



Healthy Eating in Hard Times?

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HEALTH AND THE ECONOMY

Do economic recessions harm human health? Researchers and policy makers have long been interested in this question as part of a broader area of inquiry around how social and economic conditions influence population health. Economic-related factors, including income, employment, and wealth, are consistently tied to health status and life expectancy, as well as obesity and other risk factors.^{1,2} Beyond simply measuring associations between these indicators of socioeconomic position (SEP) and health, researchers have studied economic cycles—including recessions and recoveries—to see whether these fluctuations are correlated with similar changes in population health. This approach to investigation has some inherent strengths, particularly the fact that economic cycles and their financial and social impacts are a kind of population-level intervention, and thus, causal inferences are not subject to the same selection bias concerns that plague many observational studies of SEP and health.³ Such studies have found that economic downturns are linked to higher rates of poor mental health⁴ and suicide,⁵ findings that fit with what is known about SEP and health.^{1,2,6}

But some head-scratching patterns have also emerged from this literature, in that some aspects of population health seem to improve when the economy tanks. For example, mortality, particularly deaths from cardiovascular disease and traffic accidents,⁷ have been seen to decline in economic downturns. These aspects of population health are described by health economists as “pro-cyclical,” in that they historically moved in the same direction as economic indicators.^{7,8} In recessions, economic indicators nosedive, with significant and sustained decline in economic activity triggering unemployment, lost industrial output, and falling income and consumer spending.⁹ So how could these conditions lead to better health? At the extreme, not having enough income or other resources can limit access to housing, medical care, nutritious food, and other essentials to a healthy life. Beyond

these extremes, are there some cases when hard times may promote population health?

HOW DO ECONOMIC CYCLES INFLUENCE HEALTH? HEALTH BEHAVIORS

Part of the puzzle in understanding how social and economic conditions influence health has been identifying the likely mediating pathways. In plain language, this means understanding if and how health behaviors are shaped by economic circumstances. Studies have linked some indicators of recession to risk factors for cardiovascular and metabolic diseases. For example, higher area-level rates of unemployment have been associated with lower population rates of smoking and obesity, as well as greater participation in physical activity.¹⁰ Alcohol use might also moderate during economic downturns. At the population level, alcohol consumption and binge-drinking decline during recessions.⁴ If recessions can reduce obesity, smoking, and alcohol abuse and increase physical activity, perhaps these patterns could explain some of the population health benefits observed during recessions. But what about diet?

DIETS OF US ADULTS DURING THE GREAT RECESSION

Chen and Sturm¹¹ provide an important preliminary look at whether diets in the United States varied in relation to economic cycles over a 20-year period. To do this, they conducted a novel analysis of the National Health and Nutrition Examination Survey (NHANES), the flagship dietary surveillance system in the United States. Using data from 1999 to 2018, the author’s quantified dietary quality of the US population based on the Healthy Eating Index 2015 (HEI-2015) and tested the hypothesis that dietary quality varied systematically in relation to economic cycles, including the 2007–2009 Great Recession. In their succinct report, the authors confirm sociodemographic patterns in dietary quality as well as earlier reports on improvements in the US diet over time.^{12,13} But they go on to analyze the year-by-year changes in dietary quality, noting that the most substantial improvements in healthy eating occurred in years during which unemployment were highest during the Great Recession.¹⁴ Subsequently, the improvements in dietary quality declined and reversed in 2017–2018, the final year of their analysis and corresponding to lowest rates of unemployment.

The study has several strengths, including the nationwide, representative sample in NHANES, the repeated cross-sectional design spanning nearly 20 years, and the use of HEI-2015 as a dietary quality indicator, which has been linked

to cardiometabolic risk factors and health outcomes.¹⁵⁻¹⁷ Nevertheless, correlation is not causation, so it's difficult to conclude with certainty that the recession caused improvements in diet. However, the authors offer a temptingly plausible interpretation of their observations, suggesting that population-level improvements in dietary quality during the Great Recession may have resulted from shifting consumer behaviors: People may have eaten out less often and cooked more.

HEALTHY EATING: TIME AND MONEY

Healthier diets, made up of generous servings of vegetables, fruit, whole grains, and lean proteins, tend to cost more for consumers¹⁸ and earlier analyses of NHANES data suggest that multiple measures of dietary quality, including based on the HEI, are associated with higher consumer food costs.¹⁹⁻²¹ Recessions take a bite out of incomes and consumer spending, including food expenditures,²² which could potentially reflect the purchasing of cheaper, less-healthy foods and beverages. And yet Chen and Sturm¹¹ show that the Great Recession, which plunged the nation into the highest rates of unemployment in a generation and zapped income and wealth in the process,²³ coincided with significant improvements in diet.

If consumers shifted food spending from restaurants to preparing more of their meals at home, they might save money that could be instead used to purchase healthier ingredients for home-cooked meals. Because the NHANES doesn't collect consumer spending information, this study couldn't directly answer the question of how consumers shifted to healthier diets during an economic squeeze, but other research provides clues. For example, detailed studies of consumer food spending in the United Kingdom²⁴ and United States²⁵ have shown overall upticks in the nutritional quality of foods purchased during the great recession, corresponding to higher grocery bills offset by reductions in foods purchased in restaurants.

Food from restaurants and other food-away-from-home retailers are a major part of the American diet, typically making up nearly half of consumer food spending and 1 out of 3 kcal consumed.²⁶ Yet, eating out isn't always the healthiest option, with research indicating that people who eat out more often, especially from fast-food outlets, have lower-quality diets and are more likely to live with obesity and chronic disease.^{26,27} Shifting the food dollar from restaurants to groceries might mean that consumers could eat healthier food prepared at home within a limited budget. But as people spend less money eating out, they may need to spend more time in the kitchen.

Nutrition education has often reinforced the importance of cooking and food preparation skills as a health behavior, given the reported strong associations with dietary quality and health status.^{28,29} This study could not determine whether or not NHANES participants spent more time in the kitchen, but other research has found that during the Great Recession as people lost time in

paid employment, they spent more time shopping, cooking, and doing related housework.³⁰ If generalizable, those behaviors may have contributed to the production of affordable healthy meals and helped explain the results observed in this study.

RECESSIONS: GOOD FOR HEALTHY EATING... OR?

Although this study suggests that recessions might be good for dietary quality, policy makers and nutrition educators should not rejoice at the sign of the next economic downturn. Research on the health influences of economic cycles is notoriously inconsistent, depending on the study design and level of analysis. For example, whereas ecological studies of recession and smoking show that smoking rates decline with rising unemployment,¹⁰ individual-level studies tell a different story, with smokers who lose their jobs often intensifying their smoking.³¹ Similar inconsistencies between ecological and individual-level studies have been described for other health behaviors and health outcomes, including food consumption.⁴

A recent systematic review and meta-analysis of international research on changes in food consumption associated with the Great Recession found a mixed evidence base.³² Dietary changes (mostly based on individual-level studies) differed by country and setting, as well as specific dietary outcomes measured. Some of the findings were consistent with the report of Chen and Sturm,¹¹ including declines in fast food, and sugary foods and beverages, but the preponderance of studies indicated that the recession coincided with declining dietary quality.³² Although the HEI-2015 is a valid indicator of dietary quality, as a composite measure, improvements in the total score may represent improvement in all aspects of diet or only specific components. Finally, earlier studies that examined results by SEP found disproportionate influence of the Great Recession on lower-SEP populations, revealing the importance of focusing on these groups.³² It is important to note that recessions also bring about rises in food insecurity,³³ with the Great Recession triggering one of the largest surges in enrolment in the Supplemental Nutrition Assistance Program in that program's history.³⁴

These issues are again in the spotlight with the economic consequences of the coronavirus disease 2019 (COVID-19) pandemic, which led to job losses and increases in financial and housing insecurity.³⁵ Although the so-called COVID Recession was relatively short-lived,³⁶ it scarred millions, undermining the social determinants of health and access to healthy food.³⁷ Whereas COVID-19 lockdowns gave some Americans the opportunity to cultivate their cooking and baking skills, many more were forced to turn to food banks for the first time in their lives. Further research on macroeconomic influence on diet and health will need to identify the mechanisms of how the economy influences dietary behaviors and examine differential influence among sociodemographic subpopulations. As policy makers and health care providers, including registered dietitian nutritionists, plan for the most effective individual- and

population-level approaches to ensuring equitable access to healthy food, researchers will have to improve the evidence base to better understand how the economy influences dietary quality in the population and what programs and interventions best support healthy eating during hard times.

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