

Obesity and Food Insecurity are both Florida Public Health Issues – A Commentary

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ABSTRACT

Florida faces an epidemic of overweight and obesity primarily due to an imbalance of caloric intake and physical activity modulated by multiple physiologic and cultural factors. The overweight and obesity issue notwithstanding, Florida's public health efforts must also continue to address problems related to food insecurity and hunger. Although much of the focus concerning food insecurity has been at the individual or household level, there is also discussion among policymakers, food experts, and community members about the need to focus on food security at the community-level as well. This commentary examines Florida's current food security issues.

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As every public health professional knows, the United States (U.S.) and Florida are both facing epidemics of overweight and obesity primarily due to an imbalance of caloric intake and physical activity modulated by multiple physiologic and cultural factors (U.S. Department of Health and Human Services, 2001). According to the Centers for Disease Control and Prevention (CDC) in 2010, almost 27% of Florida's adult population was obese as assessed through the Behavioral Risk Factor Surveillance System (Centers for Disease Control and Prevention, 2011). A recent University of South Florida report noted that almost one-third of Florida's youth between the ages 10-17 years were either overweight or obese (University of South Florida Child Policy Research Center, 2010). Recognizing that many Floridians have excess body weight detrimental to health has lead to numerous local and state initiatives, including a focus on obesity prevention as part of the Healthy Communities, Healthy People Program (Bureau of Chronic Disease and Health Promotion, Florida Department of Health, n.d.).

As Florida and national public health efforts correctly focus on obesity and overweight prevention, our state's public health efforts must also continue to aggressively attack the problems of food insecurity and hunger which have not disappeared despite the obesity epidemic. The American Dietetic Association (now the Academy of Nutrition and Dietetics) cautioned in a 2010 Position Paper that food insecurity, sometimes with associated hunger, remains a critical health and social issue that needs to be addressed and urges action, education, research, and advocacy (Holben, 2010). Reports tell us that U.S. food insecurity has significantly increased with

the recent economic downturn (Bruening, MacLehose, Loth, Story, & Neumark-Sztainer, 2012; Shepard, Setren, & Cooper, 2011). During this time period at least some relief was provided through the 2009 federal stimulus package which increased benefits and eligibility for the major federal food assistance program for individuals and households – the Supplemental Nutrition Assistance Program –SNAP (Nord & Prell, 2011). According to Shepard, Setren, and Cooper (2011), however, food insecurity in the U.S. still increased by 30% in the time period between 2007 and 2010. This dramatic increase in numbers of Americans affected negatively by food insecurity heightens the need for public health and societal action.

The Economic Research Service (ERS) of the United States Department of Agriculture defines "food insecurity" as "reports of reduced quality, variety, or desirability of diet" (U.S. Department of Agriculture, Economic Research Service, 2011). Hunger is defined a panel of by the Committee on National Statistics of the National Academies (CNSTAT) on an ERS website as "...a potential consequence of food insecurity that, because of prolonged, involuntary lack of food, results in discomfort, illness, weakness, or pain that goes beyond the usual uneasy sensation." (U.S. Department of Agriculture, Economic Research Service, 2011). For the year 2010, a federal government report noted that when households were classified as "food secure", the spending for food was 27% higher than that of the comparable "food insecure" household (Coleman-Jensen, Nord, Andrews, & Carlson, 2011). Examples of factors that increase the risk of hunger and food insecurity include: low income, single parenthood,

lack of employment or underemployment, lack of participation in health or social programs that provide food or assistance to buy food, and poor household management of resources, including food resources (Nord & Andrews, 2003).

Whereas much of the focus concerning food insecurity has been at the individual or household level, there is also discussion about a need to focus on food security at the community-level (Haering & Sayed, 2009; McCullum, Desjardins, Kraak, Ladipo, & Costello, 2005; Winne, 2004–2012). This distinction is a familiar one to public health professionals who deal not only with individuals and families but also with the health of population units such as communities (Turnock, 2009). The concept of community food security emphasizes optimal conditions in regard to access to food, quantity of food consumed, the nutritional quality of food, and the ability to satisfy food preferences, all within the context of a population's views of cultural acceptability and realities of economic affordability (Lee & Greif, 2008). Groups working in the area of community food security may also emphasize community partnerships, community empowerment, and local, sustainable agriculture (Community Food Security Coalition, n.d.).

Public health professionals need to be concerned about food insecurity and hunger because these states negatively influence health during all stages of life (Anater, Mc Williams, & Latkin, 2011; Borders, Grobman, Amsden, & Holl, 2007; Bruening, MacLehose, Loth, Story, & Neumark-Sztainer, 2012; Cook & Jeng, 2009; Eicher-Miller, Mason, Weaver, McCabe, & Boushey, 2009; Eicher-Miller, Mason, Weaver, McCabe, Boushey, 2011; Hampton, 2007; Holben, 2010; Lee & Frongillo, 2001; Tarasuk, McIntyre, & Li, 2007). For example, food insecurity during pregnancy has been associated with low birthweight (Borders, Grobman, Amsden, & Holl, 2007), food insecurity in early adolescence may negatively affect bone mass in males (Eicher-Miller, Mason, Weaver, McCabe, & Boushey, 2011) and food insecurity in the elderly has been associated with multiple nutrient deficiencies and lower body fat (Lee & Frongillo, 2001).

At least two studies have noted that food insecurity can be linked to lowered fruit and vegetable consumption (Bruening, MacLehose, Loth, Story, & Neumark-Sztainer, 2012; Tarasuk, McIntyre, & Li, 2007). This is at a time when the Dietary Guidelines for Americans 2010 advocate increased consumption of fruits and vegetables to help prevent chronic diseases such as cancer and cardiovascular disease (U.S. Department of Agriculture, Center for Nutrition Policy and Promotion, 2011). Specific nutrient deficiencies that have been associated with food insecurity in developed countries include: iron (Eicher-Miller, Mason, Weaver, McCabe, & Boushey, 2009)

and lack of carbohydrate, and Vitamin B6 (Tarasuk, McIntyre, & Li, 2007).

Low caloric intake has been noted as a potential problem in some food-insecure populations in Canada (Tarasuk, McIntyre, & Li, 2007) but was not observed in an analysis of the U.S. National Health and Nutrition Examination (NHANES) survey data (Zizza, Duffy, & Gerrior, 2008). Zizza, Duffy, and Gerrior (2008) however, did find food insecurity to be associated with a different pattern of caloric intake—reduced meal frequency accompanied by larger meals and more snacking. Anater, McWilliams, and Latkin (2011) also linked food insecurity to meal skipping and to the practice of overdilution of infant formula and other liquid foods. At least one study has shown that mothers may forego eating in order to provide for children (Dammann & Smith, 2009).

Reviewing a significant amount of literature, Larson and Story (2010) concluded that research on obesity's association with food insecurity is unclear with some suggestion that food-insecure children and women may be at a greater risk for this condition. This means that in some instances there may actually be a link between the obesity epidemic and food insecurity (Larson & Story, 2010). At least one study which analyzed NHANES data has also linked food insecurity with increased risk for chronic disease problems such as hypertension and diabetes mellitus (Seligman, Laraia, & Kushel, 2010).

Food insecurity is also associated with multiple mental health problems such as depression in adults, particularly food-insecure parents (Bronte-Tinkew, Zaslow, Capps, Horowitz, & McNamara, 2007; Lent, Petrovic, Swanson & Olson, 2009) and cognitive/developmental deficits in children (Jyoti, Frongillo, & Jones, 2005; Rose-Jacobs, Black, Casey, Cook, Cutts, Chilton, Herren, et al., 2008; Zaslow, Bronte-Tinkew, Capps, Horowitz, Moore, & Weinstein, 2009). It has been noted that adult mental health problems may exacerbate food insecurity since mental health impairment may lead to unemployment or underemployment (Lent, Petrovic, Swanson, & Olson, 2009).

Food insecurity, in some instances, may be linked with behavioral practices that could negatively influence health such as “dumpster diving” which can increase the risk of acquiring foodborne illness (Anater, McWilliams, & Latkin, 2011). These same authors also report that some individuals engage in sex in exchange for food, a behavior which increases the risk of acquiring sexually transmitted diseases.

Food insecurity also affects medical treatment and health care costs (Kersey, Beran, McGovern, Biros, & Lurie, 2008; Kushel, Gupta, Gee, & Haas, 2006; Weiser, Frongillo, Ragland, Hogg, Riley, & Bangsberg, 2008). Food insecurity has been shown to be related to decreased adherence to HIV treatment regimens with subsequent lessening of viral

suppression (Weiser, Frongillo, Ragland, Hogg, Riley, & Bangsberg, 2008). Food insecurity also has been associated with increased hospitalizations in adults, many times due to having to make the choice between buying medicine or buying food (Kersey, Beran, McGovern, Biros, & Lurie, 2008; Shepard, Setren & Cooper, 2011). Food insecurity also has been cited as being related to increased need for hospitalizations in children as well (Cook, Frank, Berkowitz, Black, Casey, Cutts, Meyers, et al., 2004).

The Florida Association of Food Banks estimates that on any given day about two million people in Florida are experiencing food insecurity (Florida Association of Food Banks, Help Us End Hunger in Florida, n.d.). According to government statistics published by Feeding America, Florida had a household food insecurity prevalence rate of 16.1% that was cited as being higher than the national average for the period 2008-2010 (Feeding America, Hunger and Poverty Statistics, n.d.). Florida county level insecurity prevalence information is available through an organization named *Florida Impact* (Florida Impact, Feeding Florida 2009, n.d.). An October 2011 report, looking at data from 2007-2010, cited Florida as being the state with the greatest increase in hunger-associated costs calculated by using monetary figures associated with such factors as poor health outcomes, educational progress, and philanthropic efforts such as faith-based or non-profit provision of food and/or meals. (Shepard, Setren, & Cooper, 2011).

What is currently being done to address individual and household hunger? Examples of federal programs targeting food insecurity include: the Commodity Supplemental Food Program (CSFP), the Emergency Food Assistance Program (TEFAP), and the Special Supplemental Food Program for Women, Infants, and Children (WIC) and of course, SNAP (U.S. Department of Agriculture, Food and Nutrition Service, 2012). Both Florida Impact and the Food and Research Action Center (FRAC) noted that over three million people in Florida participated in SNAP in 2011 (Florida Impact, Prepare 2012, n.d.; FRAC, National and State Program Data, n.d.). Examples of major non-governmental organizations addressing the food insecurity/hunger problem at the national level are Feeding America (Feeding America, n.d.) and the Food and Resource Action Center (FRAC, n.d.).

Florida organizations addressing hunger include: Florida Impact (Florida Impact: Mobilizing Communities Against Hunger and Poverty, n.d.), the Florida Partnership to End Child Hunger (n.d.), and the Florida Association of Food Banks (n.d.). A Homeless Shelters Directory (HSD, 2006-2012) website provides means to locate food pantries and soup kitchens throughout the state of Florida.

As Florida public health professionals, individually and through our professional organizations, we need to support efforts to eliminate food insecurity and hunger both at the individual/household level and at the community level. Chilton and Rose (2009) have advocated that public health needs to frame discussions and policy formulation such that food security is viewed as a basic human right under the United Nations Universal Declaration of Human Rights provision related to minimum standards of living for human beings. We must ensure that our public health clients have access to information about local resources available to them to help them secure food such as local food pantries, feeding programs for the poor and/or homeless, community gardening projects, programs that provide nutrition education for low income individuals, and governmental programs that support access to foods (Benjamin, 2006; McCullum, Desjardins, Kraak, Ladipo, & Costello, 2005). We must support and promote improvements in governmental programs that have been proven to be effective such as helping SNAP participants by making purchases at farmers' markets more accessible (Benjamin, 2006; Buttenheim, Havassy, Fang, Glyn, & Karpyn, 2012).

When possible public health professionals should provide nutritional advice on how to make healthy choices when food resources are limited (McCullum, Desjardins, Kraak, Ladipo, & Costello, 2005). This is particularly critical since recent study has shown that eating in ways consistent with current U.S. dietary advice may be associated with increased food costs (Monsivais, Aggarwal, & Drewnowski, 2011). Partners in these nutrition education efforts may be the county extension service (Dollahite, Olson, & Scott-Pierce, 2008) and nutrition educators employed by SNAP (U.S. Department of Agriculture, SNAP-ED Connection, 2012). Public health professionals practicing primary care need to be prepared to diagnose, treat, and help prevent health problems that are related to hunger (Holben & Myles, 2004).

Promotion of food security which involves access to acceptable food at affordable cost will be another activity in which public health professionals will need to collaborate with other stakeholders through either formal coalitions or informal contacts(McCullum, Desjardins, Kraak, Ladipo, & Costello, 2005). An example is a county health department (Duval County) which is working with other community entities to sponsor a community food summit to create community awareness and dialogue (Friends of Northeast Florida Community Gardens, n.d.). In the context of community food security, public health needs to prepare for and deal with acute situations of food insecurity such as seen in natural disasters like hurricanes (McCullum, Desjardins, Kraak, Ladipo, & Costello, 2005). Long term

public health strategies to end food insecurity should focus on advocacy for legislative and policy improvements with regard to wages, affordable housing, urban and rural agriculture, expanded benefits and access to governmental food programs, and incentives for the agricultural and food marketing sector to sell foods in areas of need such as food deserts (Benjamin, 2006; Mc Cullum, Desjardins, Kraak, Ladipo, & Costello, 2005).

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