

# Depression and Shopping Behavior

Based on BFI Working Paper 2021-131, “[Depression and Shopping Behavior](#),” by Katherine Meckel, University of California, San Diego; Bradley Shapiro, Chicago Booth

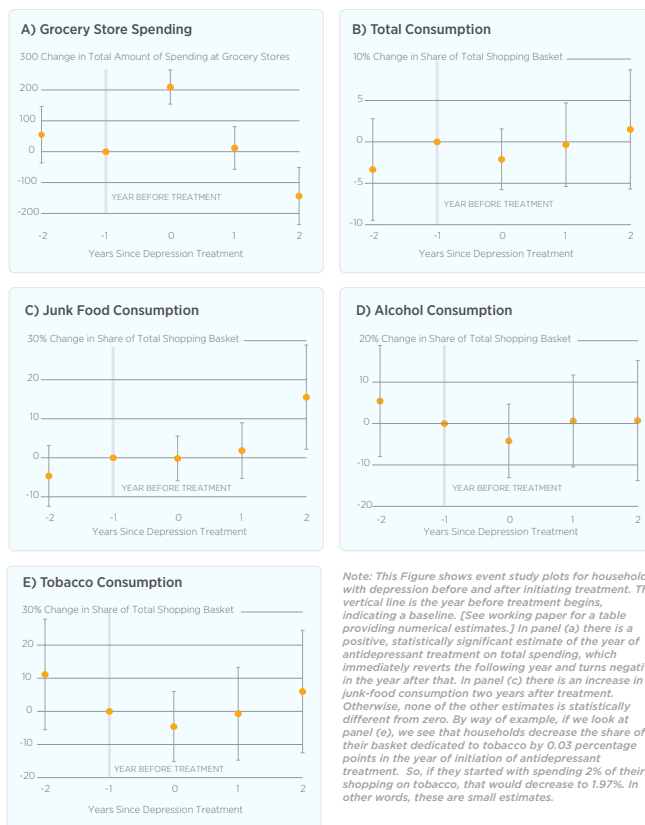
*Households with a member suffering from depression exhibit striking differences in shopping behavior, including lower spending on relatively healthy foods, as well as lower overall spending, among other key differences; these distinctions mostly hold following treatment.*

Depression is often characterized by cognitive distortions that lead to lack of self-worth and motivation. Research has described the economic impact of these symptoms on labor markets. However, if depression affects people’s ability to work, it likely also impacts economic activity in other ways. This paper documents correlations between depression and shopping behavior in a household panel survey that links health status and behaviors to shopping baskets.

Understanding the relationship between depression and shopping is important for policymakers who must determine the worth of interventions to alleviate depression. Also, the associations between physical health, addiction, and mental health mean that policymakers need to understand the effectiveness of various interventions to induce healthier eating or to reduce dependence on alcohol and tobacco. Finally, understanding how cognitive dysfunction affects decision making is important for modeling decision makers, who are often assumed to behave as fully informed utility maximizers. Cognitive distortions may lead to decision rules that are not well approximated by standard models; likewise, understanding the relationship between depression and shopping behavior may inform models of decision making.

The authors leverage a unique dataset that combines a large, nationally representative, shopper panel with a detailed survey about health conditions. Data include

**Figure 1 • Event Study at Point of Antidepressant Treatment Take-up**



information about individual shopping trips, with records of purchases using in-home optical scanners. About 45% of the panelist households in the authors' sample opted to participate in a survey that revealed information on many health conditions and associated treatment decisions. Among other conditions, survey reveals whether respondents identify as suffering from depression, as well as treatment with prescription drugs, over-the-counter drugs, or no drugs.

Consistent with other national data sources, the authors find that depression is common. In any given year, roughly 16% of individuals surveyed report having depression and 34% of households have at least one member suffering from depression. How does this phenomenon impact shopping? The authors find that households with depression:

- Spend about 5% less at grocery outlets than non-depressed households,
- Visit grocery stores less often and convenience stores more often,
- Spend a smaller fraction of their basket on fresh produce,
- Are less likely to purchase alcohol,
- And are more likely to purchase tobacco.
- However, spending on junk food (salty snacks, bakery goods and candy) is not significantly different.
- Importantly, the authors find little change in shopping behavior upon initiation of treatment with antidepressants within households.

The authors explore various explanations for these findings, but related to the motivating questions above, they conclude that the relatively large number of households with depressed members may not be an existential threat to the validity of standard demand models. Also, while their results show robust cross-sectional differences in shopping amounts between depressed and non-depressed households, their finding of a lack of within-household differences may cast doubt that depression causes a large reduction in shopping.

Further, the authors' analyses of the composition of shopping baskets suggest that there may be some self-medication with tobacco, but the large cross-sectional differences between the composition of shopping baskets on other dimensions between depressed and nondepressed households mostly disappear when looking within households. Finally, worse nutrition through the composition of shopping baskets seems unlikely to be the causal mechanism explaining the documented correlation between physical health and mental health.

## READ THE WORKING PAPER

NO. 2021-131 · NOVEMBER 2021

### Depression and Shopping Behavior

[bfi.uchicago.edu/working-paper/2021131](https://bfi.uchicago.edu/working-paper/2021131)

## ABOUT OUR SCHOLARS



### **Bradley Shapiro**

*Associate Professor of Marketing and True North Faculty Scholar, Chicago Booth*  
[chicagobooth.edu/faculty/directory/s/bradley-shapiro](https://chicagobooth.edu/faculty/directory/s/bradley-shapiro)

