When ‘Healthier’ Choices Fail to Improve Health: Precommitment to Categorically Healthier Lunch Orders

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In a field study, we exogenously restrict the timing of online lunch orders in the workplace. We show that although participants are more likely to order from lower-calorie categories and achieve a modest reduction in calories when ordering in advance, this reduction is too small to be clinically significant.

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EXTENDED ABSTRACT

Recent years have seen a wave of behavioral research regarding food choice and ways to encourage healthier eating among consumers, often accompanied by discussion sections that extrapolate theoretical findings well beyond the experimental setting. Whereas academic researchers are often primarily concerned with demonstrating that a causal relationship can exist, we communicate our results with a non-academic audience hungry for narratives about causal relationships that have meaningfully large effects on their health and well-being. This disconnect between the theoretical implications shown by researchers and the clinical implications desired by the general public is exacerbated by experimental paradigms that fail to reflect the majority of real-world decisions (e.g., forced choice between healthy and unhealthy options) or which outcome measure variables other than those most relevant to clinical outcomes (e.g., rated enjoyment of target options).

Even in field studies which have led to healthier choices (e.g., increasing share of fruits and vegetables in a meal) in real world decisions, direct clinical measures such as calorie reductions are often not included. We show that improving the relative healthiness of a meal or choice still may not be enough to achieve clinically significant outcomes, using meal calorie consumption as a more direct indicator of an intervention’s health impact. We provide field experimental data from a study designed to show that exogenously restricting the timing of lunch orders—that is, experimentally manipulating whether participants ordered a lunch in the morning or at typical lunch hours—can influence the healthiness of the meals ordered. We tested the effect of such a restriction in two stages, allowing us to determine the effect of advance ordering in both the absence and the presence of basic nutrition labeling.

Based on previous findings showing subtle but reliable effects of time delay (Hanks, Just, & Wansink, 2012; Milkman, Rogers, & Bazerman, 2010; Read & van Leeuwen, 1998) and of hunger (Tal & Wansink, 2013) on food ordering behavior, we hypothesized that restricting meal ordering to times when consumers were less likely to be hungry may allow them to “precommit” to healthier choices. In a second stage of the study, we further tested whether advance orders would be healthier in the presence of nutrition information, as such information may be necessary to make healthy decisions.

We recruited employees (N = 296) in a corporate office to place lunch orders from an on-site cafeteria via a new online ordering system that we created. This online ordering system removed the visceral and social factors associated with typical meal choices, enabling us to isolate the impact of order timing on food choice. Additionally, the study was presented as a trial period for a system in development, rather than as a study of nutrition, to reduce demand effects in consumer behavior.

Across both stages, corporate employees ordered lunches online over a 4-week period divided into two 2-week blocks, where they were randomly assigned to place orders in advance (before 10 am) or at lunchtime (between 11 am and 1:30 pm) during the first block, and switched to the alternate condition for the second block. In stage 1, the menu provided no nutrition information, whereas in stage 2, the menu provided a simple label identifying entrées containing fewer than 500 calories (a dummy variable identifying whether this label was present was included in all analyses). Using mixed model regressions, we tested for differences in calories per order, nested within participant and including basic demographic covariates, to determine the impact of timing restrictions on lunch calories, accounting for individual variation. We powered our analyses to detect a 50 calorie reduction, which is generally agreed upon as the minimal change required for clinical significance.

In line with theoretical predictions, restricting participants to place orders in advance rather than at lunch time marginally reduced lunch calories (574 vs. 602 calories, p = 0.07), though not by enough calories to constitute a clinically significant difference. In contrast, the calorie label identifying which entrées had fewer than 500 calories had an independent effect, reducing calories ordered by approximately 60 calories (p = 0.01). Ordering in advance (vs. ordering at lunch time) did shift entrée choice to low-calorie options (60% vs. 53%, p < 0.05). Finally, the vast majority of participants (87%) thought they ordered the same way regardless of when they placed their orders, whereas 10% thought they ordered healthier meals in advance and 3% thought they ordered healthier meals at lunchtime.

This study demonstrates that although participants appear to be healthier when ordering in advance, both as measured by total calories and entrée choice, the timing restriction only reduces total calories ordered by about 30 calories. Our findings support existing theoretical accounts of the relationship between time delay and behavior, suggesting that ordering early may well help people to strategically precommit to a “healthier” order, but do so without sufficiently reducing their consumption to have beneficial health consequences. This result points to the need for researchers to increase the attention paid to clinically relevant outcomes of manipulations in addition to those choice outcomes which test theoretical propositions. Although developing theories to understand how choices are made is critically important, the presumption that such theoretical developments will directly translate into clinically significant outcomes may be overly optimistic.