

Introduction

The national nutrition safety net consists of 15 programs that provide millions of low-income Americans access to a healthy and nutritious diet. It has been observed that many low-income individuals are both overweight and participants in one or more nutrition assistance programs. This has led some to question whether participation in the nutrition assistance programs contributes to the growing problem of overweight and obesity. This report presents the conclusions of an expert panel convened by the Food and Nutrition Service to determine if there is scientific evidence of a relationship between program participation and excess weight.

The panel represented a cross section of individuals with demonstrated expertise in areas of research methods, nutrition, obesity, nutrition assistance programs, food insecurity and

poverty. After a thorough search of the existing scientific literature as of March 2004, the panel identified 12 research studies that addressed participation in the Food Stamp, National School Lunch, School Breakfast, or Supplemental Nutrition Program for Women, Infants, and Children (WIC) and overweight or obesity. A critical review of these studies and the panel's combined experience formed the basis for the panel's conclusions.

Findings

Poverty, as measured by household income, is associated with obesity in some population groups. One review of 144 published studies shows a strong inverse association between socioeconomic status and obesity in women, and an inconsistent relationship in men and children. The panel concluded that it is necessary to separate the effects of poverty and socioeconomic status from the potential effects of food assistance to determine the relationship between obesity and program participation. The research challenge, however, is that poverty is highly correlated with program participation, making it hard to separate their independent effects.

Existing research provides inconsistent evidence of an association between the four major nutrition assistance programs and obesity, and no evidence that program participation causes obesity. The published scientific literature, although relatively sparse, provides some information on components of the relationship between program participation and obesity. No study, however, has fully addressed important issues related to research design and measurement necessary to establish a causal relationship.

There is no published research that considers the relationship between participation in WIC and maternal obesity. There is no published research

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that provides evidence of a consistent relationship between participation in the National School Lunch and Breakfast programs and obesity. The published research indicates there is some association between Food Stamp Program participation and obesity, but there is no evidence of causality. Only one study considered the combined effects of participation in multiple programs, and it found no evidence that participating in more than one program increased or reduced the risk of being overweight.

New research would be needed to determine the relationship between nutrition assistance program participation and obesity. The panel emphasized the need for future research to consider the simultaneous effects of program participation, poverty, and obesity. In addition, future research would have to address key limitations of past studies, including:

- selection bias that leads to systematic differences between program participants and non-participants and complicates the interpretation of observed differences in outcomes like obesity;
- incomplete measures of program participation that do not include information on the duration and amount of benefits;
- inaccurate measures of eligibility that hinder identification of appropriate comparison groups; and
- high costs of collecting accurate information on dietary intake, height and weight.

It is not likely that any single study could successfully address all of these limitations, nor is it clear that this would be a productive use of limited research funds. The panel instead suggested a mix of alternative approaches that include:

- naturally occurring opportunities to conduct controlled experiments that take advantage of existing or new program features;
- added questions on height, weight, dietary intake, and program participation in existing studies and surveys; and
- small-scale studies that focus on specific target populations and specific aspects of the relationship between participation and obesity.

The results of such exploratory studies may provide useful information about the nature of the relationship between program participation and obesity, and may also indicate whether investment in a large-scale longitudinal study is warranted to provide the best possible evidence.

For More Information

Linz, P., M. Lee, and L. Bell (2005). *Obesity, Poverty, and Participation in Nutrition Assistance Programs*. Prepared by ALTA Systems, Inc. for the Food and Nutrition Service, USDA (available on-line at www.fns.usda.gov/oane).

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