Unit 3 Food Choices: Economics

Lesson 2: The Social and Health Costs of Malnutrition

“Malnutrition costs more than obesity”
EurvActiv. (n.d.)

Identifying Hunger and Malnutrition

As defined by the Nemours Foundation, “hunger is the way the body signals that it needs to eat. Once a person is able to eat enough food to satisfy the body’s needs, he or she stops being hungry” (2008).

People with malnutrition lack the nutrients necessary for their bodies to grow and stay healthy. Someone can be malnourished for a long or short period of time, and the condition may be mild or severe. Malnutrition can affect a person’s physical and mental health. People who are suffering from malnutrition are more likely to get sick; in very severe cases, they may even die from its effects (Nemours, 2008).

Causes of Hunger and Malnutrition

According to Gail Frank, “Nestle and Guttmacher reviewed hunger studies authorized by 11 states between 1984 and 1988” (2008, page 211, ¶4). The findings revealed ‘Casual factors ranging from poverty and the high costs of housing to inadequate welfare and food assistance benefits” (page 222, ¶4). The research findings show that:

- Food insufficiency is a chronic US problem
- Food insufficiency does not reflect food shortages
- People with lack of access to resources are at greatest risk of hunger
- The federal poverty level is an inappropriate index of hunger
- The US social welfare system does not insulate individuals and families from repetitive economic insults
- Voluntary activities and private charity cannot cure the hunger problem
- Hunger, poverty, unemployment, and the costs of housing and basic needs are interrelated. (Frank, 2008, page 211, ¶4).

The Nemours Foundation states

People suffer from hunger because they don’t get enough food, and not getting enough food over the long term can lead to malnutrition. But someone can

5 Ibid.
6 Ibid.
7 Ibid.
become malnourished for reasons that have nothing to do with hunger. People who have plenty to eat may still be malnourished if they don't eat food that provides the right nutrients, vitamins, and minerals (Nemours, 2008).  

“Hunger is directly related to poverty...and reflects the cumulative effects of an economic downturn, concerns about he war on terrorism after September 11, 2001, and uncertainties about both the future and the job market” (Frank, 2008, page 212, ¶2).  

The Centers for Disease Control (CDC) shows the distribution of poverty by age group in the United States, 1966-2005.

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Special Populations at Risk for Hunger and Malnutrition

The Poor

No matter what country they live in, poor people are most likely to suffer from hunger and malnutrition. In poor countries, natural disasters — such as the severe droughts that African countries often experience — can contribute to malnutrition because they make it hard for people to get the food that they need.

Malnutrition affects people of every age, although infants, children, and adolescents may suffer the most because many nutrients are critical for growth. Older people may develop malnutrition because aging, illness, and other factors can sometimes lead to a poor appetite, so they may not eat enough (Nemours, 2008).

Homeless

According to Gail Frank, “Homelessness affects from 250,000 to 2.2 million people in the United States. Socioeconomic and health factors increase the homeless person’s nutritional status” (Frank, 2008, page 211, ¶2).

Low-income Women

Another population group at risk for malnutrition is low-income women who are pregnant, postpartum, or breast-feeding. According to Schlenker and Ross, nutritional risk exists among this population with serious medical consequences from malnutrition (2007, page 252, ¶5).

Low Income

A target population of low-income civilian households and individuals residing in eligible households was surveyed in a Low-Income Nationwide Food Consumption Survey, 1997-1998 by the USDA and Human Nutrition Information Service (HNIS) (Frank, 2008, page 62, Table 2-4).

Minority

The Centers for Disease Control (CDC) states, “Race and ethnicity in the United States are risk markers that correlate with other more fundamental determinants of health status such as poverty…” (2008)

Figure 5. Low Income by age, race, and Hispanic origin: United States, 2005.

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12 Ibid.


Older Adults

“Frail older adults may experience a reduced mobility, impaired digestion and absorption, and an increased risk of malnutrition” (Frank, 2008, page 211, ¶2).\(^{16}\)

**Effects of Malnourishment**

Malnutrition harms people both physically and mentally. The more malnourished someone is — in other words, the more nutrients they’re missing — the more likely it is that person will have physical problems. (People who are only slightly to moderately malnourished may show no outward physical signs at all.)

The signs and symptoms of malnutrition depend on which nutritional deficiencies a person has, although they can include:

- fatigue and low energy
- dizziness
- poor immune function (which can cause the body to have trouble fighting off infections)
- dry, scaly skin
- swollen and bleeding gums
- decaying teeth
- slowed reaction times and trouble paying attention

\(^{16}\) Ibid.
• underweight
• poor growth
• muscle weakness
• bloated stomach
• bones that break easily
• problems with organ function
(Nemours, 2008). 17

In addition,

When a pregnant woman is malnourished, her child may weigh less at birth and have a smaller chance of survival. Vitamin A deficiency is the biggest cause of preventable blindness in the developing world. Children in developing countries who have a severe vitamin A deficiency as a result of malnutrition have a greater chance of getting sick or of dying from infections such as diarrhea and measles. Iodine deficiency, another form of malnutrition, can cause mental retardation, delayed development, and even blindness in severe cases. Iron deficiency can cause a person to be less active and less able to concentrate. Students who are malnourished often have trouble keeping up in school (Nemours, 2008). 18

Williams’ points out the global impact of malnutrition due to unequal distribution of food, even in the United States. “Even in the midst of plenty in American, malnutrition exists” with “…approximately 11% of US households experience limited or uncertain availability of nutritionally safe and adequate food” (2007, page 246, ¶3). 19

As many as one-third of American families whose income levels are below the federal poverty level* “…experience food shortages, and such shortages influence health” (2007, page 246, ¶3). 20

*$21,000 annual income, family of four, 2008. 21

According to MedlinePlus,

Worldwide, malnutrition continues to be a significant problem, especially among children who cannot fend adequately for themselves. Poverty, natural disasters, political problems, and war all contribute to conditions -- even epidemics -- of malnutrition and starvation, and not just in developing countries. (2008) 22

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The US Centers for Disease Control (CDC) lists micronutrient deficiencies (a shortage of one or more vitamins and minerals necessary for health and well-being) as a major influence on population growth – economically and socially (2008).  

Social Costs

The costs of malnutrition create a burden on society in terms of lost work days (decreased worker productivity and increased production expense), reduced health and well-being thereby decreasing individual and collective contributions to and engagement with society. Malnutrition creates human misery and a human waste of life according to Schlenker and Long (2007, page 247).

According to a new study by the International Labour Office (ILO)

Poor diet on the job is costing countries around the world up to 20 per cent in lost productivity, either due to malnutrition that plagues some one billion people in developing countries or the excess weight and obesity afflicting an equal number mostly in industrialized economies.

"Poor meal programs and poor nutrition underlie so many workplace issues: morale, safety, productivity, and the long-term health of the workers and nations. But few workers are happy with their meal arrangements", says Christopher Wanjek, the author of the study, Food at Work: Workplace solutions for malnutrition, obesity and chronic diseases (2005).

Other findings by the ILO study on nutrition and work include:

- The world is facing a "food gap" of staggering proportions, with one out of six people on the planet undernourished, and an equal number overweight or obese.
- Inadequate nourishment can cut productivity by up to 20 percent.
- In 2001, non-communicable (diet-related) diseases contributed to about 46 percent of the global disease burden and 60 percent of all deaths worldwide, with cardiovascular disease alone amounting to 30 percent of deaths. The global burden of diet-related diseases is expected to climb to 57 percent by 2020.
- In Southeast Asia, iron deficiency accounts for a $5 billion loss in productivity.
- In India, the cost of lost productivity, illness and death due to malnutrition is 10 billion to 28 billion, or 3 to 9 percent of gross domestic product.
- In wealthier nations, obesity accounts for 2 to 7 percent of total health costs: in the United States the annual economic costs of obesity to business for insurance, paid sick leave and other payments is $12.7 billion.
- In the United States, where over two-thirds of the population is overweight, direct medical costs accounted for approximately $51.6 billion and lost productivity approximately $3.9 billion – reflected in 39.2 million lost workdays, 239 million restricted-activity days, 89.5 million bed-days and 62.6 million physician visits.

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In the developing world, a 1 percent kilocalorie increase results in a 2.27 percent increase in general labor productivity.

(Image, 2008)²⁶

According to Gail Frank, “Malnourished children are more vulnerable to...school absenteeism and a muted intellectual achievement. Malnutrition can promote reduced productivity and impaired socialization of young and middle-aged adults” (2008, page 215, ¶2)²⁷

**Poverty and Poor Health**

The US Centers for Disease Control (CDC) in an article, *Thinking Aloud About Poverty and Health in Rural Mississippi*, by Dr. Jack Leonard states, “Poverty and health status are interrelated, and their effects on each other are often bidirectional: poverty leads to poor health and poor health leads to poverty” (2007).²⁸

Regardless of people’s race, short-term poverty can have as much of a negative effect on their health as long-term poverty. Using data from 1968 through 1995 from the American Panel Study of Income Dynamics, McDonough and colleagues (11) found that people who were never poor were the healthiest and people who were always poor were the least healthy. Surprisingly, they also found that people who overcame poverty or became poor over time — especially if they were elderly, not well educated, and not white — had a similar health risk to the risk of those who were always poor (Leonard, 2007).

The IAEA points to the problem of “The global economic and social costs of malnutrition...” as being vast and far reaching. "Chronic malnutrition is a key factor in the deaths of at least 13 million children under five years of age in the developing world” (IAEA, n.d.) ¹ The cost in lost work days due to illnesses linked to poor nutrition is in the millions. “And while the economies of Africa, Asia and Latin America are the most adversely affected, those who pay the greatest individual price are women and children living in poverty” (n.d.) ¹

A UK study on the economic costs of malnutrition suggests that malnutrition costs the UK €10.5 billion a year. If we extrapolate these figures in Europe the annual cost of malnutrition amounts to some €60 billion in the EU only,” said Jean-Pierre Baeyens, chair of ENHA. These costs come from more frequent hospitalisations and longer hospital stays as recovery takes more time. "Health costs could be cut down by 20% in the EU if the issue of malnutrition was resolved," added Baeyens... (EurActiv, 2007).¹

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According to the International Atomic Energy Agency (IAEA) (n.d.) “Good nutrition is essential if people are to achieve their full potential for growth and performance. Yet over 800 million people around the world are chronically malnourished, and more than a billion are sick or disabled because of nutrient deficiencies.”

- Iron deficiency anaemia affects over 2 billion people, particularly women of reproductive age and pre-school children.
- Nearly 200 million children are moderately to severely underweight, while almost 70 million are severely malnourished.
- Over 1 billion people are at risk of iodine deficiency, and at least 50 million iron deficient children suffer from impaired development, including mental retardation and stunted growth.
- More than 40 million children worldwide are afflicted with Vitamin A deficiency - at least one million die as a result and an additional half-million go blind.

(IAEA, n.d.)

According to Community Nutrition: Apply Epidemiology to Contemporary Practice, increased health risks exist among poorly nourished individuals.

Research on homeless and housed poor children find that eating patterns of homeless children tend to be unbalanced, with a heavy reliance on fast food, and plagued by periods of food deprivation. Obesity and iron deficiency in children 6 months to 2 years old are common (Frank, 2008, page 211, ¶1).

Sabriya Rice of CNN Health reported in 2006, “Poverty in the United States increased 20 percent between 2000 and 2004, census numbers show. And although the trend stalled in 2005, researchers worry poverty will have profound effects on public health in this country.”

In the same article Rice reports,

New research indicates that it's not just the poor who are getting poorer. An analysis of poverty rates and health published in the September issue of The American Journal of Preventive Medicine found that people living in extreme poverty tend to have more chronic illnesses, more frequent and severe disease complications and make greater demands on the health care system (2006).

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30 Ibid.
34 Ibid.