

Famine and its effects on health in South Sudan

A Commentary

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Background

The Government of South Sudan, together with the World Food Programme (WFP), UNICEF and the Food and Agriculture Organization (FAO) declared famine in parts of South Sudan on February 20th 2017, based on the Integrated Food Security Phase Classification (IPC) current and projected (January-July 2017) Acute Food Insecurity Situation reports [1]. The famine affects more than 4.9 million people, who are in urgent need of food and nutrition assistance, mainly in Northern Bahr el Ghazal and Unity states, especially in the counties of Leer, Mayendit, Koch and Panyijar in Unity state [2].

This declaration followed several months of reported food shortages and malnutrition in parts of the country affected by the civil war. Unfortunately, the famine is rapidly spreading to other areas, exacerbated by the spread of the conflict and drought. This famine is the result of the civil war which started in December 2013 and the subsequent deterioration in the economy of the young nation [3].

Famine and public health

The Merriam-Webster dictionary defines famine as “an extreme scarcity of food” – sometimes called “acute food insecurity”.

Famine leads to severe undernutrition especially affecting young children and pregnant women which is a public health emergency. Undernutrition weakens the body and increases the likelihood of acquiring infections, often leading to death. Infections, on the other hand, increase the risk of undernutrition because:

- There is loss of appetite.
- Energy and nutrient needs increase.
- Nutrients are poorly absorbed or lost (as in diarrhoea).

So undernutrition and infections “make each other worse” [4]. That is why the World Health Organization’s famine response plan in South Sudan “focuses on working with partners to prevent the spread of diseases amongst people weakened by food insecurity” [5].

Effects of famine on physical health

Famine has short-term and long-term effects on the human body, and affects children and adults differently [4].

Short-term effects of severe undernutrition

Severe undernutrition has the worst effects during a child’s critical ‘first 1000 days’ (i.e. from conception to the age of two years), and mortality rates during famines are highest for infants and young children [6].

A woman who suffers severe food shortages before or during pregnancy, and so, is undernourished has:

- An increased risk of miscarriage and still birth.
- Her baby being born with a low birthweight (LBW) (<2500g) due to poor foetal growth or being preterm. LBW babies have low stores of some nutrients (e.g. fat, vitamin A and iron); they are at risk of infection, feeding difficulties, hypothermia, and increased mortality [7].

An undernourished pregnant woman is herself at increased risk of death, and, during delivery, of blood loss leading to anaemia. A severely undernourished mother may not produce enough breast milk and her milk may be low in fat, and micronutrients such as iodine or vitamin A [7].

A young child with severe undernutrition (also called ‘severe acute malnutrition’) has:

- Loss of body weight and reduced linear growth (resulting in stunting).
- More frequent and more serious infections due to a depressed immune system.
- Reduced cognitive and mental development which may have devastating effects later in life.

An older person is particularly at risk of undernutrition during famines because she or he:

- Is less resilient than a younger adult to food insecurity.
- May have mobility and other problems that limit access to rations.
- May share their food with children.

Older people who are displaced and/or living alone (or separated from relatives) are most vulnerable.

Undernutrition in older people is associated, not only with increased mortality and morbidity, but also with a greater risk of falls, poorer mobility, and psychological stress (especially if displaced) such as depression and anorexia.

In a Protection of Civilians camp in 2015 in Juba 2 in 5

older people were moderately or severely undernourished (the average meal frequency was 1.8/day), and 2 in 5 suffered psychological stress [8].

Other groups disproportionately affected by famine include people with disabilities or with long-term health problems such as HIV/AIDS or tuberculosis.

Long-term effects of severe undernutrition

Young and unborn children who survive severe undernutrition into adulthood have long-term effects. Exposure to suboptimum nutrition during crucial periods of development especially the fetal period increases the risk of metabolic syndrome and non-communicable diseases in later life [9]. Studies of the Chinese famine of the 1959–1961, and the Dutch hunger winter (1944–1945) show the effects of fetal and childhood undernutrition in adults [10, 11]. “Surviving adults prenatally exposed to the Dutch famine had higher mortality up to the age of 50 years, worse self-rated health, higher coronary heart disease risk, reduced glucose tolerance, higher BMI, and increased risk of psychological disorders [11]. There are likely to be similar long term effects of the present famine in South Sudan.

It is also likely that famine affects long-term mental health among some individuals especially those who are displaced, and lose home and land.

Effects of famine on the economy

The long-term effects of famine on adult health is depressing the economic development of South Sudan. By limiting the numbers (through death) and productivity of the labour workforce (through stunted physical or mental growth), there will not be enough healthy people to keep the economy, including food security, going [12]. For the individual household, the health effects of famine also impact on livelihoods. Data from Ethiopia famines suggest that livelihood disruption following famine does not just affect one generation but also subsequent ones [13]. The long-term effects on the economy of South Sudan’s 1988 famine in Bahr el-Ghazal are not documented.

During famines schooling is disrupted, especially where there is displacement; and undernourished hungry children have low attention spans and poorer school outcomes.

Conclusions

The United Nations and other humanitarian agencies are scrambling to limit the effects of the famine on the devastated population in South Sudan. The short-term and long-term effects on the young nation will be profound if the situation is not arrested quickly. As the main driver of the famine, the civil war must end so that access to the population that urgently need food can be attained.

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