

Nutritional Health Risks and Disorders

The vicious cycle of malnutrition, poor economic productivity and poverty can still be observed among many Filipino communities to this day. While malnutrition has ceased to be a major cause of disease and death in the country, the latest National Nutrition Survey (NNS) conducted in 2003 indicates that malnutrition is still significant.

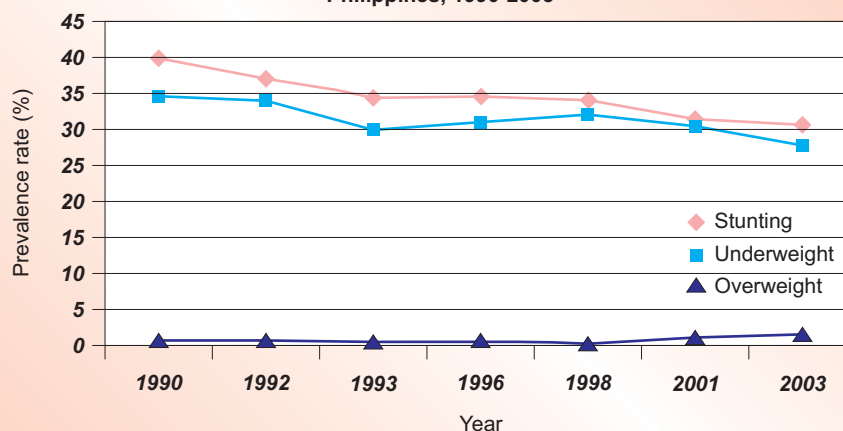
Dietary consumption patterns are also important in determining interventions to improve child feeding practices and in relation to the nationwide effort to curb the incidence of lifestyle-related and other degenerative diseases like cardiovascular diseases, diabetes mellitus, malignant neoplasms and kidney diseases.

Protein Energy Malnutrition (PEM)

Based on the 2003 NNS, there has been improvement in the nutritional status of children 0-5 years old. Among children in this age group, those that were underweight for age decreased from 32.0 percent in 1998 to 27.6 percent in 2003 while those that were short for age also decreased from 34.0 percent in 1998 to 30.4 percent in 2003. However, there is an increase of those that were found to be overweight for age from 0.4 percent in 1998 to 1.4 percent in 2003.

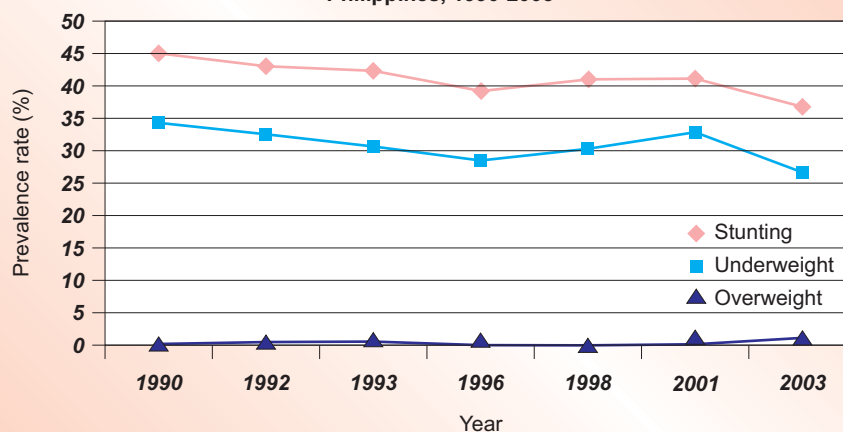
There is also an improvement in the nutritional status of schoolchildren aged 6-10 years old in 2003 as compared to the report in 1998. In this age

Figure 4.49 Trends in the Prevalence of Underweight, Stunting and Overweight Among 0 to 5 Years Old Children Philippines, 1990-2003



Source: National Nutrition Surveys, 1990-2003

Figure 4.50 Trends in the Prevalence of Underweight, Stunting and Overweight Among 6 to 10 Years Old Children Philippines, 1990-2003



Source: National Nutrition Surveys, 1990-2003

group, there is a decrease of those underweight for age from 30.2 percent in 1998 to 26.7 percent in 2003 and those that are short for age from the 40.8 percent reported in 1998 to 36.5 percent in 2003. There is also an increase of overweight for age among this age group from negligible in 1998 to 1.3 percent in 2003.

The 2003 FNRI Food Consumption Survey revealed that the food intake in Filipino households had general improvements in quantity and quality. There is a general increase in the mean one day per capita energy and nutrient intake particularly on energy, protein, calcium, vitamin A, thiamin, riboflavin and niacin. Energy and protein have adequacy of 98 percent and 99 percent, respectively. Approximately 70 percent of the total energy intake is from carbohydrates and 57 percent of protein intake is from plant sources. On the other hand, the NDHS noted a decrease in the prevalence of exclusive breastfeeding among children four to five months from 20 percent in 1998 to 16.1 percent in 2003.

Vitamin A Deficiency (VAD)

Exophthalmia, nightblindness, eye sensitivity to bright light, dryness of skin membranes, low resistance of the body to infections and blindness in severe cases are some of the manifestations of Vitamin A Deficiency. This deficiency is measured by

Table 4.30 Prevalence of Vitamin A Deficiency Among Children, Pregnant and Lactating Women Philippines, 1993, 1998 and 2003

| Age group | 1993 | 1998 | 2003 |
|----------------------|------|------|------|
| 6 months-5 years old | 35.3 | 38.0 | 40.1 |
| Pregnant women | 16.4 | 22.2 | 17.5 |
| Lactating women | 16.4 | 16.5 | 20.1 |

Source: National Nutrition Surveys, 1993, 1998 and 2003

taking the level of plasma retinol or Vitamin A in ug/dL. In the NNS, the level of VAD among children 6 months to 5 years old has increased from 38.0 in 1998 to 40.1 percent in 2003. This has also been found to be increasing among lactating mothers from 16.5 percent in 1998 to 20.1 percent in 2003.

Iron Deficiency Anemia (IDA)

Table 4.31 Prevalence of Iron Deficiency Anemia Among Children, Pregnant and Lactating Women Philippines, 1993, 1998 and 2003

| Age group | 1993 | 1998 | 2003 |
|----------------------|------|------|------|
| 6-11 months | 49.2 | 56.6 | 66.0 |
| 1-5 years old | 25.1 | 29.6 | 29.1 |
| 6 months-5 years old | | 31.8 | |
| 6-12 years old | 42.0 | 35.6 | 37.4 |
| Pregnant women | 45.7 | 45.7 | 43.9 |
| Lactating women | 43.9 | 45.6 | 42.2 |

Source: National Nutrition Surveys, 1993, 1998 and 2003

The prevalence of Iron Deficiency Anemia (IDA) has increased among six to eleven month old children from 56.6 percent in 1998 to 66.0 percent in 2003 and also among six to twelve year old children from 35.6 percent in 1998 to 37.4 percent in 2003. However, it has slightly decreased among one to five year old children from 29.6 percent in

1998 to 29.1 percent in 2003. IDA has also decreased among pregnant women from 45.7 percent in 1998 to 43.9 percent in 1998 and among lactating women from 45.6 percent in 1998 to 42.2 percent in 2003.

Iodine Deficiency Disorder (IDD)

IDD is the most common cause of preventable mental retardation in the country. It impedes the learning ability among children and affects the reproductive functions among women. The prevalence of IDD among schoolchildren decreased from 35.8 percent in 1998 to 11.4 percent in 2003. This situation may reflect the increase in the actual consumption of iodized salt from 23 percent in 1998 to 66 percent in 2003 (NNS 1998 and 2003). In addition, the prevalence of persons with goiter in the country has remained steady at 6.7 percent since 1993 and has not changed up to 2003.

Table 4.32 Prevalence of Iodine Deficiency Disorder Among Children, Pregnant and Lactating Women Philippines, 1998 and 2003

| Age group | 1998 | | 2003 | |
|-----------------|--------------------|-------------------|--------------------|-------------------|
| | Median UIE (ug/dL) | Prevalence of IDD | Median UIE (ug/dL) | Prevalence of IDD |
| 6-12 years old | 71 | 35.8 | 201 | 11.4 |
| Pregnant women | | | 142 | 18.0 |
| Lactating women | | | 111 | 23.7 |

Source: National Nutrition Surveys, 1998 and 2003

Nutritional Risk Factors

Diet interventions among adults are advocated primarily for the control of cardiovascular diseases and diabetes mellitus. For this purpose, awareness and practice on the dietary intake of fat and sugar by adults were determined and data for the lipid and glucose profiles of Filipino adults were reviewed. The 2003 NNS revealed that the mean total cholesterol of Filipino adults was 184.4 mg/dl, which is within normal levels; and the proportion of adults with high cholesterol (level of over 240 mg/dl) was 8.5 percent. The mean fasting blood sugar (glucose) or FBS level of Filipinos was 80.6 mg/dl, which is within normal; and the proportion of adults with FBS level of more than 125 mg/dl was 4.6 percent.

Table 4.33 Prevalence of Nutritional Risks Blood Examination Parameters Related to Degenerative Diseases in percent Philippines, 1998 and 2003

| Nutritional Risk Blood Examination Parameters | 1998 | 2003 |
|---|------|------|
| With High Total Cholesterol | 4.0 | 8.5 |
| With High LDL Cholesterol | 2.0 | 11.7 |
| With Low HDL Cholesterol | 65.4 | 54.2 |
| With High Triglycerides | 0.8 | 0.7 |
| With High Fasting Blood Sugar Level | 3.9 | 4.6 |

Source: National Nutrition Survey, 1998 and 2003

Increasing the intake of fruits and vegetables to reduce the health risk is being promoted. The per capita intake of vegetables has slightly increased from 106 grams per day in 1993 to 111 grams per day in 2003 while the per capita per day intake of fruits has decreased from 77 grams per day in 1993 to 54 grams per day in 2003.

The WHO recommendation is 400 grams of fruits and vegetable per day. Translated, it is equivalent to 3 servings of fruits per day and 2 servings of vegetables per day.

Through a community survey in 2000 (BSNOH), it was found that only 3.1 percent of adults and 6.6 percent of older persons avoided fatty foods and only 2.3 percent of adults

Table 4.34. Per Capita Vegetables and Fruits Intake per Day Philippines, 1987, 1993 and 2003

| Food taken | 1987 | 1993 | 2003 |
|--------------------------|------|------|------|
| Vegetable (g/day) | 111 | 106 | 111 |
| Green and yellow (g/day) | 29 | 30 | 31 |
| Others (g/day) | 82 | 76 | 80 |
| Fruits (g/day) | 107 | 77 | 54 |

Source: National Nutrition Surveys, 1987, 1993 and 2003

and 3.7 percent of the elderly avoided sweets. These data mean that not enough has been done in terms of increasing awareness regarding the correlation of fatty foods and sweets in the development of disease, particularly cardiovascular diseases and diabetes mellitus.

To provide the impetus for improving the nutritional status and reducing nutritional risk factors among the

general population, and specifically among children and mothers, the Philippine Plan of Action for Nutrition (PPAN) was formulated. The PPAN, as the country's blueprint for action for nutrition improvement has five impact programs, namely: home, school and community food production; nutrition education; micronutrient supplementation; food fortification; and food assistance. These impact programs are complemented by other health programs such as immunization, reproductive health and safe motherhood programs, environmental health initiatives and deworming of children.

In addition, the enactment of RA 8976 or the Food Fortification Act of 2000 was a milestone in the mass provision of micronutrients. The law provides for the mandatory fortification of staples like flour with iron and vitamin A, cooking oil and refined sugar with vitamin A and rice with iron and the voluntary fortification of processed foods for the Sangkap Pinoy Seal. Major flour millers and oil refiners are now fortifying their products. The National Food Authority is distributing iron-fortified rice to marginalized population groups. More sugar millers are seeking technical assistance in food fortification. Fifty-six brands of staples have qualified for the Diamond Sangkap Pinoy Seal, and 53 percent of households were found to have purchased at least one product with a Sangkap Pinoy Seal.

The integration of vitamin A distribution with other maternal and child health programs has assured the mechanism for the twice a year single doses of vitamin A capsules for children six months to 71 months old. With adequate Vitamin A supplementation, the risk

of mortality from measles is reduced by about 50 percent, from diarrhea by about 40 percent and overall mortality by 23 percent.

Annually, the performance of local government nutrition and health workers is assessed. The yearly awarding of Consistent Regional Outstanding Winners in Nutrition Awards (CROWN) to LGUs and the Nutrition Honor Award to outstanding barangay nutrition scholars have provided non-monetary incentives to implement local nutrition programs effectively and efficiently.

The availability of iron supplements largely depends on the capability of LGUs to buy the preparations in adequate quantities. The rising prevalence of iron-deficiency anemia among infants deserves a review of the prevalence of iron deficiency among pregnant women, and the procedures for delivery (birthing). Anemia in the newborn may adversely affect his ability to withstand disease and chances for survival. The provision of iron supplements needs serious consideration by local governments and national agencies and non-government partners.

In the meantime, the universal acceptance and compliance to the provisions of the food fortification law will need to be worked out by designated national agencies. The complexities of the food industry such as the existence of strong industry alliances like the sugar block, the rice cartel and the quedan (sugar refiners who do not own sugar) continue to challenge the food fortification law.

Nutrition programs barely consider the increasing need to modify the dietary intake, eating habits and food production priorities to reduce the risk factors for the development of the top causes of death like cardiovascular diseases and diabetes mellitus.

| Goals: Protein energy malnutrition and iron deficiency anemia are reduced. Vitamin A and iodine deficiencies are eliminated as public health problems. Obesity among children and adults are controlled. Nutritional risk factors and their health-related effects are controlled. | | | |
|--|--|------------|---------------------------------|
| National Objectives for 2005 - 2010 | | | |
| Objective | Indicator | Target | Baseline Data and Source |
| The levels of various forms of malnutrition are reduced | Percentage of low birth weight infants | 10 percent | 12 percent <i>NDHS, 2003</i> |

| National Objectives for 2005 - 2010 | | | |
|---|---|---|--|
| Objective | Indicator | Target | Baseline Data and Source |
| | Percentage of children underweight for age | Preschool children (0-5 years old): 21.58 percent or less* Schoolchildren (6-10 years old): 22.64 percent or less | 27.6 percent 26.7 percent <i>NNS, 2003</i> |
| | Prevalence of stunting among children | Preschool children (0-5 years old): 25.36 percent or less Schoolchildren (6-10 years old): 30.48 percent or less | 30.4 percent 36.5 percent <i>NNS, 2003</i> |
| | Percentage of obese children 0-5 years old schoolchildren adolescents adults | 1 percent or less 1 percent or less 3 percent or less 3 percent or less | 1.4 percent 1.3 percent 3.5 percent 4.3 percent <i>NNS, 2003</i> |
| | Prevalence of iron-deficiency anemia (IDA) | Infants (0-11 months old): 41.70 percent Children (1-5 years old): 15.10 percent Children (6-12 years old): 25.50 percent Pregnant women: 38 percent | 66.0 percent 29.1 percent 37.4 percent 43.9 percent <i>NNS, 2003</i> |
| | Prevalence of Vitamin A deficiency (VAD) | Preschool children: 14.90 percent or less Pregnant women: 10.92 percent Lactating women: 15 percent | 40.1 percent 17.5 percent 20.1 percent <i>NNS, 2003</i> |
| | Prevalence of Iodine Deficiency Disorder (IDD) | School children: 0 percent Pregnant women: 0 percent Lactating women: 20.0 percent | 11.4 percent 18.0 percent 23.7 percent <i>NNS, 2003</i> |
| Increase the proportion of children 4-5 months old that are exclusively breastfed | Percentage of children 4-5 months old that are exclusively breastfed | 50 percent | 16.1 percent <i>NDHS, 2003</i> |
| Decrease the proportion of population below minimum level of dietary consumption | Proportion of population below minimum level of dietary consumption* | 46.0 percent | 56.9 percent <i>NNS, 2003</i> |

| National Objectives for 2005 - 2010 | | | |
|---|--|---------------------------|---|
| Objective | Indicator | Target | Baseline Data and Source |
| | Mean one-day per capita food consumption | Greater than 886 grams | 886 grams <i>NNS, 2003</i> |
| | Mean one-day per capita energy intake | Greater than 1,905 kcal | 1,905 kcal <i>NNS, 2003</i> |
| | Chronic energy deficiency among pregnant women | 20.86 percent | 26.6 percent <i>NNS, 2003</i> |
| Increase the availability of fortified staple goods | Percentage of salt iodization; rice fortified with iron; flour fortified with Vitamin A and iron; sugar fortified with Vitamin A; and oil fortified with Vitamin A | 100 percent fortification | 90 percent salt iodization and 0 percent fortification of the other staple goods <i>DOH 2004</i> |
| Reduce nutritional risk factors associated with life-style related diseases | Per capita vegetables intake | 160.2 grams/day | 111 grams/day vegetable intake <i>NNS, 1998</i> |
| | Mean one-day per capita salt intake | To be determined | To be determined |

Strategic Thrusts for 2005-2010

- **Strengthen collaboration and partnership among the stakeholders** for health to support the strategies recommended by the Philippine Plan of Action for Nutrition (PPAN). Strengthen partnership with the private sector, civil society and non-government and other stakeholders.
- **Target the nutritionally at-risk and vulnerable.** Priority will be given to areas with high prevalence of undernutrition and micronutrient deficiencies and to children 0-5 years old, adolescent females and pregnant and lactating mothers.
- **Encourage family-driven response to malnutrition.** Families and household members will be recognized as primarily duty bearers of their family's nutrition welfare.
- **Sustain support for local partners.** Program implementors at the local level should be trained and given tools for them to be well equipped for an effective and efficient delivery of services.
- **Increase investments for nutrition** and related services through counterparting or cost sharing with partners and other stakeholders.
- **Integrate nutrition concerns in development of local policies and programs including anti-poverty measures.** Malnutrition is caused by many factors, hence there is a need to integrate nutrition concerns into other sectors and institutions.
- **Enforce, promote and monitor the implementation of existing nutrition laws and ordinances.**

* Millennium Development Goal Indicator