the complexity of issues related to the reduction of DBM.

CHAPTER 6: CONCLUSION

The emergence of DBM is a relatively new phenomenon and is most prevalent in middle income countries including Malaysia. Low income countries and high income countries are less common to have DBM as low income countries tend to have higher prevalence of underweight while high income countries tend to have higher prevalence of overweight. In order to solve the newly emerging nutrition problems in a new context requires continuous and strong effort in health and nutrition promotion. This includes the need to find effective solution for childhood malnutrition with sustainable reduction in stunting, underweight and micronutrients deficiencies, along with measures to identified and control the obesity and overweight problems.

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