The Impact of Food Insecurity on Women and Children

Kangyang Pam Jari
Home Economics Department
Federal College of Education Pankshin, Plateau State

Abstract
Food insecurity exists whenever the availability of nutritionally adequate and safe foods is limited or uncertain. Some of the causes of food insecurity identified in this paper include poor access to productive inputs, social and economic inequalities, women's resilience to climate change, disasters and emergency situations. The discussion of food insecurity and in quantification of the number of food insecure globally is the lack of a standardized measure relevant to all settings and cultures. The effects of food insecurity can be seen in nutrient deficiency, weight loss and some risky coping strategies adopted by women, some households adopt the 'no breakfast, but launch and dinner' approach, while others skip one or more mealtimes in a day to maximally utilize the available food resources. The corresponding effects of these measures can translate to food insecure households where poor health and diseases are common. For children, there are bound to cognitive effects, where children perform poorly academically. Food insecurity is an impending threat to human survival and mitigates the achievement of the sustainable development goal on zero hunger, it is therefore imperative that every effort must be put in gear to forestall further occurrence of food insecurity affecting most especially women and children. Intervention programs of the Government should be focused more on women and children in emergency-related food security measures. The emphasis on agriculture should be pursued by governments at the various levels to enhance food production and processing

Keywords: Food insecurity, zero hunger, nutrient deficiency, survival strategies, vulnerable groups.

Introduction

A commonly used definition of food insecurity states that it exists "whenever the availability of nutritionally adequate and safe foods or the ability to acquire acceptable foods in socially acceptable ways is limited or uncertain" (Hamelin, Beaudry and Habicht, 2002). This definition does not only include the "total unavailability of food", but also some factors responsible for this from other perspectives.

Food insecurity ranges in severity from worry and anxiety over where the next meal will come from, to an inability to eat an appropriate variety and quantity of food, to skipping meals, and finally, experiencing absolute food deprivation (McIntyre and Rondeau, 2009; Tarasuk, 2009). These various forms of severity can be found in disaster and ethnic-related violence prone communities in the Northern parts of Plateau State. In contrast, food security is recognized to exist "when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life" (Agriculture and Agri-food Canada, 1998). People's overall access to food in Plateau State relies to a great extent on the work of rural women. Women comprise, in average, 43 percent of the agricultural labour force in developing countries, Nigeria inclusive (Asian Development Bank, 2013).

Poor households headed by women often succeed in providing more nutritional food for their children than those headed by men (Che and Chen, 2001). There is a strong correlation between a higher level of gender equality and lower level of child mortality (Food and Agriculture Organization FAO, 2013). It suffices to say that food security for women is largely connected to food security for their children. Cultural traditions and social structures often mean that women are more affected by hunger and poverty than men even though women, and in particular expectant and nursing mothers, often need special or increased intake of food and too often, child hunger is inherited that is, a mother who is stunted or underweight due to an inadequate diet often give birth to low-birth-weight children (FAO, 2012).

With numerous studies conducted to review the negative health implications of food insecurity on mothers and their children (Che and Chen, 2001), the importance of understanding and addressing this reality is a significant concern. This article will show that though mothers in food-insecure households in Plateau-North often compromise their own food intake to ensure their children have enough to eat, this does not protect children as well as women from the pervasive effects of food insecurity. The paper will also attempt to discuss the causes and challenges of food insecurity. This will also lead the discourse to the relationship of food insecurity and nutrient deficiency and how it affects weight and health of women and children.

Causes of Food Insecurity

Women face numerous obstacles to access productive inputs, assets to land and services required for rural livelihoods. These include access to fertilizers, livestock, mechanical equipment, improved seed varieties, extension services, agricultural education and credit. As rural women in typical Nigerian settings often spend a large amount of their time on additional household obligations, they have less time to spend on food production or other income opportunities. Subsidies attached to these agricultural services are scarcely enough to go round within the communities.

Social and economic inequalities between men and women result in less food being produced, less income being earned, and higher levels of poverty and food insecurity. If women farmers had the same access to resources as men, the agricultural yield could increase by 20 to 30 percent. This could raise total agricultural output in developing countries by 2.5 percent, which could reduce the number of hungry people in the world by 12 to 17 percent (FAO, 2012).

Disasters, especially droughts, and emergency situations like the farmers-herders clashes are the most common causes of food shortages in the world (World Food Program). In humanitarian contexts, discrimination of women and girls may be reinforced, and the occurrence of domestic violence increase during times of food scarcity. Because of women's specific roles and experiences in food production and preparation, it is crucial to include them in emergency-related food security planning and decision making as potential change agents and decision makers, rather than as the "victims" they often are portrayed to be.

Gender dynamics within households must be considered in situations of displacement when food aid and other relief items are distributed. This includes men's and women's ability to access and equitably distribute relief items within

households. Humanitarian interventions that radically alter gender roles, for example by giving women greater control over water and food distribution, may impact power dynamics negatively and can also lead to increased gender-based violence.

Challenges of Food Insecurity

One of the challenges in a discussion of food insecurity and in quantification of the number of food insecure globally is the lack of a standardized measure relevant to all settings and cultures. Barrett (2010) attributes this difficulty in measurement to the fact that food insecurity is a multidimensional concept that encompasses aspects of availability, access, and utilization. However, it is widely acknowledged that the establishment of an accurate, cross-culturally appropriate, measurement of food insecurity is of critical importance in the design and implementation of targeted interventions, and to evaluate programs (Webb *et al*., 2006; Coates *et al*., 2006). Different measurement tools have different strengths and weaknesses and can often result in estimations or interpretations that differ significantly. There is almost a complete absence of any of these tools for the residents in especially the rural areas in Plateau North. Some households adopt the 'no breakfast but launch and dinner' approach; others ensure they skip one or more mealtimes in a day to maximally utilize the available food resources.

Food Insecurity and Nutrient Deficiency

By its working definition, food security requires nutritional adequacy. This means that in the broadest sense any individual who is undernourished or has micronutrient deficiency can be interpreted as being food insecure. These deficiencies show the importance of understanding the dynamics of both household and individual food security as an unbalanced distribution of adequate amounts and types of food within the household, which may result in deficiencies in some but not all family members. Women of childbearing age and children under 5 years are at particular risk of poor health due to under-nutrition and micronutrient deficiencies.

In a study of 3,744 women in the United States, Rose and Oliveira (1997) observed that food insecurity was associated with reduced micronutrient intake among women of childbearing age, based on a 24-h recall. Mean intakes of women from food-insufficient households were below two-thirds of the recommended daily allowance for calcium, iron, vitamin E, magnesium, and zinc, and women from these households were more likely to consume, 50% of the recommended energy intake than were those from food-sufficient households.

Food Insecurity and Weight

If food security were to be considered only in terms of access to food in sufficient quantity, it might follow that food insecurity would be associated with being underweight. However, the relation between food insecurity and weight is more complex and not yet clearly defined. In cross-sectional studies in the United States, food insecurity has been associated with obesity among women, but the direction of the association and its causality are unclear. Meanwhile, few data exist to define the association between food insecurity and weight among individuals in resource poor settings.

Food Insecurity, Household Economics and Risky Coping Strategies

Implied in the concept of food insecurity

is the vulnerability that results from a lack of reliable access to food, which puts individuals at risk of the use of coping strategies that are either risky or not sustainable. When there is limited or uncertain ability to acquire acceptable foods in "socially acceptable ways," a variety of coping strategies may be used. These can include withdrawal of children from school, a decrease in the intake of certain foods, the sale of assets to purchase food, theft, or exchange of sex for food or money (Weiser *et al*., 2007; Salaam-Blyther and Hanrahan, 2010).Women, as primary caretakers of children, responsible for the maintenance of the household and for food preparation and with less purchasing power than men, are particularly vulnerable to resorting to risky coping strategies, especially when they have low education and few economic opportunities. In the case in which risky coping strategies result in the female caretaker becoming HIV infected, the food security of the entire household is negatively affected because food production and the ability to prepare food decreases with illness (Coon *et al*., 2007).

Poverty and low income are associated with food insecurity, but adequate household income is not sufficient to ensure food security. The geographic epidemics of food insecurity and HIV overlap in many cases in countries in which the rights and economic status of women increase their vulnerability. Weiser et al (2007) showed that food insecurity was associated with high-risk sexual behaviour among women in Botswana and Swaziland.

In Lagos, Nigeria, a survey of 320 female commercial sex workers showed that 35% identified poverty and difficulty accessing food daily as their reason for joining that industry (Oyefara, 2007). In qualitative interviews with women living with HIV in Uganda, Miller *et al* (2010) showed that food insecurity was associated with transactional sex, with lack of control over condom use, and with a likelihood of staying in abusive relationships (Miller *et al*., 2010). Food insecurity has also been shown to contribute to non-adherence to antiretroviral therapy (Weiser *et al*., 2010).

Influence of food insecurity on the health of women and children

Income-related food insecurity has been linked to a multitude of negative physical and mental health conditions. As reported by Che and Chen (2001), a 1998/1999 Canadian National Population Health survey showed that 17 percent of those who were food insecure had poor or fair health, compared to seven percent of food secure individuals (Piwoz, 2004). In addition to poorer overall health, the food-insecure also suffer from higher rates of disease. These include multiple chronic conditions, most notably heart disease, obesity, high blood pressure, and diabetes (Che and Chen, 2001; Drewnowski and Specter, 2004). Food insecurity also has psychological effects; contributing to higher levels of stress, anxiety, irritability, social isolation, heightened emotional responsiveness, eating disorders and depression (Che and Chen, 2001; Hamelin, Beaudry and Habicht, 2002). It has also been correlated with impaired cognitive abilities, restricted activity levels, poor functional health, and fatigue (Polivy, 1996; Hamelin, Beaudry and Habicht, 2002). Many of the studies on the psychological and cognitive effects of food insecurity have primarily focused on women and mothers in food insecure households, due to the prevalence of food insecurity in this population.

Prior to discussing how mother's direct experience of food insecurity has secondary consequences for their children's health, growth and well-being,

it should be noted that when children directly experience food insecurity themselves, it negatively impacts their health and development (Alaimo et al., 2001; McIntyre, Connor and Warren, 2000). McIntyre, Connor and Warren (2000) found that 87 percent of children who had never experienced hunger were reported to be in very good or excellent health, compared to only 74 percent of hungry children (963). Additionally, hungry children were much more likely to report fair or poor health than children who never experienced hunger. Findings from the United States Third National Health and Nutrition Examination Survey demonstrated that food-insufficient children scored worse on six of seven health measurement indicators than food-sufficient children (Alaimo et al., 2001). This survey shows that food insecurity also affects their cognitive development, academic achievement, physical and mental health.

Experiencing food insufficiency is associated with poorer psychological health among children and has been linked with depression and suicidal tendencies in adolescents (Alaimo, Olson and Frongillo, 2002; Vozoris and Tarasuk, 2003). Adolescents in food insufficient households are four times more likely to have had thoughts of death and five times more likely to have attempted suicide than those in food secure households (Alaimo, Olson and Frongillo, 2002). The implications of these findings are far-reaching and should be recognized as such. For not only does experiencing food insecurity negatively contribute to children's mental and physical health and development during actual periods of food insecurity, but studies have shown that social inequalities in health persist into adulthood, contributing to continued poor health status (Alaimo et al., 2001).

Interventions

Despite gaps in the science that surrounds food insecurity and challenges in standardization of measurement, programs exist that attempt to address the issue with the goal of an improvement in the outcomes of individuals, households, and communities. In one of Africa's largest and rapidly expanding HIV programs, with 50,000 patients in active care in 17 clinics in western Kenya, the Academic Model Providing Access to Health care has combined HIV care with a robust nutritional support program for food-insecure patients and their dependents. Of the 9623 patients enrolled to receive food during 2007, 73% were women (Mamlin *et al*., 2009).

In Nigeria, a similar mode of intervention includes the creation of Primary Healthcare approach, Accelerated Child Survival and Development, Gender Informed Nutrition and Agriculture, Homegrown School Feeding and Health Program.

In Bangladesh, a homestead gardening program for women designed to control vitamin A deficiency had a positive effect on the food security of households 3 year after withdrawal of the program (Bushamuka, 2005). Nutrition education also has a role to play in food security. A US study of 219 female heads of households receiving food stamps who were randomly assigned to either receive or not receive education regarding food insecurity and nutrition showed significantly improved food security in the intervention group (Eicher-Miller, 2009). Although evidence is limited on interventions with a proven effect on food insecurity in women with HIV, food assistance, livelihoods programs, education, and intergenerational support show evidence of success (Eicher-Miller, 2009). A prospective observational cohort

study of 600 adults in rural Haiti showed that food assistance was associated with improved BMI, food security, and attendance at monthly clinic visits for both men and women living with HIV (Ivers *et al*., 2010).

Conclusion and Recommendations

Food insecurity independent of its association with poverty and low income has devastating impacts on the health and general well-being of all, including women and children. Despite the numerous intervention programs recognized both locally in Nigeria and internationally on the global scale, the challenges seem never to end. Risky coping strategies by women whose responsibilities are to cater to the nutritional well-being of their homes have been seen to include sex-for-money, theft, domestic violence, psychological and physiological deficiencies. Children as well as their mothers suffer the aftermath of these strategies. It is however recommended that women and children should be included in emergency-related food security planning and decision making as potential change agents and decision makers, rather than as the "victims" they often are portrayed to be. Risky coping strategies where mothers give up their food for their children does little help in tackling the menacing effects of food insecurity, and so should be discouraged.

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