

Use of Psychology and Behavioral Economics to Promote Healthy Eating

Christina A. Roberto, PhD, Ichiro Kawachi, MD, PhD

Understanding the psychology of how people make decisions can shed light on important factors contributing to the cause and maintenance of public health problems like obesity. This knowledge can and should inform the design of government and private-sector public health interventions. Several insights from psychology and behavioral economics that help explain why people are particularly vulnerable to the current food environment are discussed. These insights fall into the following categories: the influence of starting points (status quo bias and anchoring effects); communicating health information (simplicity and framing); and unintended consequences of policy interventions (compensation, substitution, and the peanuts effect). The paper discusses opportunities for improving the design of food policies and interventions by altering default options, providing the public with simple and meaningful nutrition information, carefully constructing the framing of public health messages, and designing food policies to minimize unintended consequences, such as compensation and substitution.

(Am J Prev Med 2014;47(6):832–837) © 2014 American Journal of Preventive Medicine

Introduction

Social scientists have been studying decision making for decades, but public health interventions have been slow to incorporate these insights. In their book *Nudge*, Thaler and Sunstein¹ popularized the idea that insights into how people make decisions can be leveraged to encourage wiser choices without abridging freedom to choose. This philosophy of “libertarian paternalism” encourages private institutions and governments to construct choice environments that “nudge” people toward decisions that are in their long-term self-interest. The appeal of nudge strategies is that they preserve freedom, although some worry that pursuing nudges will discourage implementation of restrictive, but more effective policies. We argue that behavioral nudges should not replace strategies known to be effective (such as taxing “bads” like cigarettes), but should be harnessed to make policies and interventions more effective.

In a recent review, Thorgeirsson and Kawachi² discuss the application of behavioral economics to a broad range of public health problems. The current paper builds on this broad overview by focusing in depth on poor diet

and obesity.³ Specifically, it examines how the behavioral sciences can aid understanding of why people have difficulty eating healthfully and how to leverage that knowledge to design better interventions and policies to address obesity.

Why Is It Hard to Eat Healthfully?

In the current food environment, nutrient-poor, calorie-dense foods are widely available, inexpensive, heavily marketed, not clearly labeled, and served in large portions.^{4–6} This environment makes it easy to choose unhealthy foods, even when those choices are inconsistent with long-term preferences.^{7,8} People are also susceptible to present-biased preference, the tendency to place disproportionate weight on momentary gratification relative to future costs and benefits.^{9–11} When unhealthy, tasty food is available, it is easy to be influenced by the immediate enjoyment of the food, rather than delayed health costs associated with eating it. To make matters worse, people are vulnerable to the planning fallacy, the tendency to be overly optimistic about one’s ability to carry out future intentions.¹² This can lead to false predictions that one will alter entrenched eating habits or start exercising “tomorrow.”

The Influence of Starting Points: Status Quo Bias and Anchoring Effects

Much of one’s daily eating habits are “mindless,”—habitual, automatic, and guided by default options.¹³

From the Departments of Social and Behavioral Sciences (Roberto, Kawachi) and Nutrition (Roberto), School of Public Health, Harvard University, Boston, Massachusetts

Address correspondence to: Christina A. Roberto, PhD, Department of Social and Behavioral Sciences, Harvard School of Public Health, Room 617, 677 Huntington Avenue, Boston MA 02115. E-mail: crobotto@hsph.harvard.edu.

0749-3797/\$36.00

<http://dx.doi.org/10.1016/j.amepre.2014.08.002>

People have a strong tendency to stick with default options, a phenomenon known as the “status quo bias.”¹⁴ Unfortunately, the vast majority of food defaults encourage unhealthy choices. Restaurant defaults include large portion sizes and unhealthy side dishes (e.g., french fries), so those who want healthier options must request a substitute—something the status quo bias discourages. Such defaults are also influential because they shape norms; large portion sizes convey that it is not unreasonable to eat the entire portion in one sitting.

Unhealthy defaults can also interact in problematic ways with anchoring effects. Anchoring refers to the tendency to base decisions on initial information provided. For example, people’s estimates of unknown quantities are lower when first considering a small rather than large quantity.¹⁵ This tendency may explain why people eat more when served larger portions. In one study, participants used 30% more pasta when they were given a 2-pound box compared to a 1-pound box, and 23% more oil from a 32-ounce bottle than a 16-ounce bottle when making fried chicken.¹⁶ This indicates that people base their usage volume on the package size. However, much of the portion size research has only examined unhealthy foods; therefore, more studies are needed to determine whether portion size effects are as strong with healthy foods.

Communicating Health Information: Simplicity and Framing

The importance of simplicity in health communication is critical, but often overlooked. Psychologists have described two systems of thought: “System 1,” which is fast and relatively effortless, and “System 2,” which is slower and effortful.¹⁷ Although quick System 1 thinking drives many eating decisions, many efforts to communicate nutrition information to the public rely on numeric data, which requires System 2 thinking. Research shows that people have difficulty processing numeric information,^{18,19} making the use of numbers in health communication problematic. For example, the Nutrition Facts Panel presents nutrient information in grams and milligrams accompanied by percentages. Serving sizes appear in cups, ounces, or grams. Many weight-loss programs require patients to count calories, and doctors talk to patients about maintaining a healthy BMI (calculated by weight divided by height squared).

Peters and colleagues^{20,21} offer several reasons why numbers present a processing challenge: they are abstract, the meaning of the same number changes in different contexts, and differences in numbers typically reflect small and unfamiliar discrepancies. Other research²² has found that depicting statistical

information in pictographs reduced medical patients’ reliance on anecdotes when making decisions, and another study²³ found that evaluative labels (e.g., “normal,” “positive”) presented with prenatal screening test results were better able to influence risk perceptions and behavioral intentions than were numbers.

Such research can inform current debates about the type of nutrition labels that should be displayed on the front of packaged foods. The food industry recently released a front-of-package labeling system called Facts Up Front,²⁴ which displays grams and milligrams for saturated fat, sugar, and sodium alongside daily value percentages. The industry can also list up to two positive nutrients on the label (e.g., fiber, vitamins). In addition to having lots of information, the label is small and appears in only one or two colors. This is in contrast to traffic light labels used by some food manufacturers in the United Kingdom and recently adopted, although not yet implemented, by Ecuador. The label uses evaluative red, yellow, and green circles to alert customers to low, medium, or high levels of nutrients, respectively. The benefit of a traffic light approach is that it caters to System 1 thinking by leveraging automatic associations between “red” and “stop” and “green” and “go.”²⁵ The comprehension of traffic light labels, especially among those of lower SES, further increases by including “low,” “med,” and “high” text.²⁶ Given research suggesting that individuals of lower SES suffer from a “bandwidth tax,”²⁷ simplistic communication of information that relies on System 1 processing might help reduce disparities in health interventions. One study found that traffic light labels and a choice architecture intervention in a hospital cafeteria significantly increased the purchase of “green-light” items and decreased the purchase of “red-light” ones,²⁸ suggesting it may be a more effective labeling system than more numeric-based approaches like Facts Up Front.

By making certain aspects of a message salient,²⁹ the framing of public health messages can influence beliefs and behaviors.³⁰ For example, the phrasing of First Lady Michelle Obama’s childhood obesity campaign “Let’s Move!” promotes exercise, not diet; the campaign is not titled, “Let’s Eat Less.” One concern is that the exercise framing could have a negative impact on food-related beliefs and behaviors. In one study,³¹ people who attributed obesity to a lack of exercise (as opposed to excessive caloric intake) were more likely to be overweight, and the belief that exercise contributes more to weight gain than diet led to greater food consumption in the lab. These findings suggest a need to evaluate the influence of such messaging.

Marketers also make certain aspects of products salient to create “health halos” that influence consumer

Download English Version:

<https://daneshyari.com/en/article/6237952>

Download Persian Version:

<https://daneshyari.com/article/6237952>

[Daneshyari.com](https://daneshyari.com)