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Commentary

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Food Insecurity and Poor Sleep: Another Consequence of Food Insecurity in the United States[1,2]

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Food insecurity is one of the most serious nutrition-related health issues in the United States today. The magnitude of the problem is enormous. In 2013, for example, almost 50 million Americans lived in food-insecure households (1). The extent of food insecurity remains very high and, despite the end of the Great Recession, rates have not returned to the food insecurity levels of 2007. Because of the magnitude of the problem, an extensive literature looking at food insecurity in the United States has emerged (2).

That households are going without enough food is, in and of itself, an important policy issue. Making the problem of food insecurity even more severe are the numerous health and other consequences associated with being food insecure (3). In this issue of *The Journal of Nutrition*, Ding et al. (4) make a nice contribution to this literature on the association of food insecurity with negative outcomes in their paper, "Food Insecurity Is Associated with Poor Sleep Outcomes among US Adults". Their work examines an especially important issue insofar as lack of sleep and difficulty initiating sleep have been associated with a wide array of chronic health conditions, including diabetes and hypertension (5, 6).

Using data from the 2005–2010 NHANES, Ding et al. first found that women who are very low food secure have lower sleep durations than women who are fully food secure (i.e., they do not respond affirmatively to any of the food hardship questions posed in the NHANES). Second, they found that men who experience any form of food insecurity (i.e., they respond affirmatively to at least one of the food hardship questions) have longer sleep latencies (the amount of time it takes to fall asleep) than fully food-secure men. Along with being, to the best of my knowledge, the first paper to look at the impact of food insecurity on sleep, this paper further points out the importance of looking at marginal food insecurity along with just food insecurity when looking at health outcomes (7). This work also identifies another pathway through which food insecurity affects chronic health conditions—through its effect on sleep. I now consider 2 implications from this research.

Interpreting the Effect of Food Insecurity on Health Outcomes

Consistent with almost all of the research looking at the effect of food insecurity on health outcomes, the authors impose the assumption that there are no unobserved characteristics that lead a household both to be more or less likely to be food insecure and simultaneously to be more or less likely to be in poor health. This assumption is unlikely to hold. As a consequence, the results found in this paper (and other papers using similar methods) is subjected to some level of bias. The extent of this bias and even the direction of the bias is unclear a priori.

There are a number of econometric techniques that can be used to reduce these biases. Using one approach that imposes reasonable assumptions regarding the impact of food insecurity and the unobserved characteristics that would lead one to be food insecure and in poor health, and also using data from NHANES, we find that food-insecure children are less likely to be in good or better health and that the impact from this can be quite large (8). As such, our research is consistent with other research, including the paper by Ding et al., showing that food insecurity leads to worse health outcomes. Future research should use the methods employed by Gunderson and Kreider (8), along with other appropriate econometric methods to correct for these unobserved characteristics. This will be especially important for policymakers and program administrators who need accurate estimates of the potential impact of reducing food insecurity on health outcomes.

The Importance of the Supplemental Nutrition Assistance Program

The Supplemental Nutrition Assistance Program (SNAP; formerly known as the Food Stamp Program) has been a critical component of the social safety net in the United States for >50 y (9). Along with improving well-being over multiple other dimensions, SNAP, more than any other program, has ensured that millions of Americans are less likely to be food insecure (10).

Despite the many successes of SNAP, there have been calls by some to fundamentally change the structure of the program by placing substantial restrictions on what can be purchased with SNAP benefits. These calls are based largely on a misperception that SNAP recipients are more likely to be obese than eligible nonrecipients (11). Whereas imposing restrictions on SNAP purchases is unlikely to lead to reductions in obesity or other improvements in well-being, such restrictions will lead to increases in food insecurity, primarily because of the increased stigma and transactions costs that will lead to reductions in SNAP participation (11). Restrictions will also lead to increases in food insecurity among even nonparticipants because of

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increased food prices (12). There need to be continued efforts to ensure that there are no misguided restrictions imposed on SNAP so that SNAP can continue to serve its critical role in reducing food insecurity and its negative consequences, including sleep problems as found in the paper by Ding et al.

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