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Selections highlight research, evaluation reports, and other publications that inform the field about key issues in, and effective practices for, fostering economic self-sufficiency.

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**Pan, L., Freedman, D. S., Sharma, A. J., Castellanos-Brown, K., Park, S., Smith, R. B., & Blanck, H. M. (2016). Trends in obesity among participants aged 2–4 years in the Special Supplemental Nutrition Program for Women, Infants, and Children — United States, 2000–2014. *Morbidity and Mortality Weekly Report*, 65(45), 1256–1260. doi:10.15585/mmwr.mm6545a2**

<https://www.opressrc.org/content/trends-obesity-among-participants-aged-2%E2%80%934-years-special-supplemental-nutrition-program>

In this report, the authors used data from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) to examine trends in the prevalence of obesity among young children from low-income families. WIC is a federal food assistance program that operates in all U.S. states and territories to support nutrition among low-income new and expectant mothers as well as children from birth to age five, and the biennial census by the USDA of participants and program characteristics collected child anthropometric data, which are outcomes related to body measurements, such as height and weight. The authors found that, though there was an overall increase in obesity among WIC participants aged two to four years between 2000 and 2010, between 2010 and 2014 there was a significant decrease overall as well as among multiple racial/ethnic groups and the majority of state WIC agencies. However, the obesity rate of 14.5 percent among this population in 2014 was still higher than the rate of 8.9 percent for children ages 2-5 years between 2011 and 2014 in the National Health and Nutrition Examination Survey. Though these two samples are not directly comparable because they differ slightly in their year and age ranges, this evidence suggests that obesity was more prevalent among young children participating in WIC than in the sample of young children that was not low-income specific. In addition, rates differed by race-ethnicity, affecting American Indians/Alaska Natives and Hispanics more than other groups. The authors suggested that, given the high prevalence of childhood obesity among WIC participants despite recent declines, continued prevention efforts are warranted.

**Institute of Medicine. (2011). *Hunger and obesity: Understanding a food insecurity paradigm: Workshop summary*. Washington, DC: The National Academies Press.**

<https://www.opressrc.org/content/hunger-and-obesity-understanding-food-insecurity-paradigm-workshop-summary>

This report summarized the proceedings of a workshop organized by the Institute of Medicine to engage a range of experts – including researchers, activists, and specialists focused on hunger and/or overweight/obesity – to better understand the relationship between food insecurity and obesity. The experts reviewed existing research and noted that while most studies have not found a direct relationship between food insecurity and childhood obesity, further investigations into these commonly co-occurring conditions, as well as the effects of stressors and poverty, would be worthwhile. Participants also discussed topics such as the possibility of considering young children a “sentinel population” whose outcomes could provide information about the links between food insecurity and obesity for other demographic groups or subgroups, the complexity of measuring socio-economic disparities in food insecurity and obesity, the need to examine links between income level and children’s diet quality, the importance of considering food environments such as those in schools, the utility of using varied methodological approaches when researching food insecurity and obesity, and a series of potential approaches to reducing childhood obesity.

**Bronte-Tinkew, J., Zaslow, M., Capps, R., Horowitz, A., & McNamara, M. (2007). *Food insecurity works through depression, parenting, and infant feeding to influence overweight and health in toddlers*. *The Journal of Nutrition*, 137(9), 2160-2165.**

<https://www.opressrc.org/content/food-insecurity-works-through-depression-parenting-and-infant-feeding-influence-overweight>

This article investigated links between food insecurity and overweight in toddlers. Using the nationally representative Early Childhood Longitudinal Study-Birth Cohort 9- and 24-month surveys, the authors tested direct and indirect associations between food insecurity and child health and well-being outcomes using structural equation modeling. Though they found no significant direct relationship between food insecurity and overweight, they did find a significant indirect relationship that operated through parenting and infant feeding practices such as the timing of breastfeeding and the introduction of solid foods. The authors suggested that these results highlight the importance of strengthening food security among families with young children.

**Morrissey, T. W., Jacknowitz, A., & Vinopal, K. (2014). *Local food prices and their associations with children’s weight and food security*. *Pediatrics*. doi:10.1542/peds.2013-1963**

<https://www.opressrc.org/content/local-food-prices-and-their-associations-children%E2%80%99s-weight-and-food-security>

This article examined the influence of local food prices on body mass index (BMI) and overweight status in young children. The authors used data from the Early Childhood Longitudinal Study-Birth Cohort and local

food price data from the Council for Community and Economic Research Cost-of-Living Index to predict children's health outcomes from local food prices by running ordinary least squares, linear probability, and fixed effects models. They found that higher local prices for fresh produce were related to higher BMI in children and that higher prices of soft drinks were related to lower likelihood of being overweight.

Unexpectedly, they also found that higher prices of fast food were associated with greater likelihood of being overweight. In light of these findings, the authors suggested that efforts to improve the affordability of fresh produce for low-income families may be a promising strategy for promoting children's healthy weight outcomes.

**Miller, A. L., Dawson, L., & Welker, E. (2017). *Stress in early life and childhood obesity risk*. Princeton, NJ: Healthy Eating Research.**

<https://www.opressrc.org/content/stress-early-life-and-childhood-obesity-risk>

This report summarized emerging evidence linking childhood obesity risk with stressors in early childhood. The authors systematically identified and reviewed peer reviewed articles and papers of all study designs. The authors found that though associations between stress in early childhood and obesity risk are inconsistent in the literature thus far, there are multiple, interrelated ways through which early childhood exposure to stressors such as poverty, food insecurity, and adverse childhood experiences may increase risk for childhood obesity. These links included effects on biological development such as brain development, as well as effects on behaviors such as physical activity and feeding and eating behaviors. In light of this evidence, the authors identified early childhood as a critical period for obesity prevention and recommended prevention efforts at the family, community, and policy levels, such as efforts that follow a two-generation approach, improve the built environment in communities, and ensure access to high-quality child care and health care.

**Ward, D. S., Welker, E., Choate, A., Henderson, K. E., Lott, M., Tovar, A., Wilson, A., & Sallis, J. F. (2017). *Strength of obesity prevention interventions in early care and education settings: A systematic review*. *Preventive Medicine, 95*, S37-S52. doi:10.1016/j.yjpm.2016.09.033.**

<https://www.opressrc.org/content/strength-obesity-prevention-interventions-early-care-and-education-settings-systematic>

Considering the large number of children enrolled in child care while their parents work and evidence of increased obesity risk among children enrolled in child care, this article systematically reviewed evaluations of interventions to prevent obesity among children in center-based early childhood education settings. The authors identified, assessed, and analyzed 47 peer-reviewed studies of 43 interventions that were published between 2010 and 2015 to determine what aspects of interventions helped to improve effectiveness. They coded the studies for characteristics such as intervention strength (i.e., the number and potential impact of the strategies employed, the frequency of delivery, and the duration of the intervention), intervention success (i.e., what favorable and statistically significant outcomes were observed), and methodological quality. Results indicated that intervention strength was negatively correlated with behavioral outcomes but that it was positively correlated with successful anthropometric outcomes, particularly when they

incorporated parent engagement. The authors suggested that more comprehensive approaches may be more effective at promoting healthy weight, although – given the negative correlations with behavioral outcomes – they may face greater challenges to implementation and fidelity.

**Korenman, S., Abner, K. S., Kaestner, R., & Gordon, R. A. (2013). The Child and Adult Care Food Program and the nutrition of preschoolers. *Early Childhood Research Quarterly*, 28(2), 325-336. doi:10.1016/j.ecresq.2012.07.007**

<https://www.opressrc.org/content/child-and-adult-care-food-program-and-nutrition-preschoolers>

This article examined nutritional outcomes for low-income children enrolled in child care centers participating in the Child and Adult Care Food Program (CACFP). Using data for four-year-old children drawn from the nationally-representative Early Childhood Longitudinal Study-Birth Cohort and propensity-score, weighted regression, the authors made non-experimental comparisons between outcomes among children at centers that participated in the CACFP and those at centers that did not. They found that CACFP participation was significantly associated with better intake of milk and vegetables and slight reductions in the likelihood of overweight among low-income children. Results were mixed regarding the intake of less-healthy foods. The authors stated that these findings suggest that the CACFP has the potential to improve diet quality and help reduce obesity among low-income children and that it is especially important to expand the reach of this program, as prior research found that many low-income children were not receiving the program.

**Chiasson, M. A., Findley, S. E., Sekhobo, J. P., Scheinmann, R., Edmunds, L. S., Faly, A. S., & McLeod, N. J. (2013). Changing WIC changes what children eat. *Obesity*, 21(7), 1423-1429. doi:10.1002/oby.20295**

<https://www.opressrc.org/content/changing-wic-changes-what-children-eat>

This article described changes in children's food consumption and body mass index (BMI) across a period of changes to the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). The authors examined cross-sectional administrative data for participants in New York State between 2008 and 2011 and identified improvements in dietary intake accompanied by steady reductions in obesity among children. The authors found these results promising for the potential of cost-neutral modifications to the program across the United States.

**Gundersen, C. (2015). Food assistance programs and child health. *The Future of Children*, 25(1), 91-109.**

<https://www.opressrc.org/content/food-assistance-programs-and-child-health>

In this article, the author gave an overview of the Supplemental Nutrition Assistance Program and the federal school meal programs, some of their effects on children's health generally, and their links to food insecurity and obesity. The author found that while the evidence regarding these programs' effects on obesity among low-income children has been mixed, research indicates that they have met with success in reducing food

insecurity. He then reviewed the potential effects of proposed policy changes; for example, he cautioned that restricting SNAP benefits in an attempt to reduce children's consumption of "unhealthy" foods may have nonexistent or negative effects. Similarly, he pointed out that changes in regulations to make foods served in schools "healthier" may lead schools to fall out of participation, restricting food access for children who need it.

**Gortmaker, S. L., Long, M. W., Resch, S. C., Ward, Z. J., Cradock, A. L., Barrett, J. L., . . . Wang, Y. C. (2015). Cost effectiveness of childhood obesity interventions: Evidence and methods for CHOICES. *American Journal of Preventive Medicine*, 49(1), 102-111. doi:10.1016/j.amepre.2015.03.032**

<https://www.opressrc.org/content/cost-effectiveness-childhood-obesity-interventions-evidence-and-methods-choices>

This article described four interventions designed to reduce childhood obesity: a tax on sugar-sweetened beverages, reduced tax subsidies for TV advertising to children, policy changes in early childhood education settings, and state-level physical education requirements. The authors analyzed costs, intervention effects, implementation information, and equity issues. They found that all except the physical activity requirements would save net costs and that the two tax interventions would produce revenue. The authors suggested that these broad policy interventions show promise of greater cost-effectiveness, relative to published clinical interventions.