



# Cornhusker Economics

## Active consideration of health and nutritional quality of food choices

How often do you fully consider the consequences of alternative options you face when you make a choice? For some decisions, such as buying a new car, most of us probably do think hard about the alternative uses of our money given the cost of cars and how much the prices of cars vary. We make other choices so often, however, that we likely fall into habitual patterns. Research on cognition has identified different ways of thinking that are frequently separated into two general types—perhaps most famously written about by Economics Nobel Prize winner Daniel Kahneman in his book, “Thinking, Fast and Slow.” In the language of the book, thinking fast relies on quickly formed intuitions, while slow thinking involves careful deliberation. Other researchers have categorized decision-making into categories such as habitual versus goal-directed or model-free versus model-based, etc. However, all distinguish between decisions that are made quickly and without significant cognitive investment and those decisions that involve significant cognitive investment in evaluating or predicting the impacts of alternative options faced by the individual.

Given the sheer number of ways we can choose to spend our time or money, it is perhaps not surprising that we seek to conserve the time and attention—which are themselves limited resources—that are required to evaluate all options. However, there may be consequences for people who do not consider the broader consequences of their choices but instead rely on habitual patterns of choice—especially if those habits lead to repeated decisions that may negatively impact the individual in the future.

Significant percentages of the public have low rates of saving, eat diets that deviate from nutritional recom-

mendations, and use tobacco. A common element of all these decisions is that the individual’s current choice has implications for their future. Though a single instance of any of these behaviors almost certainly has a negligible impact on undesirable outcomes—such as not having enough retirement savings, experiencing diet-related diseases, or developing lung cancer—the habitual decision to spend, eat unhealthy foods, or smoke cigarettes dramatically increases the likelihood of negative outcomes. Much of the focus on understanding choices that have impacts across time in agricultural economics, economics, and other decision-making fields, such as psychology, has been on intertemporal preferences, or how people discount benefits experienced in the future relative to immediate benefits. Recently, however, researchers have started to examine inattention and the impact of reminders in health contexts. In a recent large-scale study of gym attendance, which tested 53 interventions simultaneously, the most effective intervention offered gymgoers \$0.09 to make up a missed workout. Given the minute size of the reward, it may well be that the true effect of the intervention was as a timely reminder, rather than an incentive. Other recent studies have found significant—and enduring—impacts of simple reminders on decisions to go to the gym.

Like exercise, diet has an important effect on health. Unlike interventions targeting members of gyms, however, everyone can be positively influenced by effective interventions promoting healthier food choices. A handful of recent papers have documented positive impacts on dietary quality resulting from interventions that remind people to consider health through prompt messages or subtle priming in supermarkets and in controlled, online experiments. These studies have focused on the impact of reminders on nutritional quality rather than explaining

how reminders work. An exception, Arslain, Gustafson, and Rose (2021), collected data on multiple elements of individuals' choice processes to trace the impact of reminders on decisions, showing that reminder messages led people to consider a healthier set of products and increased the likelihood that they examined nutrition information (as well as having a direct effect on nutritional quality). These results show that reminders influence elements of the choice process, but the research did not elicit information on what broader outcomes people had considered during the choice process.

To address questions about the impact of active consideration of broader impacts (health, in this case) on choices and whether active consideration can be brought about through simple messaging, two recent studies have used a food choice experiment with a post-experiment survey that collected data on what participants had actively considered during the food choice process. The question about what people had considered included a number of decoy options to disguise our interest in the active consideration of health during choice.

First, both studies—using two different samples of US consumers—examined the relationship between the nutritional quality of food choices and active consideration of health, in the absence of any reminder messages.

Participants in one study selected foods from three common categories: breads, breakfast cereals, and crackers (Tuyizere and Gustafson, 2022); in the second, they selected from those same categories, plus produce and a category that included pasta, grains, and rice (Gustafson, 2022). The first take-away from both studies is that less than one-third of the respondents reported thinking about future impacts on health while making choices. However, those who did actively consider health during the choice process made significantly healthier choices than those who did not. The nutritional quality of foods chosen differed particularly among those who actively considered health and those who did not for more highly processed food categories—breads, cereals, and crackers. The second study also documented healthy choice promoting decisions that occurred during the choice process for those who considered health impacts. Those individuals were more likely to view a healthier subset of products during decision-making and were more likely to use nutrition information while making a product choice.

The second study additionally examined a further question: can a simple health message—focused on the health benefits of dietary fiber—increase the likelihood that people consider health during food choice? The study also documents the impact of the message on the nutritional

quality of foods chosen to test whether people who reported considering health impacts after being exposed to the fiber message made choices differently than those who considered health but were not exposed to the message. The results of this study show that seeing the fiber message did lead more people to consider broader issues of health during the food choice process. Additionally, the impact of actively considering health did not differ between those who saw the message and those who did not, which suggests that the effect of actively considering health is consistent, whether the individual takes health into account naturally or whether they are prompted to think about health by a message.

The implications of these findings are important for policies aiming to promote choices that will likely be better for individuals in the long run. These findings show that consideration of health is important—people who consider health make significantly healthier choices—and that the number of people who consider health during choice can be increased through simple reminders. On the other hand, alternative constructs that have been used to explain decisions with impacts occurring at multiple time points, such as the study of how people discount the future, are meant to capture stable preferences. Discount rates are correlated with food decisions, and multiple studies have found that people who are more impatient are more likely to be overweight or obese than those who are more patient. Therefore, influencing people to be more patient may be a way to address diet-related health problems. There are many studies that evaluate how to promote patience, but—as would be expected for a fundamental preference—the methods that are most effective and long-lasting are intense, requiring multi-session educational programs. The results of these studies, then, show that reminder messages delivered strategically during the decision-making process may be a more efficient way to help people account for the impacts of the choices they are making and better balance the trade-offs between taste and health than if health is not considered by the individual when making choices.

On the other hand, it may be important to evaluate the combined effects of active consideration during choice and discounting; they may (or may not) represent fundamentally different forces in the decision-making process. That is, people may make the best decisions for themselves when they both value their future experiences (are more patient) and when they think about the implications of their current choices for their future experiences. However, there may also be interactive effects: people who value the future more may be more likely to invest the time and cognitive energy in considering the impacts of their choices on their future selves. A study by Bartels and Urminsky

(2015) asked this question in the context of decisions to save or spend money. While they used a different approach to measure consideration of the future—a scale meant to capture a tendency to think about the future consequences of decisions rather than our approach of directly asking about choice considerations—they found important interactions between valuing the future and considering the future. They used an intervention that makes people feel more connected to their future selves, which reduces discount rates. However, reducing discount rates only impacted savings if people also thought about what they give up in the future by spending money now rather than saving it. While their approach differed somewhat from ours, it is likely that there are important interactions between valuing and considering the future for health-related decisions as well as financial decisions.

At a personal level, the combined findings for food and financial decisions point to actions that individuals can take if they want to eat healthier or save more for the future. Psychologists have found that feeling connected to your future self—expecting that you will enjoy similar things in the future as you do now, say—makes people more patient, which can help them delay gratification. However, it's also necessary to think about future opportunity costs—what you give up by making a particular choice—to help make decisions that are beneficial in the long-run. While the point-of-decision reminder messages that we highlight in this article have not been widely adopted, owning a smart phone (or other smart device) may allow people to set up their own reminders that would be activated when they arrive at a supermarket or other store. In the food shopping context, using grocery lists that have been written out ahead of time have also been shown to help people make healthier choices, potentially by allowing more contemplation of the broader issues—such as health—that the shopper may want to consider when choosing what to buy.

Further reading:

Arslain, Kristina, Christopher R. Gustafson, and Devin J. Rose. 2021. The effect of health prompts on product consideration, attention to information, and choice in large product assortments: the case of fiber. *Food Quality and Preference*.  
<https://doi.org/10.1016/j.foodqual.2021.104329>.

Bartels, Daniel M., and Oleg Urminsky. "To know and to care: How awareness and valuation of the future jointly shape consumer spending." *Journal of Consumer Research* 41.6 (2015): 1469-1485.

Gustafson, Christopher R. 2022. Active Consideration of Future Health Can Be Prompted by Simple Health Mes-

sages and Improves Nutritional Quality of Food Choices. *Frontiers in Nutrition*, 9:  
<https://doi.org/10.3389/fnut.2022.926643>

Tuyizere, Olivier. and Christopher R. Gustafson. 2022. The Impact of Active Consideration of Health Outcomes on the Nutritional Quality of Food Choices. *Current Developments in Nutrition*, 6(S1):  
<https://doi.org/10.1093/cdn/nzac059.024>

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