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Editorial

Understanding Healthy Lifestyles: The Role of Choice and the Environment

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Introduction

Health-related behavior is an intriguing area of study for most applied economists who engage with policy questions. While health status is often not chosen directly by individuals, it is generally influenced by individual behavior and lifestyle choices. Hence, incentives are vital for the economic policy analysis of healthy lifestyles. This explains why the design of behaviorally-compatible incentives is essential to the pursuit of desirable health outcomes. Yet, it is increasingly clear that health-related choices are very much influenced by the social environment that individuals are exposed to (McDonald and Kennedy 2005); this includes their social identity (Costa-Font and Gil 2004), and more generally the social norms that affect wider constraints on behaviors that go unobserved by naïve economic analysis. Modeling to account for environmental effects on behaviors is especially relevant if policy success is regarded as a definitive test of an economics claim.

An increasingly important share of health care expenditures is directly and indirectly the consequence of healthy behaviors. Preventable diseases linked to lifestyle choices associated with food consumption, smoking and drinking alcohol play an increasing role in health care demand. However, more needs to be known to inform economics-grounded policy-making regarding health-related lifestyles more generally, and obesity and nutrition more specifically, both for its effects on medical care costs (Cawley and Meyerhoefer 2012), as well as its impact on wellbeing and life satisfaction.

According to the World Health Organization (WHO), the impact of the obesity epidemic on non-communicable diseases such as cardiovascular diseases, diabetes, and cancer threatens health systems and is set to become one of the greatest challenges to public health in the twenty-first century. Studies have confirmed that a significant burden of the "obesity epidemic" comes through its incidence on chronic illnesses (Costa-Font and Gil 2005). The health consequences range from increased risk of

premature death (Banegas et al. 2003) to serious chronic conditions that reduce overall quality of life and cause sizeable health-care costs (Swinburn et al. 2004). In economic terms, the effect of obesity on the prevalence of chronic illness can be envisaged as confounding other health care inputs, rather than a single negative input into health.

The determinants of health related lifestyles and obesity are multiple and the incentives to reduce their undesirable effects on health are relatively unexplored. Genetic and physiological factors explain some variability in body weight, although not the dramatically rapid growth of obesity rates over the last three decades. Calories expended at work, doing home chores, and during active leisure are important determinants of the increase in body mass among a large share of the population. Influential factors include changes in relative prices, reductions in the time costs of preparing meals, a lower share of the population working at strenuous occupations, as well as changes in identity and self-image (Costa-Font and Jofre-Bonet 2013). However, all these alone can only explain a small percentage of the variability in unhealthy lifestyles. The growth of obesity rates has been linked to an "obesogenic" environment that promotes excessive caloric food intake and discourages physical activity in multiple ways. Yet what triggers unhealthy environments is relatively unknown (Costa-Font, Fabbri, and Gil 2010).

This editorial attempts to provide a summary of the most relevant contributions that this Special Issue brings to the debate on choice, environment, and healthy lifestyles and behaviors. The next section summarizes the key messages of the submitted contributions, section three contains a summary of the featured articles, and a final section concludes.

Featured Articles

The featured articles in this issue are written by eminent economists and social scientists, and address the influence of food packaging on health behavior, as well as their effects on strategic security activities of the growing obesity epidemic.

The first of the featured articles, by Chandon (2013), focuses on the role of packaging as communication tools. The author makes the point that packaging helps draw attention to the product at the time of purchase and consumption, the so-called two critical "moments of truth." The paper specifically examines how the design of food packages and the marketing, health and nutrition claims printed on them influence food intake and lead to overeating. The authors argue that packaging influences people's taste and healthiness expectations, as well as their short-term consumption by as much as 30%. However, the most striking result is that labeling chocolate candies as "low-fat" increased actual calorie intake by 46% among overweight people, but increased their perceived calorie intake by only 8%. A second striking result is that people appear to overlook up to 50% of the quantity increase in large meals and packages.

The second featured article, by Cawley and Maclean (2013), examines the obesity epidemic by looking at a sample of U.S. military admissions over time. These authors document a doubling of age-eligible applications exceeding the weight standards among men, and a quadrupling of this rate for women between 1959 and 2010. Hence, one of the consequences

of the obesity epidemic lies in the spillover effects into other public goods, in this case national security.

The paper by Gittelsohn and Lee (2013) picks up the main question of this article to claim that policy interventions can influence or even change social environments, thereby influencing how individuals learn from nutrition information. Drawing on behavioral economics, these authors explain different strategies whereby interventions can lead to healthier diets and reduced disease risk. The latter refers to cases where individuals exhibit multiple exposures to health-related decisions, whereby educational interventions that change behavioral constraints create the conditions for socially persistent behavioral change.

Submitted Articles

The unsolicited manuscripts included in this special issue contribute towards answering the main question posed in this editorial article, namely, what explains unhealthy behaviors? Such contributions explore the influence of health insurance, access to foods and food deserts, as well as time constraints faced by individuals.

Kyureghian, Nayga, and Bhattacharya (2013) analyze the individual and interaction effects of income and food access on actual purchases of fruits and vegetables by households. The authors use a national purchase data set that contains information on household purchases as well as demographic characteristics. In this contribution, the actual shopping patterns of households are studied by explicitly disentangling the effects of food access from the effects of income constraints. The results of this study help us to understand how food access issues interact with the level of income in influencing purchases of fruits and vegetables at the household level. The focus on fruits and vegetables is especially relevant for the U.S. context, given the high rates of obesity among the population and the need to improve diet quality. Results suggest that improving access to food would increase the fruit and vegetable purchases of the non-poor population, but decrease purchases by the poor, showing that policies designed to improve health food accessibility are likely not to be effective.

The need to better understand the causes of poor diet and obesity has spurred a growing body of research on the role of access to food. Specifically, diet, nutrition, and the health effects of living in areas with limited access to healthy foods (food deserts) have been the focus of many recent studies. Alviola, Nayga, and Thomsen (2013) contribute to this body of literature by examining the relationship between food deserts and child obesity, an outcome of considerable policy interest. These authors use data on obesity rates in a panel of 230 school districts in Arkansas from 2007 to 2009. The district obesity rates were determined from school children's measured height and weight. The school districts were classified as food desert districts by developing district-level measures of food access using food store location data. Controlling for a variety of other factors and using panel data and spatial error models, they report estimates that indicate no statistically significant relationship between school district obesity rates and whether the districts are located in food deserts. This finding was robust to several specifications and subsamples.

Speaking to the same overall question, Kalenkoski and Hamrick (2013) consider the effect that time poverty has on an individual's decisions about

food consumption and activity levels, both of which are key determinants of general health. Time poverty is defined as having a shortage of discretionary time, where discretionary time is the time an individual has left after accounting for the time that must be devoted to necessary and committed tasks such as sleeping, personal grooming and work. These authors analyze the American Time Use Survey (ATUS) for the years 2006–2008, and limit their sample to adults aged 20+ who had completed the Eating and Health Module of the ATUS. Respondents were surveyed about their activities in a 24-hour period just prior to the interview period, and the authors are interested in four outcomes during that period: consumption of fast food; the number of eating or drinking occurrences; minutes spent in sports and exercise; and active travel (20+ minutes traveling by bike or on foot). To account for the possible endogeneity of time poverty in such decision-making, the authors jointly estimate equations for each of these measures, along with an equation for the incidence of time poverty. The authors find that time-poor individuals are 2% less likely to engage in active travel, but are also 4% less likely to purchase fast food. They conclude that this might indicate that time-poor individuals are purchasing prepared food from grocery stores or other venues rather than potentially less healthy fast food.

Schroeter, Anders, and Carlson (2013) investigate a range of possible determinants of diet quality outcomes as measured by the Healthy Eating Index (HEI). These authors are particularly interested in the potential importance of vitamin supplement intake on healthy eating, but also consider a range of other factors including lifestyle, health indicators, food culture, and demographic characteristics. They use the 2003–2004 National Health and Nutrition Examination Survey (NHANES) of American adults. Their empirical analysis explicitly addresses the potential endogeneity of vitamin supplement intake, an important issue given the cross-sectional nature of their data. The authors compare two alternative instrumental variable approaches: Generalized Methods of Moments and Two-stage Least Squares, and adopt an estimation strategy using secondary and tertiary instruments. They find that vitamin consumption is an important indicator of healthy eating, and that diet quality is also strongly interrelated with food culture. The authors conclude by emphasizing the importance of using economic modeling when developing public policy designed to reduce obesity.

Andrews, Bhatta, and Ver Ploeg (2013) examine how an increase in Supplemental Nutrition Assistance Program (SNAP) benefit levels affects SNAP redemptions at supermarkets and supercenters, retail outlets where prices tend to be lower, but which may be farther away or require greater travel costs. The authors use monthly county-level data on SNAP redemptions by store type over a three-year period from May 2007 to May 2010, and model the percentage of SNAP redemptions at superstores as a function of maximum monthly benefit levels deflated by food prices, store density by store type, other economic and policy factors, and county fixed effects to control for unobserved county-specific effects. The authors find that changes in SNAP benefits can potentially encourage SNAP participants to make use of lower-cost, less accessible food shopping alternatives. They note, however, that a limited scope exists for future expansions in SNAP benefits given the current financial restraint at the federal level. Instead, the authors suggest that cost-neutral policies such as allowing

SNAP participants to convert a portion of their benefits as "access dollars" to fund transportation costs to more economical shopping venues might be worth serious consideration by policy-makers.

Rousu and Thrasher (2013) report on the results of experimental auctions with U.S. smokers, and assess the percentage of U.S. smokers whose demand for cigarettes decreases when bidding on packs with text and pictorial warnings relative to packs with text-only warnings. The authors find that pictorial labels and pictorial labels accompanied by plain packaging are more effective at reducing demand for cigarettes than only a front-text warning label. The pictorial labels were most effective at encouraging younger smokers to reduce their demand for cigarettes, while plain packaging was most effective at reducing demand among less-educated smokers.

Conclusions

We have argued that although unhealthy behaviors largely take the form of choices, they are constrained beyond standard budget and time constraints. Hence, interventions should consider product packaging (Chandon 2013), educational interventions (Gittelsohn and Lee 2013), as well as the effects that unhealthy behaviors have on the functioning of strategic sectors such as the armed forces (Cawley and Maclean 2013).

All these contributions appear to suggest that dealing with unhealthy behaviors implies the development of policies that can encompass both product packaging and accessibility; but they also imply that policies should include incentives at the insurance level, and more specifically in the cultural and societal spheres so that repeated behaviors (which comprise the majority of health decisions) are disentangled from one-off decisions. The papers in this special issue have provided suggestive evidence that we are convinced will leave a footprint in the economic analysis of health, food, and economic policy design.

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