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Could the Net Health Effect of Food Stamps be Negative?

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Background:

Current restrictions on the food stamp program include alcohol and cigarettes among other things, and present research on food stamp effects focuses on adding more restrictions to the program like not allowing soda or sugary fruit juice to be purchased with the funds. The goal is to encourage this population to lead a healthier life, or at least limit the prevalence of obesity and resulting obesity-related mortality. However, current restrictions have not eliminated the consumption of the items of interest in this paper, alcohol and tobacco products, which are also leading causes of mortality. Despite efforts to keep participants from consuming certain products and before more restrictions are enforced, understanding consumption of items already restricted like alcohol and tobacco could be beneficial.

This paper will consider if food stamp participation could affect alcohol and tobacco, and determine the consumption level differences as well.



Source: Boseley, S. 2011. *UN Summit Targets Obesity, Alcohol and Smoking*. The Sydney Morning Herald. www.smh.com.au.

Previous Research and Hypotheses:

- Alcohol and cigarettes are substitutes and have a habit-persistent effect (Goel and Morey 1995)
- Income elasticities from largest to smallest are wine, spirits, and beer, but all are normal goods (Gallet 2007)
- Therefore, food stamps, or essentially an increase in income, are hypothesized to affect (increase) both alcohol and cigarette consumption

Data:

- National Health and Nutrition Examination Survey (NHANES) 2007-2008
- 9,762 individuals were sampled using datasets: Demographics, Dietary (Total Nutrient Intakes – Day 1 and Day 2) and Questionnaire (Alcohol Use (ages 20+), Food Security, and Smoking – Cigarette (Centers for Disease Control and Prevention 2010))
- In the dietary portion of the survey, participants report their food consumption over the course of two days, which we used assuming it is the most reliable indicator of alcohol consumption

Results:

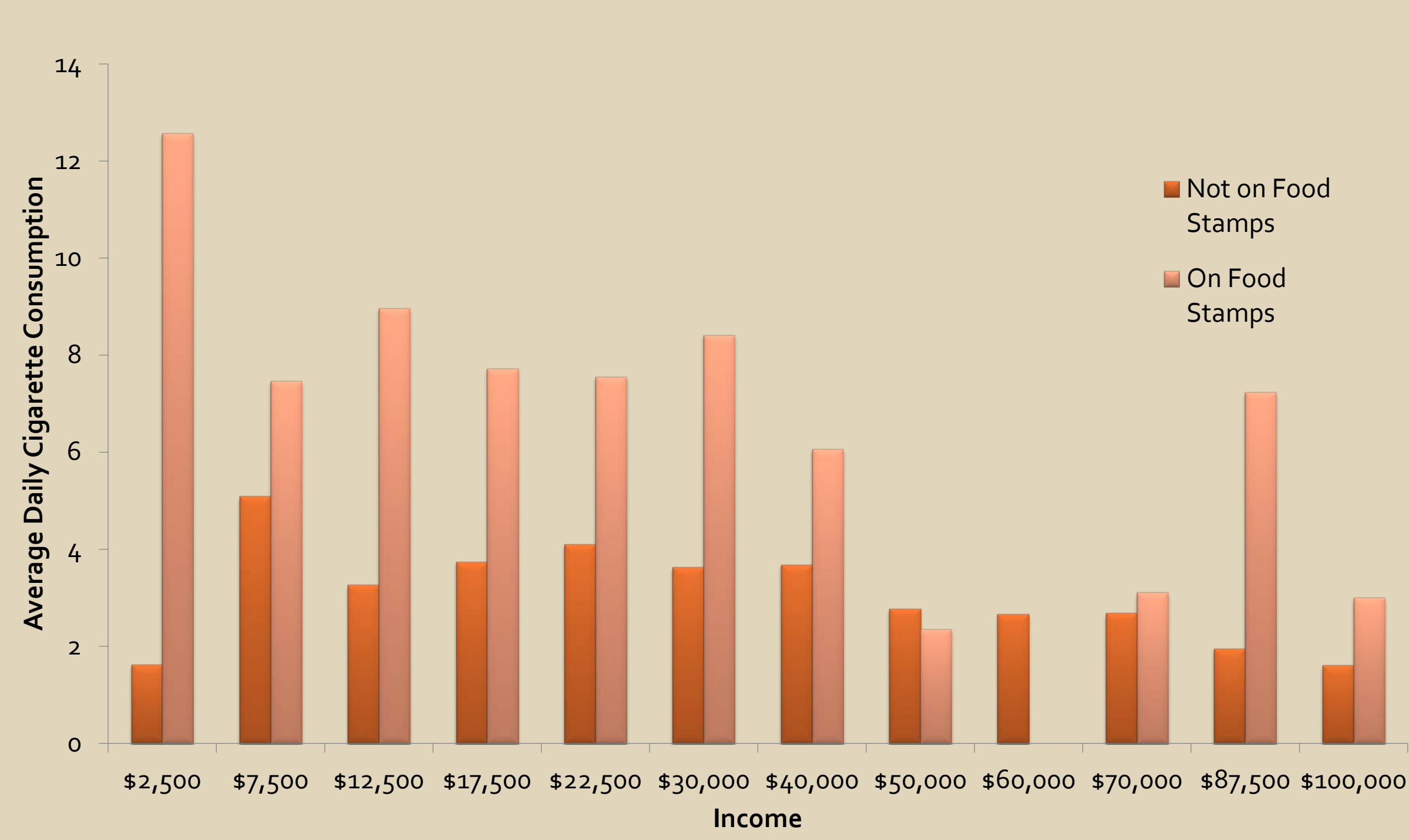


Figure 1. Average Daily Cigarette Consumption by Income Level for Both Food Stamp Participants and Non-Participants

Tobit, Probit, and Double Hurdle Model Results:

- Outcomes: Alcohol grams consumed days 1 and 2 and average # of cigarettes consumed in the past 30 days
- Variables: Ever been on food stamps, food stamp dollars received last, high school graduate, college graduate, female, married, & income
- Food stamps have no significant effect on the amount of alcohol consumed
- Food stamp participants smoke almost 8 more cigarettes/day (tobit model)
- The larger the family, the fewer adult members who consume alcohol
- Females consume less alcohol and cigarettes
- College graduates have a significantly lower average number of cigarettes daily, by as many as 29 with the truncated model
- The average number of cigarettes smoked per day for all of the sample from the tobit model is about 3.5
- At nearly every income level, those on food stamps smoke more than those who are not (as shown in the figure above)

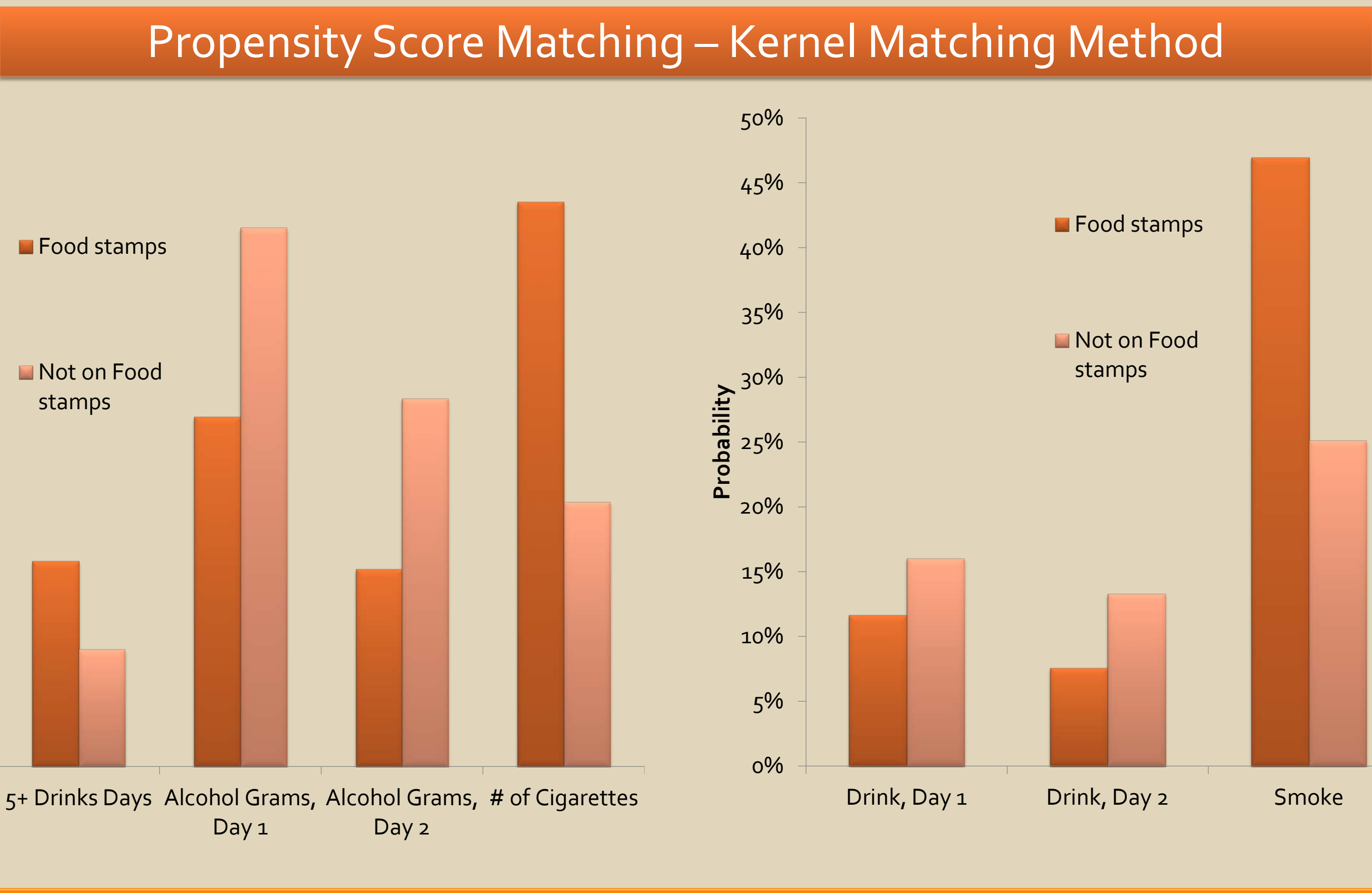
Conclusions:

If those on food stamps are still consuming alcohol and smoking even more cigarettes and assuming that restrictions do not change consumption habits, are the efforts to improve health futile among this population? Food stamps still meet the fundamental purpose of the program, but much is still unknown about how bad consumption habits can be transformed. Limiting food stamp dollars from being used to purchase alcohol and cigarettes has been unsuccessful, if not counteractive. Further research would need to examine how food stamp participation results in fewer grams of alcohol consumed. Possible explanations could include anything from the type of alcohol consumed to substitution of alcohol for cigarettes.

Smoking is a prominent habit among food stamp participants. Obviously, restrictions on cigarette purchases with food stamp benefits have not translated to fewer smokers. Considering that smoking is a leading contributor to the main causes of death in the US, policymakers can see that while food stamps promotes increased food spending, it also provides means to pick up another pack of cigarettes.

Summary Statistics by Food Stamp Participation (Treatment)		
Variable Name	Treatment Group	Control Group
Less than High School Education	21.20%	15.59%
High School Education	12.25%	17.60%
Some College	13.74%	20.85%
College Degree	4.23%	21.34%
Annual Household Income	\$ 30,162.43	\$ 54,964.11
Log of Annual Household Income	\$ 9.98	\$ 10.70
Multi-Racial	4.08%	4.26%
Non-Hispanic Black	31.66%	14.80%
Non-Hispanic White	31.16%	54.93%
Other Hispanic	12.39%	10.46%
Pregnant	0.73%	0.50%
On a Diet	12.35%	16.04%
Food Did Not Last	41.44%	10.69%
Percentage Who Drink, Day 1	11.72%	21.88%
Percentage Who Drink, Day 2	7.57%	16.20%
Average Grams of Alcohol Consumed, Day 1	4.37	7.42
Average Grams of Alcohol Consumed, Day 2	2.40	4.27
Percentage of Those Who Smoke	46.63%	21.05%
Average Number of Cigarettes Per Day	6.93	2.62

Note: Variables in bold were utilized to calculate propensity score



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