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The Impact of Mindfulness on Healthy Food Choices

Kaylea Hopfer
University of Arkansas, Fayetteville

The Impact of Mindfulness on Healthy Food Choices

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Kaylea Hopfer
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_____
Di Fang, Ph.D.
Thesis Director

_____
Rodolfo M. Nayga Jr., Ph. D.
Committee Member

_____
Christine Yung Hung, Ph.D.
Committee Member

Abstract

The practice of mindfulness has a long history in research, particularly psychological studies. In this paper I examine the effects of a short mindfulness intervention on healthy food purchases. Specifically, I developed an online survey and recruited 634 participants via Prolific between July 24 - July 27, 2020. I randomly assigned participants to either a mindfulness manipulation or a control condition. Following treatment (or control) participants completed a food choice task and various other control. Following the survey, I analyzed data using R version 4.0.2 (2020-06-22) and R-Studio. I estimated three different regression models, ordinary least squares (OLS), Poisson, and Negative Binomial (NB) (Wooldridge, 2006) to analyze the collected data. My findings bridge the gap in the literature of online mindfulness interventions and food purchase behaviors. In particular, I studied the impact of the 5-minute body scan on healthy food choices in a hypothetical grocery shopping experiment. My research suggests that the mindfulness intervention could increase healthy food purchases for the overweight and obese subsample. This is consistent with earlier findings for a similar population in the context of food consumption. Furthermore, my research highlights the importance of nutrition knowledge in promoting healthy food choices.

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Dedication

I dedicate this thesis to my greatest academic cheerleader, Dr. F. Bailey Norwood. Without your nudge to explore graduate programs I can say with absolute certainty I would not be here today. Consider this dedication metaphorically written with the 'OSU ag econ pen,' I could not have done it without you, thank you!

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Introduction

The concept of 'mindfulness' has existed some 2500 years in Buddhist culture since the historical Buddha began teaching and practicing mindfulness himself (Shonin et al., 2015). Early definitions of mindfulness, though many delineations exist, amount to idea that, 'mindfulness entails being fully aware of what is unfolding in the here and now' (Shonin et al., 2015). Though historically a Buddhist practice, the meditation form does not specifically require any religious belief at all and piqued the interest of researchers in the health realm as early as 1982 (Kabat-Zinn, 1982). Dr. Jon Kabat-Zinn, now considered an expert in mindfulness coined the meditation style Mindfulness Based Stress Reduction (MBSR), through his work with chronic pain patients. He found the stress reduction strategy MBSR to be an effective behavioral program for the self-regulation on pain in the chronic pain patients he worked with (Kabat-Zinn, 1982). MBSR has since become the basis of numerous body-scan meditation methods including Elisha Goldstein's 5-minute body scan technique (Stahl, B. & Goldstein, E. 2019).

Though a long history exists between mindfulness and pain management, recently, MBSR has become a popular tool in food consumption research, specifically with overweight and obese populations (Mantzios and Wilson, 2015; Ruffault et al., 2017). Specific findings indicate that mind-body meditation use is more common among normal weight individuals than overweight and obese individuals (Camilleri et al., 2016). Further, research indicates that mindfulness training increases positive effects in weight loss trials among overweight and obese individuals (Dalen et al., 2010; Ruffault et al. 2017). Mindfulness training, in and of itself, is a low-cost practice as it does not require individuals to purchase materials or equipment. Due partially to the aforementioned findings, mindfulness training has been identified as a potential

low-cost alternative to current weight loss tools and strategies (O'Reilly et al., 2014; Mantzios and Wilson, 2015).

When assessing the impact of mindfulness, levels of mindfulness can be measured in a number of ways, most notably by the Mindful Attention Awareness Scale (MAAS) (Brown et al., 2003) and the Toronto Mindfulness Scale (TMS) (Lau et al., 2006). MAAS measures an individual's trait mindfulness; how mindful they are dispositionally. TMS measures an individual's state mindfulness, how mindful they are in the moment, especially as a reaction to stimuli. It is generally understood that an individual has a fairly stable trait mindful disposition while state mindful levels are more easily altered (Mahmood et al., 2016), even in an online setting (Cavanagh et al., 2013; Mahmood et al., 2016).

Previous literature indicates that individuals who are more mindful are better able to avoid automatic behaviors and evaluate the situation at hand (Pagnini and Phillips, 2015). These high levels of evaluative skills play an active role in dietary consumption, weight loss practice, and other health indicators (Mantzios and Wilson, 2015). Though the effects of mindfulness have been extensively researched in the domains of weight loss and food intake (Mantzios and Wilson, 2015; Ruffault et al., 2017), the effects of mindfulness on healthy food purchases have not yet been explored. The aim of the present study was to examine the relationship between mindfulness and healthy food choices. In order to answer this question, I developed a survey and recruited a large sample representative of the US population to participate in a 30-minute online study. In doing this, my goal was to determine whether consumers, after having completed a 5-minute body scan mindfulness intervention (Mahmood et al., 2016) would choose a greater number of "healthy" items in a grocery shopping choice task.

The remainder of this thesis will be structured as follows. The beginning section titled experimental design will explain the recruitment process and layout of the survey, as well as justify the inclusion of controls in the questionnaire. In the second section I display the data collected and discuss descriptive statistics. Following the presentation of data, the methods section dives into the theory upon which analysis is based. This section also explains measures taken to ensure the robustness of my reported findings. In the results section I report the findings from three separate regression models. In the final two sections I draw conclusions based on the models, discuss the shortcomings of the project and opportunities for future research, and discuss potential policy implications.

Experimental Design

In the following the section I discuss the experiment I developed for this study. The study was approved by the Institutional Review Board at the University of Arkansas (#2001246274). Specifically, I explain in detail the choice experiment I created using Qualtrics[1]. I titled the survey, 'A Choice Experiment in Food Purchases', in order to reduce self-selection bias towards mindfulness studies. The participants for the survey were recruited online via Prolific. Prolific has a base of participants which have previously been recruited through social media (Facebook, Twitter, blog posts), flyer campaigns at universities, and researcher referrals. When new studies are posted, eligible participants are notified if their demographic information matches requirements. From Prolific's base I recruited a total of 634 adult participants from July 24 - July 27, 2020. Each participant was paid at a rate of $11.47/hour which is considered competitive

[1] The entire survey is included in the appendix.

pay for the recruitment platform. Those recruited to my study formed a representative sample of the US population based on age, sex, and ethnicity.

2.1 Design

I used a between-subject design (Charness, 2012) where a choice experiment approach was employed to estimate participants' evaluation of healthy/unhealthy food product alternatives (Vermeulen, 2008). By assigning each participant to either the control group or the treatment group, the between-subject design allowed me to investigate the different impact of two separate conditions on participants. In later analysis I compare the effects of the conditions on the separate groups. I followed the design of (Segovia et al., 2019) by presenting an image of a snack and a "healthier" version of the same snack (i.e., original vs. sugar free strawberry Jello)[2]. Each choice set was presented on a separate screen and order of items as well as position of item on the screen (i.e., right or left) were randomized for each participant. On each screen participants were presented with the instructions, "Please choose the product you prefer recall that each item is the **SAME PRICE**". The grocery shopping task consisted of 20 binary choice sets. Figure 1 shows an example of a choice set from the grocery shopping task.

My study was a hypothetical choice experiment meaning that it was non-incentive compatible (i.e., participants were not required to purchase their choices). It is commonplace in hypothetical choice experiments to include a cheap talk in order to elicit participants true preferences (Silva et al., 2012; Silva et al., 2011; Brummett et al., 2007). Researchers have found these excerpts to aid in reducing hypothetical bias (Silva et al., 2012; Silva et al., 2011; Brummett et al., 2007), a distortion that arises when individuals believe their response will have no impact and state their preferences different from what they actually prefer. As such, before

[2] A full list of choice set items is available in the appendix

the choice exercise I included a cheap talk excerpt which encouraged participants to behave as they would in a retail store. In addition to mitigating hypothetical bias, it is crucial in experimental research, especially that of online nature to secure the attention of subjects. If participant attention is not established, a greater degree of noise and a lesser degree of validity can result in the data (Oppenheimer et al., 2009). In order to establish and ensure attention, I included an oath (Carlsson et al., 2013; Jacquemet et al., 2013) at the beginning of my survey. In answering the oath, participants committed to thoroughly reading and providing thoughtful answers to all questions.

Figure 1 Choice Experiment Example Source: https://www.walmart.com/grocery/ip/Jif-To-Go-Creamy-Peanut-Butter-12-Ounce/15556216

Participants in the treatment group were presented with a 5-minute body scan mindfulness intervention, where they were instructed to close their eyes and pay attention to specified parts of their bodies moving from the feet up to the head. The manipulation was pre-recorded with a male voice using a body scan method that was previously found to increase state mindfulness in online samples (Mahmood et al. 2016). The recording lasted approximately 5

minutes. Participants in the control group were presented with a 5-minute compilation of affectively neutral information on glaciers (i.e., formation of glaciers and where they are located). The manipulation featured the same male voice as the treatment manipulation and was also pre-recorded[3]. The presented recordings ensured members of both groups were engaged for an equal amount of time. To ensure participants had as similar as possible experiences, I programed Qualtrics to remain on the page for the duration of both the control and treatment audio clips without the option to advance. The remainder of the survey was the same for participants in both the control and treatment groups.

> Welcome to the body scan practice, take a moment to either sit or lie down as we begin to deepen our practice. Gently close your eyes in whatever position you're in right now. You can use your breath as an anchor in this moment to just ground ourselves into the now. And now bringing awareness to the feet noticing sensations in the soles of the feet, the toes, the top of the feet, and up into the ankle joint and bringing a sense of curiosity to this practice, as if you've never noticed these sensations before. Shifting the awareness up from the feet and ankles into the legs. And shifting up from there into the hips. And shifting attention up from there now into the torso being aware of the back region, the chest, the abdomen. Being aware of the now arms and the hands, choosing to shift awareness to these areas. Now in this space of awareness choose to bring attention to the shoulders, shoulders are often a place of tension and stress, just being aware of what's here. And up from there now to the neck. And from the neck to the face, noticing sensations in the entirety of the face. And breathing in breathing out and releasing any awareness of the head, and the face, and the torso, and arms. and the hips, and the legs, and the feet and just coming back to the breath. And as we come to the end of this practice just acknowledging the choice of taking this time out to deepen your practice. Connecting with our bodies is an act of self-care in this way. (Elisha Goldstein, 5-Minute body scan)

I included the two aforementioned assessments, TMS and MAAS in the survey to measure mindfulness. TMS (Lau et al., 2006) is a series of 13 questions answered on a 5-point ordinal scale ranging from "Not at all" to "Very much". The questions are divided into two subcategories: curiosity and decentering. The scaled answers are averaged for each of the subcategories to determine the participant's state mindfulness score. The questionnaire was

[3] full scripts of both control and treatment audios available in the appendix

completed before and after treatment (and control) to arrive at both pre-treatment and post-treatment mindfulness scores. MAAS is a series of 15 questions answered on a 6-point ordinal scale ranging from “Always” to “Never” (Brown et al., 2003). The scaled answers are averaged to determine the participant’s trait mindfulness score (Brown et al., 2003).

2.2 Other controls

Previous research considers individuals time preference, health position, diet, and various demographic measures to have significant impacts on food purchase behaviors. In order to assess time preference of participants I included the assessment consideration of future consequences, (CFC) (Strathman et al., 2013). CFC is a series of 14 questions answered on a 7-point ordinal scale ranging from “Not at all like me” to “Very much like me” (Strathman et al., 2013). The scaled answers are split into two categories and assigned a numeric value which is then averaged to determine the participant’s preference toward future or present. De Marchi et al. (2016) find that consumers’ time preferences have a significant influence on their valuation of health claims and calorie information present on packaging. For instance, consumers who are more future oriented tend to make healthier purchase decisions because they envision the effects their consumption has on their ‘future-self’ (De Marchi et al., 2016)

To assess individual health and nutrition positions, I followed the design of Pieniak et al. (2010) by including three separate health indicator surveys which determine participant’s: interest in healthy eating (Steptoe et al., 1995), subjective health (Ware et al., 1993), and involvement in health (Zaichkowsky, 1985). I added an additional health measure following the design of Fang et al. (2019) which assessed individuals’ attention to the nutrient content of foods they purchase regularly, and their trust in health labels (i.e., “low-fat”, “light”, etc.). All health indicators were continuous variables created by averaging numerical values which correspond to

question set answers. In addition to health indicators, diet adherence could prompt healthier food choices, because of this I posed the simple question, “Are you currently following a special diet?” which if answered yes prompted the next question, “What type of diet are you following?”. This variable was binary with “Yes” being equal to 1. To conclude the survey, I collected general demographic information including gender, age, education, race, income, and self-reported height and weight. Specifically, gender was a categorical variable comprised of 3 groups: male, female, and other. Age was a self-reported categorical variable with 3 groups: 39 and below, 40-59, and 60 and above. Education was a binary variable equal to 1 for individuals who have a bachelor’s degree. Race was defined as binary variable where White or Caucasian was equal to 1. Income was defined as a categorical variable with 7 groups: $0 to $14 999, $15 000 to $29 999, $30, 000 to $44 999, $45 000 to $59,999, $60,000 to $74,999, $75,000 to $89,999, $90,000 or more. Self-reported height and weight were used to calculate BMI scores which were converted to a binary variable where a BMI of 25 or greater was equal to 1.

Summary of Data

My initial sample includes 634 participants. 10 individuals were removed from the data initially due to failure to comply with the oath at the beginning of the survey. Further, in order to ensure the treatment variable would represent an increase in state mindfulness, I removed 118 participants in the treatment group who’s TMS score did not increase post treatment. My final sample included 506 participants, in the control group (N=315) and treatment group (N=191). In Table 1 I provide descriptive statistics for several demographic and behavioral measures obtained from the survey.

The average CFC score for the sample was 4.84 out of 7 and the average MAAS score was 3.85 out of 6, with the higher score indicating a greater degree of mindfulness. Participant's self-reported height and weight were used to calculate body mass index (BMI) and classified following the CDC (2020)'s recommendation: normal weight (≤ 24.9), overweight (25–29.9), or obese (≥ 30). The average BMI for my sample was 27.4, which falls within the overweight category. Over half of my sample (58%) was in the overweight/obese category which would explain the high average. Given this, I also looked at the overweight and obese subsample later. On average annual income of the sample was between $45,000 – 75,000 and the average age was 45.24 years old. Half of the participants were female (50%), 55% had a bachelor's degree or higher, and 72% identified themselves as White.

My outcome variable was total number of healthy choices. My independent variable of interest was the mindfulness treatment variable. Other covariates included time preference (CFC) score, health involvement, health interest, health perception, nutrition knowledge, special diet, age category, gender, weight category, bachelor's degree, race, and income. I further investigated subsamples based on overweight and obese, gender, age, response time, special diet adherence, education, and race.

Table 1 Descriptive Statistics

Variable	N	Mean	St. Dev.	Min	Max
Total Healthy Choices	506	7.889	4.71	0	20
Treatment	506	38%	0.49	0	1
TMS1 Decentering	506	2.24	0.96	0	4
TMS1 Curiosity	506	1.68	0.67	0	4
TMS2 Decentering	506	2.08	1.14	0	4
TMS2 Curiosity	506	2.02	0.89	0	4
Average Response Time	506	9.71	6.53	2.43	75.3
CFC Score	506	4.84	0.92	1.5	7
MAAS Score	506	3.85	0.88	1.27	6
Health Importance	506	5.63	1.12	1	7
Health Interest	506	5.37	1.22	1	7

Table 1 Descriptive Statistics Cont.

Variable	N	Mean	St. Dev.	Min	Max
Health Perception	506	4.57	1.41	1	7
Nutrition Knowledge	506	3.34	0.68	1	5
Following a Special Diet	506	19%	0.4	0	1
Age	506	45.24	15.83	18	75
Female	506	50%	0.5	0	1
Other	506	1%	0.12	0	1
Male	506	48%	0.5	0	1
White	506	72%	0.45	0	1
Bachelor's Degree	506	55%	0.5	0	1
Education	506	4.277	1.42	1	7
Income	506	4.553	2.51	1	9
BMI	506	27.42	6.7	14.12	68.35
Overweight +	506	58%	0.49	0	1

Table 2 provides a balance check to ensure random assignment across conditions. Specifically, I found that the 5-minute body scan effectively increased state mindfulness in the treatment group. P-values show there was no significant difference between percentage of healthy choices, MAAS score, CFC Score, TMS iteration 1 decentering score, TMS iteration 1 curiosity score, Health Importance score, Health Interest score, Health Perception score, Nutrition Knowledge score, Special Diet, Age, Gender, BMI, Education, Race, or Income, and a significant difference between TMS iteration 2 decentering score ($p<.001$) TMS iteration 2 curiosity score ($p<.001$). The lack of significant difference between treatment and control groups for iteration one of TMS indicated that before listening to the audio manipulations both groups had statistically similar state mindfulness scores. Post manipulation, a significant difference in scores indicated that the mindfulness manipulation successfully influenced state mindfulness in the treatment group.

Methods

In order to ensure the robustness of my findings I employed three different regression models, ordinary least squares (OLS), Poisson, and Negative Binomial (NB) (Wooldridge, 2006) to analyze the collected data. All statistical analysis was performed using R version 4.0.2 (2020-06-22) and R-Studio. I found no significant difference in the three models and report the findings from each estimation.

4.1 Balance test

Before beginning regression analysis, to confirm that my sample was random, I used a one-way ANOVA test (Tabachnick and Fidell, 2007). This test allowed me to compare means from the treatment and control group using the F-distribution. Rejection of the null hypothesis indicates a significant result, that the two means are statistically different. I performed this test on the outcome variable, and 18 other data points collected from my survey. Results from this test can be found in Table 2 and are further discussed in the results section.

Table 2 Balance Test Results

Variable	P-Value
Total Healthy Choices	0.6953
MAAS	0.5969
CFC	0.3161
TMS1 D	0.387
TMS1 C	0.6161
TMS2 D	0
TMS2 C	0
Health Importance	0.8756
Health Interest	0.5994
Health Perception	0.3576
Nutrition Knowledge	0.6548
Special Diet	0.1051
Age	0.5591
Gender - Female	0.6977
BMI	0.6871
Education	0.7387
White	0.9352
Income	0.7514

4.2 Statistical Analysis

To begin I estimated a base model following each of the methods which included only the outcome variable, total number of healthy choices and the variable of interest the mindfulness treatment. Following the base models, I estimated more complex models which included other covariates: time preference (CFC) score, health involvement, health interest, general health, nutrition knowledge/interest, special diet, age category, gender, weight category, bachelor's degree, race, and income. I further investigated subsamples based on BMI, gender, age, response time, special diet adherence, education, and race.

4.2.1 Ordinary Least Squares

The first regression model I estimated was an OLS model (Wooldridge, 2006). OLS models are characterized as linear models which can be used to approximate average partial effects, or the contribution each variable makes to the outcome variable. This type of model is best suited for data where the outcome variable is continuous. Though my data was not arranged in this way, the coefficients generated can be useful in determining goodness-of-fit of all models. Equation 1 shows a more detailed version of the equation used in my analysis.

$$Total\ Healthy\ Choices = \beta_0 + \beta_1 Treatment + \beta_2 CFC + \beta_3 Health\ Importance + \beta_4 Health\ Interest + \beta_5 Health\ Perception + \beta_6 Nutrition\ Knowledge + \beta_7 Special\ Diet + \beta_8 Age + \beta_{10} Female + \beta_{12} BMI + \beta_{13} Education + \beta_{14} Race + \beta_{15} Income \quad \textbf{(1)}$$

Specifically, the outcome variable was the total number of healthy choices, β_0 was the intercept, the variable of interest was β_1 treatment variable, and the remaining covaries were: β_2 time preference (CFC) score, β_3 health importance, β_4 health interest, β_5 health perception, β_6 nutrition knowledge, β_7 special diet (a binary variable), $\beta_8 - \beta_9$ age category, $\beta_{10} -$

β_{11} gender, β_{12} BMI greater than 25, β_{13} bachelor's degree (a binary variable), β_{14} race, and $\beta_{15} - \beta_{20}$ income category.

Since my dependent variable was count data, I further employed Poisson and NB models. While OLS falls into the linear category as mentioned, Poisson and NB fall into the count category meaning they are more specifically designed for data where the independent variable takes on a non-negative integer value (Wooldridge 2006).

4.2.2 Poisson and Negative Binomial Models

Poisson regression is used to predict a dependent variable comprised of count data based on one or more independent variables. I follow (Negative binomial regression, n.d.) to specify models. The Poisson regression model can be generalized by introducing an unobserved heterogeneity term for observation i. Thus, the individuals are assumed to differently randomly in a manner that is not fully accounted for by the observed covariates. This is formulated as

$$E[Y_i|\boldsymbol{x}_i, \tau_i] = \mu_i\tau_i = e^{x_i^T\beta+\varepsilon_i} \quad \textit{(2)}$$

Where the unobserved heterogeneity term $\tau_i = e^{\varepsilon_i}$ is independent of the vector of regressors $\mathbf{x}_i$. Then the distribution of Y_i conditional on $\mathbf{x}_i$ and τ_i is Poisson with conditional mean and conditional variance $\mu_i\tau_i$:

$$f(y_i|\boldsymbol{x}_i, \tau_i) = \frac{e^{-\mu_i\tau_i}(\mu_i\tau_i)^{y_i}}{y_i!} \quad \textit{(3)}$$

where $y_i = 0, 1, 2, \ldots, 20$. Let $g(\tau_i)$ be the probability density function of τ_i. Then, the distribution $f(y_i|\mathbf{x}_i, \tau_i)$ with respect to τ_i:

$$f(y_i|\mathbf{x}_i) = \int_0^\infty f(y_i|\mathbf{x}_i, \tau_i)\, g(\tau_i) d\tau_i. \quad \textbf{(4)}$$

An analytical solution to this integral exists when τ_i is assumed to follow a gamma distribution. This solution is the negative binomial distribution. When the model contains a constant term, it is

necessary to assume that $Ee^{\varepsilon_i} = E\tau_i = 1$, in order to identify the mean of the distribution. Thus, it is assumed that τ_i follows a gamma(θ, θ) distribution with $E\tau_i = 1$ and $\mathbf{Var}\tau_i = 1/\theta$:

$$g(\tau_i) = \frac{\theta^\theta}{\Gamma(\theta)} \tau_i^{\theta-1} exp\{-\theta\tau_i\}, \quad \textbf{(5)}$$

Where $\Gamma(x) = \int_0^\infty z^{x-1}\exp\{-z\}dz$ is the gamma function and θ is a positive parameter. Then, the density of Y_i given $\mathbf{x}_i$ is derived as

$$f(y_i|\boldsymbol{x}_i) = \frac{\Gamma(y_i+\theta)}{y_i!\Gamma(\theta)}\left(\frac{\theta}{\theta+\mu_i}\right)^\theta \left(\frac{\mu_i}{\theta+\mu_i}\right)^{y_i}. \quad \textbf{(6)}$$

Making the substitution $\alpha = 1/\theta$ $(\alpha > 0)$, the negative binomial distribution can then be rewritten as

$$f(y_i|\boldsymbol{x}_i) = \frac{\Gamma(y_i+\alpha^{-1})}{y_i!\Gamma(\alpha^{-1})}\left(\frac{\alpha^{-1}}{\alpha^{-1}+\mu_i}\right)^{\alpha^{-1}} \left(\frac{\mu_i}{\alpha^{-1}+\mu_i}\right)^{y_i} \quad \textbf{(7)}$$

where $y_i = 0, 1, 2, \ldots, 20$. Thus, the negative binomial distribution is derived as a gamma mixture of Poisson random variables. It has conditional mean

$$E[Y_i|\boldsymbol{x}_i] = e^{\boldsymbol{x}_i^T\beta} \quad \textbf{(8)}$$

And conditional variance

$$\mathrm{Var}[Y_i|\boldsymbol{x}_i] = \mu_i\left(1+\frac{\mu_i}{\theta}\right) = \mu_i(1+\alpha\mu_i) > E[Y_i|\boldsymbol{x}_i]. \quad \textbf{(9)}$$

The conditional variance of the negative binomial distribution exceeds the conditional mean. Overdispersion results from neglected unobserved heterogeneity. The Poisson distribution is a special case of the negative binomial distribution where $\alpha = 0$. More specifically in all cases, *Y* is total number of healthy choices. $\boldsymbol{X}_i$ = time preference (CFC) score, health involvement, health interest, general health, nutrition knowledge/interest, special diet, age category, gender, weight category, bachelor's degree, race, and income.

4.3 Robustness checks

When developing an OLS regression model, it is important to consider whether the model is the best linear unbiased estimator. To ensure this was the case with my models, I considered the correlation of variables (i.e., how related the variables are to one another). I also considered both the issue of multicollinearity and the issue heteroskedasticity using the following methods.

I first looked to the issue of multicollinearity, a situation where two or more independent variables in a regression model are highly linearly correlated. My main causes for concern of multicollinearity were the variables which represented individuals' health and nutrition because an interest/concern for health is likely correlated with that of nutrition in a linear fashion. I used Variance inflation factors, VIF to assess this potential issue of multicollinearity, which could have, if present skewed the results of my regression model. I looked specifically at the VIF for the base OLS model (VIF will not change between models). As suspected, I found moderate correlation (VIF score between 3 and 5) (Ringle et al., 2015) between health involvement and health interest. I tested models removing each of the two variables and ultimately decided to include both variables to avoid the issue of omitted variable bias. If I removed health interest, health involvement became significant, when in fact that significance should have been attributed to health interest. Following this decision, the next step in my robustness check was to confirm homoskedasticity in all regression models.

The issue of heteroskedasticity arises in regression models when the variance of the standard error for an independent variable is non-constant across levels. If left unchecked, the resulting coefficients generated by a regression model will have inaccurate stand errors and confidence intervals, which could lead to an issue of false significance. I used the Breusch-Pagan (Wooldridge, 2006), BP test to assess the potential issue of heteroskedasticity. A significant p-

value yield from the BP test would indicate a heteroskedasticity issue within the model. In all places where an error was detected I used the results from White's Heteroskedasticity Consistent Estimators (Wooldridge, 2006) for result analysis.

Results

5.1 OLS Model Results

The outcome variable of the OLS model was total number of healthy choices. In the overall sample, OLS results from the base model, which included only the treatment dummy as an independent variable, indicated that mindfulness had an insignificant effect on healthy food choices (0.169; 95% Confidence Interval or CI: -0.678 to 1.016). Table 3 presents the results for the base model using the three regression methods. In the model where I included the previously listed covaries, the treatment effect was 0.16 (95% CI: -0.65 to 0.96). The regression results for the full sample based on the three regression methods are presented in Table 4. OLS subsample results are presented in the appendix on Tables 5, 6, and 7.

Table 3 Base Model Regression Results

	OLS	**Poisson**	**Negative Binomial**
Treatment	0.169	0.021	0.021
	(-0.678, 1.016)	(-0.042, 0.085)	(-0.093, 0.136)
Constant	7.825***	2.057***	2.057***
	(7.305, 8.346)	(2.018, 2.097)	(1.987, 2.128)
Observations	506	506	506
R2	0.0003	NA	NA
Adjusted R2	-0.002	NA	NA
Residual Std. Error	4.712 (df = 504)	NA	NA
F Statistic	0.154 (df = 1; 504)	NA	NA
Log Likelihood	NA	-1,698.21	-1,484.47
theta	NA		3.587*** (0.346)
Akaike Inf. Crit.	NA	3,400.42	2,972.94

Note: *p<0.05; **p<0.01; ***p<0.001;

Though I found no significant effect from the treatment in the entire sample, I found the treatment to have a significant effect (1.241; 95% CI: 0.187 to 2.294) on healthy food choices in subsample of individuals who are overweight and obese. This result is consistent with findings in previous research (Mantzios and Wilson, 2015; Ruffault et al., 2017) regarding the impacts of mindfulness interventions on food consumption, specifically in overweight and obese populations. I found a heterogenous effect in the normal and underweight group where the treatment variable was once again insignificant (-1.225; 95% CI: -2.487,0.038).

I found the treatment to have no significant or heterogenous effects between the male (-0.279; 95% CI: -1.45, 0.90) and female (0.733 95% CI: -0.43, 1.90) subsamples. This finding is in contrast with earlier findings which suggest gender differences emerge when testing mindfulness in male and female populations (Gilbert and Waltz, 2010). No significant or heterogenous differences emerged in the remaining subsamples tested which included: three age groups, above and below average response times, individuals following and not following a special diet, individuals with and without a bachelor's degree, and White and Non-white individuals.

Overall, in OLS models I found nutrition knowledge to be the covary that had the most consistent statistically significant effect (1.47; 95% CI: 0.79 to 2.14) on healthy food choices. The nutrition knowledge score was based on three questions: familiarity with the nutrient content of foods regularly purchased, extent of knowledge of the nutrient content of foods regularly purchased, and belief in health claims on food products (i.e. "low-fat", "high fiber", etc.). Answers to the three questions were averaged based on numeric assignment and subject scores were determined on a 5-point scale (5 being the best 1 being the worst). Of the 506 participants, 79.2% (N=401) scored a 3 or higher on this scale, which indicated a relatively high 'nutrition knowledge'. When asked how they would rate their knowledge of nutrient content of the foods they regularly

buy, 75.3% (N=381), indicated their knowledge to be either good or very good. And when asked for how many of their regularly purchased products they know the nutrient content well, 51.6% (N=261) answer either most or all of them. Though knowledge and familiarity with nutrition content seemed to be high, in the overall sample I found that 73.91% (N=374) of subjects only believe half or fewer of the health claims on food products.

The impact of the nutrition knowledge variable was greatest in the subsample of individuals who had an above average response time to questions, (2.380; 95% CI: 1.080, 3.679) and had a homogenous effect in the subsample of individuals who had a below average response time (1.150; 95% CI: 0.295, 2.005). The significance of this variable was confirmed in 13 out 15 subsamples assessed. The two subsamples where I found no significant effect were the 40-59 age group (0.277; 95% CI: -1.012, 1.566) and the subsample of individuals who were on a special diet (1.842; 95% CI: 0.025, 3,658).

Table 4 Full Sample Regression Results

Dependent Variable: Total Number of Healthy Choices			
	OLS	**Poisson**	**Negative Binomial**
Treatment	0.16	0.018	0.026
	(-0.65, 0.96)	(-0.08, 0.12)	(-0.08, 0.13)
CFC Score (time preference)	-0.27	-0.029	-0.02
	(-0.75, 0.21)	(-0.09, 0.03)	(-0.08, 0.04)
Health Importance	0.35	0.048	0.057
	(-0.25, 0.95)	(-0.04, 0.13)	(-0.03, 0.14)
Health Interest	0.51	0.075	0.078*
	(0.00, 1.03)	(0.00, 0.15)	(0.00, 0.15)
Health Perception	-0.12	-0.018	-0.032
	(-0.49, 0.24)	(-0.07, 0.03)	(-0.08, 0.02)
Nutrition Knowledge	1.47***	0.200***	0.210***
	(0.79, 2.14)	(0.11, 0.29)	(0.12, 0.30)
On a Special Diet	1.26*	0.134*	0.129*
	(0.14, 2.39)	(0.01, 0.26)	(0.00, 0.26)
Age			
40-59	0.1	0.008	0.007
	(-0.84, 1.04)	(-0.12, 0.13)	(-0.12, 0.13)
60+	1.07*	0.126	0.125
	(0.04, 2.11)	(0.00, 0.25)	(0.00, 0.25)
Gender			
Female	0.17	0.021	0.038
	(-0.62, 0.96)	(-0.08, 0.12)	(-0.06, 0.14)
Other	0.04	-0.187	-0.18
	(-2.74, 2.81)	(-0.83, 0.46)	(-0.76, 0.40)

Table 4 Full Sample Regression Results Cont.

	OLS	Poisson	Negative Binomial
BMI > 25	0.00471	0.012	0.013**
	(-0.83, 0.84)	(-0.09, 0.12)	(-0.09, 0.12)
Education	1.31**	0.174**	0.184
	(0.45, 2.16)	(0.06, 0.28)	(0.07, 0.30)
White	-0.16	-0.019	-0.032
	(-1.05, 0.72)	(-0.13, 0.09)	(-0.15, 0.08)
Income			
$15,000-30,000	0.0082	0.013	0.051
	(-1.56, 1.57)	(-0.20, 0.22)	(-0.16, 0.27)
$30,000-45,000	0.24	0.03	0.051
	(-1.32, 1.79)	(-0.17, 0.23)	(-0.16, 0.26)
$45,000-60,000	0.84	0.124	0.159
	(-0.60, 2.29)	(-0.06, 0.31)	(-0.03, 0.35)
$60,000-75,000	-0.29	-0.022	0.005
	(-1.98, 1.40)	(-0.24, 0.20)	(-0.23, 0.24)
$75,000-90,000	-0.48	-0.031	-0.019
	(-2.30, 1.34)	(-0.27, 0.20)	(-0.26, 0.22)
$90,000 +	0.13	0.022	0.06
	(-1.35, 1.61)	(-0.17, 0.21)	(-0.14, 0.26)
Constant	-1.34	0.719**	0.595*
	(-4.33,1.66)	(0.27, 1.16)	(0.14, 1.05)
Observations	506	506	506
R2	0.196	NA	NA
Adjusted R2	0.163	NA	NA
Residual Std. Error	4.308 (df = 485)	NA	NA
F Statistic	5.905*** (df = 20; 485)	NA	NA
Log Likelihood	NA	-1,553.31	-1,429.71
theta	NA	NA	5.150*** (0.579)
Akaike Inf. Crit.	NA	3,148.61	2,901.43

Note: *p<0.05; **p<0.01; ***p<0.001; Intercept: Special Diet: not on a special diet, Age: 18-39, Gender: male, BMI: less than 25, Education: no bachelor's degree, Race: non-white, Income: less than 15K

5.2 Poisson Model Results

Poisson regression models were estimated using the same outcome variable and covaries as models from OLS analysis. In the overall sample, Poisson results from the base model indicated that mindfulness had an insignificant effect on healthy food choices (0.021; 95% CI: -0.042 to 0.085). In the model I once again included the listed covaries, the treatment effect was 0.018 (95% CI: -0.08 to 0.12). All Poisson subsample regression results are presented in Tables 8, 9, and 10 in the appendix.

With the Poisson models I once again found no significant treatment effect in the entire sample, but found the treatment to have a significant effect (0.153; 95% CI: 0.064 to 0.242) on healthy food choices in the overweight and obese subsample. This result is consistent with findings in the OLS model. In the subsample of individuals classified as normal and underweight, I found a homogenous significant effect (-0.157; 95% CI: -0.259, -0.054), however the effect in this case was negative. This negative effect in the normal weight subsample agrees with the earlier findings in food intake studies testing the effects of mindfulness (Anderson et al., 2015).

Using Poisson regression methods treatment effects were homogenous between male (-0.014; 95% CI: -0.17, 0.14) and female (0.082; 95% CI: -0.06, 0.23) subsamples; this is once again in contrast to earlier findings (Gilbert and Waltz; 2010), but consistent with my OLS findings. No significant or heterogenous differences emerged in the remaining subsamples tested which included: three age groups, above and below average response times, individuals following and not following a special diet, individuals with and without a bachelor's degree, and White and Non-white individuals.

I found nutrition knowledge and education to be the two most consistently significant covaries among all subsamples using Poisson methods. In the full sample nutrition knowledge had an effect of .200 (95% CI: 0.11, 0.29) and education had an effect of 0.174 (95% CI: 0.06, 0.28). The effects of both covaries were positive in each of the fifteen subsamples tested. The impact of the nutrition knowledge variable is greatest in the subsample of individuals who are 39 years old and below, (0.301; 95% CI: 0.206, 0.396) the significance of this effect was homogenous in the subsample of individuals who are 60 years old and older (0.211; 95% CI: 0.095, 0.328) and heterogenous in the middle-aged subsample with participants aged 40-59 (0.047; 95% CI: -0.059, 0.154). The covary of education had the greatest positive significant

effect in the subsample of individuals who were normal and underweight (0.247; 95% CI: 0.135, 0.359). This variable was significant in 10 out of 13 subsamples assessed.

5.3 Negative Binomial Model Results

The final regression models, NB were also estimated using total number of healthy choices as the outcome and the listed covaries as independent variables. Looking at the entire sample, the NB results from the base model once again indicated that mindfulness had an insignificant effect on healthy food choices (0.021; 95% CI: -0.093 to 0.136). In the model where I once again included the listed covaries, the treatment effect was 0.026 (95% CI: -0.08 to 0.13). The NB subsample regression are presented in Tables 11, 12, and 13 in the appendix.

Consistent with findings from the OLS and Poisson models I found the treatment to have a significant effect (0.151; 95% CI: 0.009 to 0.292) on healthy food choices in subsample of individuals who are the overweight and obese. In the subsample of individuals classified as normal and underweight, I found a heterogenous effect (-0.146; 95% CI: -0.305, 0.012), this finding is consistent with OLS, and in contrast to Poisson findings. I found the treatment to have no significant effect in any of the remaining subsamples using NB methods.

I found nutrition knowledge to be the most consistently significant covary among all subsamples using NB methods. In the full sample nutrition knowledge had an effect of .210 (95% CI: 0.12, 0.30). This significant effect was further confirmed in fourteen out of fifteen subsamples. The impact of the nutrition knowledge variable was greatest in the subsample of individuals aged 39 and below, (.318; 95% CI: .176, .460). The sole subsamples where I found no significant effect was the 40-59 age group (0.48; 95% CI: -0.121, 0.216), this was consistent with OLS and Poisson results.

Conclusion

I bridge the gap in the literature of online mindfulness interventions and food purchase behaviors. In particular, I studied the impact of the 5-minute body scan on healthy food choices in a hypothetical grocery shopping experiment. My research suggests that the mindfulness intervention could increase healthy food purchases for the overweight and obese subsample. This is consistent with earlier findings for a similar population in the context of food consumption. Furthermore, my research highlights the importance of nutrition knowledge in promoting healthy food choices.

As robustness checks, I conducted Poisson regressions and Negative Binomial regressions in addition to the OLS regressions. These probability models (Poisson and Negative Binomial) are tailored to address the unique features of count data. Consistent with OLS results, the additional models produced similar estimates for the treatment variable, i.e., mindfulness intervention, in that mindfulness could increase healthy food purchases only in the overweight and obese subsample. Similarly, nutrition knowledge was also found to increase healthy food choices by the additional models in most subsample.

Although I find a negative significant effect of mindfulness in the normal and underweight subsample through the Poisson model, I believe it is due, as is pointed out by Warren et al. (2017), to a limited base of evidence for the effects of mindfulness on food intake behavior in normal weight individuals. While certain studies (Higgs and Donohoe, 2011; Jenkins and Tapper, 2014; Jordan et al., 2014; Kidwell et al., 2015) report positive findings, others report neutral (Kearney et al., 2012; Jacobs et al., 2013; Cavanagh et al., 2014; Marchiori and Papies, 2014) and even, like our study, negative (Anderson et al., 2015) findings.

I created 15 subsamples based on BMI categories, age groups, gender, response time, whether or not one is on a special diet, education level, and whether a person is Caucasian. As illustrated above, the mindfulness intervention was only effective in the subsamples based on BMI categories. Unlike the findings of Gilbert and Waltz (2010), I did not find a significant difference between male and female subsamples. Although the age group of 40-59 is significant in the overall sample, I did not find significant or heterogeneous effects of mindfulness in the subsamples based on age. Special diet was also significant increasing healthy food choices in the overall sample; however, the mindfulness effect is insignificant in the subsample of individuals on a special diet. This is likely due to a small sample size in this group.

Discussion

Obesity and impulsive purchasing patterns remain prevalent issues in the US and researchers work tirelessly to find solutions. This study is, to the author's knowledge, the first to examine the effects of a short-term mindfulness manipulation on a representative US populations' healthy food choices. As Fischer et al. (2017) point out in their mindfulness and sustainable consumption paper, mindfulness training should be applied in a randomized-controlled design and draw from the general population, not regarding their tendency to practice sustainable consumption, mindfulness, or both. From my randomized-controlled experiment, I found that the addition of a 5-minute body-scan mindfulness intervention was effective in increasing the number of healthy food choices in the subsample of overweight and obese individuals. Additionally, my data indicates, that nutrition knowledge has a consistently significant effect on healthy food choices among numerous subsamples. I fill an important gap in literature pointed out by Tapper (2017), in using an adult sample for an experiment type that typically recruits university students.

Future policy implications based on my findings could be two-fold, increasing trust in product health claims and increasing healthy food purchases of overweight and obese individuals. I provide primary data which indicates the importance of individual understanding and belief in the health claims present on products. My data shows that 73.91% of participants believe half or fewer of all product health claims (i.e. low-fat, low-sugar, high-fiber, etc.). This finding alone represents an opportunity for reform and education at a policy level. There is space to increase consumer trust in product health claims, which could have potential to further increase their willingness to purchase healthier alternatives. In addition to opportunity I find with product health claims, there is another opportunity for policy intervention in healthy food purchasing strategies for overweight and obese individuals. I find that the addition of a mindfulness intervention has a positive effect on the healthy food purchases of overweight and obese individuals. This finding, which is backed by experimental evidence could be used by policy makers in programs such as the Supplemental Nutrition Assistance Program and Women Infants and Children to increase healthy food purchasing patterns specifically among overweight and obese participants.

My findings should appeal to academics in behavioral economics, as well as psychology fields who seek to determine a method for increasing consumer nutrition knowledge and trust in product health claims. In the future, research in this area could be valuable to food producers and marketeers. Additionally, this is valuable information for dietitians and clinicians who seek to provide alternative methods to improve patient healthy food choices based on experimental evidence.

My research is not without limitations. Hypothetical studies such as mine tend to be rigged with bias, unlike studies that employ incentive compatibility. Interested researchers

should consider conducting similar studies in a non-hypothetical context. My intervention treatment is tailored to look at short term effects. Future research should consider investigating a similar study with long term mindfulness interventions.

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Appendix

Table 5 OLS Subsample 1-5 Results

	Dependent Variable: Total Number of Healthy Choices				
	Overweight	**Normal and Underweight**	**Males**	**Females**	**60+ Age Group**
Treatment	1.241*	-1.225	-0.279	0.733	0.545
	(0.187, 2.294)	(-2.487, 0.038)	(-1.45, 0.90)	(-0.43, 1.90)	(-1.034, 2.124)
CFC Score (time preference)	-0.471	0.113	-0.488	0.073	-1.082*
	(-1.048, 0.106)	(-0.718, 0.943)	(-1.15, 0.18)	(-0.70, 0.85)	(-2.053, -0.112)
Health Importance	0.282	0.394	0.78	-0.142	0.439
	(-0.515, 1.078)	(-0.590, 1.379)	(-0.10, 1.66)	(-1.09, 0.81)	(-0.942, 1.820)
Health Interest	0.712	0.241	0.482	0.717	0.684
	(-0.012, 1.437)	(-0.654, 1.136)	(-0.28, 1.24)	(-0.10, 1.53)	(-0.547, 1.914)
Health Perception	-0.277	-0.096	-0.439	0.002	-0.315
	(-0.703, 0.149)	(-0.666, 0.473)	(-0.97, 0.10)	(-0.54, 0.54)	(-0.968, 0.338)
Nutrition Knowledge	1.402**	1.765**	1.919***	1.116*	1.782*
	(0.496, 2.308)	(0.663, 2.866)	(0.97, 2.87)	(0.07, 2.17)	(0.250, 3.314)
On a Special Diet	0.939	1.276	2.609**	0.233	0.981
	(-0.313, 2.190)	(-0.569, 3.120)	(0.83, 4.39)	(-1.29, 1.76)	(-1.239, 3.202)
Age					
40-59	0.302	-0.106	0.786	-0.782	
	(-0.946, 1.549)	(-1.615, 1.403)	(-0.60, 2.17)	(-2.16, 0.60)	
60+	1.266	0.629	1.678*	0.273	
	(-0.086, 2.619)	(-1.000, 2.259)	(0.24, 3.12)	(-1.30, 1.85)	
Gender					
Female	0.766	-0.445			-0.024
	(-0.270, 1.802)	(-1.674, 0.783)			(-1.588, 1.540)
Other	0.43				
	(-3.082, 3.942)				
BMI > 25			-0.888	1.014	0.437
			(-2.09, 0.31)	(-0.20, 2.23)	(-1.212, 2.085)
Education	1.003	1.829**	0.936	1.760**	2.070*
	(-0.060, 2.067)	(0.461, 3.197)	(-0.31, 2.18)	(0.52, 3.00)	(0.367, 3.772)
White	-0.533	0.309	-0.405	0.031	-0.76
	(-1.664, 0.598)	(-1.083, 1.701)	(-1.71, 0.90)	(-1.26, 1.32)	(-2.795, 1.274)

Table 5 OLS Subsample 1-5 Results Cont.

	Dependent Variable: Total Number of Healthy Choices				
	Overweight	**Normal and Underweight**	**Males**	**Females**	**60+ Age Group**
Income					
$15,000-30,000	0.063	1.124	1.582	-1.067	0.408
	(-1.796, 1.923)	(-1.953, 4.202)	(-0.94, 4.10)	(-3.26, 1.13)	(-2.893, 3.709)
$30,000-45,000	0.092	1.141	0.175	0.324	0.658
	(-1.686, 1.870)	(-1.825, 4.108)	(-2.22, 2.57)	(-1.90, 2.55)	(-2.466, 3.782)
$45,000-60,000	0.953	1.048	1.316	0.553	1.084
	(-0.918, 2.825)	(-1.751, 3.848)	(-1.00, 3.63)	(-1.50, 2.61)	(-2.266, 4.435)
$60,000-75,000	-0.095	0.268	0.598	-0.881	-0.059
	(-2.267, 2.078)	(-2.849, 3.386)	(-2.13, 3.33)	(-3.20, 1.44)	(-3.420, 3.302)
$75,000-90,000	-0.287	-0.403	0.018	-0.677	2.664
	(-2.583, 2.009)	(-3.610, 2.803)	(-3.21, 3.25)	(-2.98, 1.63)	(-1.795, 7.124)
$90,000 +	0.614	0.023	0.528	0.052	-0.815
	(-1.149, 2.378)	(-2.662, 2.709)	(-1.82, 2.88)	(-2.16, 2.27)	(-4.028, 2.397)
Constant	-0.627	-3.031	-2.589	-0.599	1.676
	(-4.326, 3.072)	(-8.406, 2.345)	(-7.10, 1.93)	(-5.18, 3.98)	(-5.536, 8.888)
Observations	294	212	245	254	140
R2	0.22	0.231	0.289	0.175	0.25
Adjusted R2	0.166	0.159	0.232	0.112	0.146
Residual Std. Error	4.215 (df = 274)	4.438 (df = 193)	4.193 (df = 226)	4.359 (df = 235)	4.480 (df = 122)
F Statistic	4.063*** (df = 19; 274)	3.220*** (df = 18; 193)	5.095*** (df = 18; 226)	2.770*** (df = 18; 235)	2.398** (df = 17; 122)

Note: *p<0.05; **p<0.01; ***p<0.001; Intercept: Special Diet: not on a special diet, Age: 18-39, Gender: male, BMI: less than 25, Education: no bachelor's degree, Race: non-white, Income: less than 15K

Table 6 OLS Subsample 6-10 Results

	Dependent Variable: Total Number of Healthy Choices				
	40-59 Age Group	**39 and Below Age Group**	**Above Average Response Time**	**Below Average Response Time**	**On a Special Diet**
Treatment	0.085	0.348	-0.331	0.402	0.382
	(-1.361, 1.532)	(-0.942, 1.637)	(-1.809, 1.147)	(-0.557, 1.360)	(-1.952, 2.716)
CFC Score (time preference)	-0.138	0.341	-0.423	-0.191	-1.082
	(-0.915, 0.638)	(-0.416, 1.098)	(-1.316, 0.471)	(-0.738, 0.356)	(-2.389, 0.224)
Health Importance	0.181	0.086	0.501	0.183	0.344
	(-0.979, 1.342)	(-0.811, 0.982)	(-0.617, 1.619)	(-0.569, 0.935)	(-1.540, 2.228)
Health Interest	1.026	0.204	0.442	0.436	0.775
	(-0.079, 2.130)	(-0.607, 1.016)	(-0.669, 1.553)	(-0.215, 1.087)	(-0.977, 2.527)
Health Perception	0.151	-0.308	-0.446	0.054	1.053*
	(-0.393, 0.696)	(-0.912, 0.296)	(-1.038, 0.146)	(-0.362, 0.471)	(0.262, 1.844)
Nutrition Knowledge	0.277	2.190***	2.380***	1.150**	1.842
	(-1.012, 1.566)	(1.168, 3.213)	(1.080, 3.679)	(0.295, 2.005)	(0.025, 3.658)
On a Special Diet	0.902	1.710*	1.171	1.714**	
	(-0.808, 2.613)	(0.080, 3.339)	(-0.717, 3.059)	(0.455, 2.974)	
Age					
40-59			0.64	-0.082	-1.375
			(-1.335, 2.616)	(-1.214, 1.050)	(-3.900, 1.150)
60+			1.232	0.856	-0.792
			(-0.771, 3.235)	(-0.434, 2.146)	(-3.910, 2.326)
Gender					
Female	-0.212	0.964	-0.126	0.284	-1.838
	(-1.598, 1.175)	(-0.297, 2.225)	(-1.573, 1.321)	(-0.669, 1.238)	(-4.075, 0.398)
Other		0.192		0.071	8.425
		(-3.362, 3.745)		(-3.447, 3.589)	(-4.499, 21.350)
BMI > 25	0.52	-0.554	0.516	-0.294	0.679
	(-0.967, 2.007)	(-1.830, 0.722)	(-1.069, 2.100)	(-1.305, 0.718)	(-1.839, 3.197)
Education	1.547*	0.49	1.458	1.403**	1.507
	(0.052, 3.041)	(-0.812, 1.791)	(-0.113, 3.029)	(0.401, 2.404)	(-0.846, 3.861)
White	-0.002	0.024	-0.002	-0.181	0.792
	(-1.524, 1.519)	(-1.230, 1.278)	(-1.573, 1.570)	(-1.256, 0.894)	(-1.735, 3.319)

Tables 6 OLS Subsample 6-10 Results Cont.

Dependent Variable: Total Number of Healthy Choices					
	40-59 Age Group	**39 and Below Age Group**	**Above Average Response Time**	**Below Average Response Time**	**On a Special Diet**
Income					
$15,000-30,000	0.23	0.586	0.528	-0.153	0.788
	(-2.613, 3.073)	(-1.899, 3.071)	(-2.111, 3.168)	(-2.176, 1.870)	(-2.929, 4.506)
$30,000-45,000	0.72	0.756	1.739	-0.277	1.355
	(-1.918, 3.357)	(-1.747, 3.260)	(-0.941, 4.420)	(-2.162, 1.607)	(-2.325, 5.035)
$45,000-60,000	1.756	0.644	1.974	0.722	-0.468
	(-1.103, 4.616)	(-1.497, 2.785)	(-0.900, 4.847)	(-1.142, 2.585)	(-4.041, 3.106)
$60,000-75,000	1.534	-2.289	-0.845	0.405	-2.829
	(-1.479, 4.547)	(-5.219, 0.642)	(-3.878, 2.189)	(-1.727, 2.538)	(-7.645, 1.986)
$75,000-90,000	0.469	-1.301	-0.476	-0.111	-4.097
	(-2.543, 3.481)	(-4.120, 1.519)	(-4.048, 3.097)	(-2.270, 2.048)	(-8.483, 0.288)
$90,000 +	1.994	-0.074	-0.158	0.297	-1.311
	(-0.626, 4.614)	(-2.206, 2.058)	(-2.819, 2.503)	(-1.474, 2.069)	(-4.584, 1.963)
Constant	-2.253	-2.581	-2.909	-0.434	-2.543
	(-7.745, 3.239)	(-7.358, 2.196)	(-8.960, 3.141)	(-4.148, 3.281)	(-12.928, 7.843)
Observations	179	187	166	340	98
R2	0.201	0.263	0.249	0.194	0.314
Adjusted R2	0.116	0.184	0.151	0.144	0.147
Residual Std. Error	4.424 (df = 161)	4.095 (df = 168)	4.451 (df = 146)	4.260 (df = 319)	4.677 (df = 78)
F Statistic	2.380** (df = 17; 161)	3.328*** (df = 18; 168)	2.549*** (df = 19; 146)	3.844*** (df = 20; 319)	1.882* (df = 19; 78)

Note: *p<0.05; **p<0.01; ***p<0.001; Intercept: Special Diet: not on a special diet, Age: 18-39, Gender: male, BMI: less than 25, Education: no bachelor's degree, Race: non-white, Income: less than 15K

Table 7 OLS Subsample 11-15 Results

Dependent Variable: Total Number of Healthy Choices					
	Not on a Special Diet	**Bachelor's Degree**	**No Bachelor's Degree**	**White**	**Non-White**
Treatment	0.068	0.135	0.291	0.276	0.066
	(-0.783, 0.920)	(-1.017, 1.287)	(-0.88, 1.47)	(-0.68, 1.23)	(-1.561, 1.694)
CFC Score (time preference)	-0.079	-0.617	0.103	-0.517	0.097
	(-0.570, 0.412)	(-1.271, 0.038)	(-0.66, 0.86)	(-1.06, 0.03)	(-0.809, 1.002)
Health Importance	0.401	0.3	0.29	0.477	-0.132
	(-0.252, 1.054)	(-0.655, 1.256)	(-0.54, 1.12)	(-0.24, 1.19)	(-1.348, 1.084)
Health Interest	0.562	0.342	0.6	0.581	0.588
	(-0.033, 1.157)	(-0.571, 1.255)	(-0.01, 1.21)	(-0.06, 1.22)	(-0.564, 1.740)
Health Perception	-0.445*	-0.059	-0.158	-0.017	-0.357
	(-0.813, -0.077)	(-0.574, 0.456)	(-0.69, 0.38)	(-0.44, 0.40)	(-1.058, 0.344)
Nutrition Knowledge	1.390***	1.322*	1.667**	1.483***	1.457*
	(0.641, 2.140)	(0.322, 2.322)	(0.61, 2.73)	(0.67, 2.30)	(0.033, 2.881)
On a Special Diet		1.116	1.306	1.347*	0.851
		(-0.268, 2.500)	(-0.55, 3.16)	(0.06, 2.64)	(-1.431, 3.133)
Age					
40-59	0.188	1.023	-0.946	0.109	0.198
	(-0.822, 1.198)	(-0.389, 2.435)	(-2.24, 0.35)	(-1.04, 1.26)	(-1.657, 2.053)
60+	1.202*	1.880*	0.164	0.88	1.684
	(0.128, 2.276)	(0.413, 3.347)	(-1.24, 1.57)	(-0.34, 2.10)	(-0.572, 3.940)
Gender					
Female	0.647	0.369	-0.039	0.28	0.239
	(-0.189, 1.483)	(-0.768, 1.506)	(-1.16, 1.09)	(-0.65, 1.21)	(-1.413, 1.890)
Other	-0.272	-0.825	0.436	1.122	-3.652
	(-3.883, 3.339)	(-7.940, 6.291)	(-2.50, 3.37)	(-2.43, 4.67)	(-13.086, 5.782)
BMI > 25	0.071	-0.463	0.729	-0.029	0.428
	(-0.804, 0.946)	(-1.649, 0.723)	(-0.42, 1.88)	(-1.01, 0.96)	(-1.285, 2.141)
Education	1.338**			1.563**	0.624
	(0.449, 2.227)			(0.53, 2.59)	(-1.124, 2.372)
White	-0.275	0.313	-0.655		
	(-1.185, 0.635)	(-0.948, 1.575)	(-1.94, 0.63)		

Table 7 OLS Subsample 11-15 Results Cont.

	Dependent Variable: Total Number of Healthy Choices				
	Not on a Special Diet	**Bachelor's Degree**	**No Bachelor's Degree**	**White**	**Non-White**
Income					
$15,000-30,000	0.201	-0.071	0.303	0.088	0.199
	(-1.558, 1.961)	(-2.897, 2.754)	(-1.69, 2.30)	(-1.79, 1.97)	(-2.889, 3.286)
$30,000-45,000	0.378	0.431	0.694	0.606	0.043
	(-1.290, 2.047)	(-2.067, 2.929)	(-1.28, 2.67)	(-1.16, 2.37)	(-3.377, 3.463)
$45,000-60,000	1.344	1.211	0.608	1.174	0.653
	(-0.335, 3.023)	(-1.331, 3.753)	(-1.32, 2.53)	(-0.59, 2.94)	(-2.503, 3.809)
$60,000-75,000	0.59	-0.699	1.128	0.239	-0.984
	(-1.276, 2.456)	(-3.339, 1.941)	(-1.29, 3.55)	(-1.77, 2.25)	(-4.786, 2.818)
$75,000-90,000	0.372	-0.21	-0.564	0.017	-1.125
	(-1.641, 2.385)	(-2.900, 2.481)	(-3.39, 2.26)	(-2.09, 2.13)	(-4.831, 2.580)
$90,000 +	0.804	0.048	0.461	0.33	0.222
	(-0.835, 2.444)	(-2.256, 2.351)	(-1.75, 2.67)	(-1.36, 2.02)	(-2.760, 3.204)
Constant	-1.754	2.405	-3.394	-2.374	0.613
	(-5.017, 1.509)	(-2.679, 7.489)	(-7.47, 0.68)	(-5.66, 0.91)	(-5.664, 6.891)
Observations	408	278	228	364	142
R2	0.19	0.126	0.262	0.238	0.14
Adjusted R2	0.151	0.061	0.195	0.196	0.006
Residual Std. Error	4.150 (df = 388)	4.659 (df = 258)	3.890 (df = 208)	4.286 (df = 344)	4.522 (df = 122)
F Statistic	4.796*** (df = 19; 388)	1.955* (df = 19; 258)	3.890*** (df = 19; 208)	5.644*** (df = 19; 344)	1.047 (df = 19; 122)

Note: *p<0.05; **p<0.01; ***p<0.001; Intercept: Special Diet: not on a special diet, Age: 18-39, Gender: male, BMI: less than 25, Education: no bachelor's degree, Race: non-white, Income: less than 15K

Table 8 Poisson Subsample 1-5 Results

Dependent Variable: Total Number of Healthy Choices					
	Overweight	**Normal and Underweight**	**Males**	**Females**	**60+ Age Group**
Treatment	0.153***	-0.157**	-0.014	0.082	0.063
	(0.064, 0.242)	(-0.259, -0.054)	(-0.17, 0.14)	(-0.06, 0.23)	(-0.056, 0.182)
CFC Score (time preference)	-0.057*	0.022	-0.057*	0.012	-0.119**
	(-0.106, -0.008)	(-0.044, 0.087)	(-0.14, 0.03)	(-0.08, 0.11)	(-0.194, -0.045)
Health Importance	0.037	0.055	0.113**	-0.015	0.055
	(-0.034, 0.108)	(-0.030, 0.140)	(-0.02, 0.24)	(-0.14, 0.11)	(-0.057, 0.166)
Health Interest	0.103**	0.042	0.068	0.093	0.089
	(0.037, 0.168)	(-0.035, 0.120)	(-0.05, 0.18)	(-0.02, 0.20)	(-0.011, 0.189)
Health Perception	-0.041*	-0.012	-0.062**	0.002	-0.038
	(-0.077, -0.005)	(-0.058, 0.034)	(-0.13, 0.00)	(-0.07, 0.07)	(-0.088, 0.013)
Nutrition Knowledge	0.196***	0.232***	0.272***	0.151*	0.211***
	(0.117, 0.275)	(0.142, 0.323)	(0.14, 0.41)	(0.02, 0.28)	(0.095, 0.328)
On a Special Diet	0.098	0.103	0.294***	0.016	0.083
	(-0.003, 0.199)	(-0.031, 0.238)	(0.11, 0.48)	(-0.16, 0.19)	(-0.076, 0.242)
Age					
40-59	0.041	-0.021	0.095	-0.101	
	(-0.068, 0.150)	(-0.144, 0.101)	(-0.09, 0.28)	(-0.28, 0.08)	
60+	0.161**	0.05	0.215***	0.026	
	(0.045, 0.277)	(-0.077, 0.178)	(0.03, 0.40)	(-0.16, 0.22)	
Gender					
Female	0.096*	-0.052			-0.007
	(0.008, 0.185)	(-0.150, 0.045)			(-0.127, 0.113)
Other	-0.138				
	(-0.537, 0.261)				
BMI > 25			-0.094	0.133	0.066
			(-0.24, 0.06)	(-0.02, 0.29)	(-0.059, 0.191)
Education	0.140**	0.247***	0.133**	0.227**	0.243***
	(0.050, 0.230)	(0.135, 0.359)	(-0.03, 0.30)	(0.07, 0.38)	(0.109, 0.377)
White	-0.072	0.051	-0.056	0.009	-0.088
	(-0.168, 0.023)	(-0.060, 0.163)	(-0.23, 0.11)	(-0.15, 0.17)	(-0.239, 0.063)

Table 8 Poisson Subsample 1-5 Results Cont.

Dependent Variable: Total Number of Healthy Choices					
	Overweight	**Normal and Underweight**	**Males**	**Females**	**60+ Age Group**
Income					
$15,000-30,000	0.031	0.151	0.229*	-0.152	0.073
	(-0.133, 0.195)	(-0.100, 0.402)	(-0.11, 0.56)	(-0.45, 0.15)	(-0.175, 0.320)
$30,000-45,000	0.018	0.134	0.001	0.034	0.088
	(-0.135, 0.172)	(-0.103, 0.371)	(-0.33, 0.33)	(-0.23, 0.30)	(-0.142, 0.317)
$45,000-60,000	0.145	0.151	0.185	0.077	0.139
	(-0.013, 0.303)	(-0.076, 0.378)	(-0.13, 0.50)	(-0.17, 0.33)	(-0.110, 0.389)
$60,000-75,000	-0.011	0.042	0.09	-0.11	-0.003
	(-0.198, 0.177)	(-0.213, 0.297)	(-0.28, 0.46)	(-0.40, 0.18)	(-0.254, 0.248)
$75,000-90,000	0.014	-0.049	0.023	-0.079	0.283
	(-0.185, 0.213)	(-0.310, 0.211)	(-0.40, 0.44)	(-0.37, 0.21)	(-0.030, 0.595)
$90,000 +	0.08	0.001	0.059	0.006	-0.083
	(-0.071, 0.230)	(-0.219, 0.222)	(-0.26, 0.37)	(-0.27, 0.28)	(-0.322, 0.157)
Constant	0.820***	0.472	0.451*	0.883**	1.179***
	(0.483, 1.157)	(-0.001, 0.945)	(-0.22, 1.12)	(0.24, 1.53)	(0.608, 1.750)
Observations	294	212	245	254	140
Log Likelihood	-888.741	-643.474	-722.05	-780.749	-426.657
Akaike Inf. Crit.	1,817.48	1,324.95	1,482.10	1,599.50	889.314

Note: *p<0.05; **p<0.01; ***p<0.001; Intercept: Special Diet: not on a special diet, Age: 18-39, Gender: male, BMI: less than 25, Education: no bachelor's degree, Race: non-white, Income: less than 15K

Table 9 Poisson Subsample 6-10 Results

	Dependent Variable: Total Number of Healthy Choices				
	40-59 Age Group	**39 and Below Age Group**	**Above Average Response Time**	**Below Average Response Time**	**On a Special Diet**
Treatment	0.006	0.046	-0.03	0.051	0.03
	(-0.112, 0.124)	(-0.069, 0.161)	(-0.143, 0.083)	(-0.031, 0.133)	(-0.131, 0.192)
CFC Score (time preference)	-0.009	0.053	-0.049	-0.02	-0.111*
	(-0.072, 0.055)	(-0.016, 0.122)	(-0.118, 0.021)	(-0.067, 0.027)	(-0.200, -0.021)
Health Importance	0.023	0.019	0.057	0.029	0.03
	(-0.074, 0.119)	(-0.065, 0.103)	(-0.031, 0.146)	(-0.040, 0.097)	(-0.104, 0.163)
Health Interest	0.148**	0.034	0.065	0.066*	0.087
	(0.054, 0.242)	(-0.044, 0.111)	(-0.023, 0.154)	(0.006, 0.126)	(-0.039, 0.213)
Health Perception	0.014	-0.045	-0.050*	0.003	0.110***
	(-0.030, 0.058)	(-0.100, 0.010)	(-0.095, -0.006)	(-0.033, 0.039)	(0.054, 0.165)
Nutrition Knowledge	0.047	0.301***	0.296***	0.166***	0.192**
	(-0.059, 0.154)	(0.206, 0.396)	(0.194, 0.398)	(0.090, 0.241)	(0.063, 0.321)
On a Special Diet	0.108	0.178*	0.134	0.190***	
	(-0.022, 0.237)	(0.039, 0.317)	(-0.004, 0.271)	(0.089, 0.290)	
Age					
40-59			0.072	-0.018	-0.129
			(-0.082, 0.226)	(-0.116, 0.080)	(-0.304, 0.046)
60+			0.153	0.094	-0.067
			(-0.001, 0.308)	(-0.014, 0.203)	(-0.271, 0.138)
Gender					
Female	-0.02	0.117*	-0.01	0.041	-0.178*
	(-0.133, 0.092)	(0.005, 0.230)	(-0.119, 0.100)	(-0.041, 0.122)	(-0.331, -0.025)
Other		-0.159		-0.158	1.012*
		(-0.572, 0.254)		(-0.555, 0.238)	(0.122, 1.903)
BMI > 25	0.078	-0.074	0.064	-0.027	0.077
	(-0.041, 0.198)	(-0.188, 0.041)	(-0.056, 0.185)	(-0.113, 0.059)	(-0.094, 0.247)
Education	0.204**	0.083	0.166**	0.197***	0.159
	(0.082, 0.325)	(-0.034, 0.200)	(0.048, 0.284)	(0.110, 0.285)	(-0.008, 0.326)
White	0.007	0.002	0.004	-0.026	0.064
	(-0.116, 0.131)	(-0.111, 0.114)	(-0.116, 0.123)	(-0.119, 0.067)	(-0.113, 0.240)

Table 9 Poisson Subsample 6-10 Results Cont.

Dependent Variable: Total Number of Healthy Choices					
	40-59 Age Group	**39 and Below Age Group**	**Above Average Response Time**	**Below Average Response Time**	**On a Special Diet**
Income					
$15,000-30,000	0.035	0.1	0.065	-0.01	0.079
	(-0.218, 0.288)	(-0.126, 0.326)	(-0.141, 0.271)	(-0.192, 0.172)	(-0.169, 0.327)
$30,000-45,000	0.098	0.102	0.172	-0.03	0.13
	(-0.133, 0.329)	(-0.122, 0.326)	(-0.030, 0.373)	(-0.199, 0.139)	(-0.113, 0.373)
$45,000-60,000	0.246*	0.106	0.237*	0.11	-0.026
	(0.004, 0.489)	(-0.084, 0.295)	(0.025, 0.450)	(-0.054, 0.274)	(-0.265, 0.213)
$60,000-75,000	0.217	-0.334*	-0.129	0.079	-0.326
	(-0.035, 0.468)	(-0.630, -0.038)	(-0.368, 0.110)	(-0.107, 0.266)	(-0.693, 0.040)
$75,000-90,000	0.095	-0.118	-0.065	0.018	-0.479**
	(-0.165, 0.355)	(-0.382, 0.146)	(-0.344, 0.214)	(-0.171, 0.207)	(-0.819, -0.140)
$90,000 +	0.274*	0.001	-0.01	0.046	-0.126
	(0.051, 0.498)	(-0.194, 0.196)	(-0.212, 0.192)	(-0.111, 0.203)	(-0.348, 0.096)
Constant	0.546*	0.496*	0.619*	0.799***	0.937*
	(0.047, 1.044)	(0.038, 0.953)	(0.121, 1.118)	(0.452, 1.145)	(0.202, 1.672)
Observations	179	187	166	340	98
Log Likelihood	-547.035	-544.13	-503.358	-1,031.21	-296.253
Akaike Inf. Crit.	1,130.07	1,126.26	1,046.72	2,104.41	632.506

Note: *p<0.05; **p<0.01; ***p<0.001; Intercept: Special Diet: not on a special diet, Age: 18-39, Gender: male, BMI: less than 25, Education: no bachelor's degree, Race: non-white, Income: less than 15K

Table 10 Poisson Subsample 11-15 Results

Dependent Variable: Total Number of Healthy Choices					
	Not on a Special Diet	**Bachelor's Degree**	**No Bachelor's Degree**	**White**	**Non-white**
Treatment	0.015	0.013	0.025	0.019	0.019
	(-0.061, 0.090)	(-0.070, 0.097)	(-0.16, 0.21)	(-0.10, 0.14)	(-0.110, 0.149)
CFC Score (time preference)	-0.004	-0.072**	0.034	-0.059	0.014
	(-0.048, 0.039)	(-0.119, -0.024)	(-0.09, 0.15)	(-0.13, 0.01)	(-0.057, 0.085)
Health Importance	0.057	0.038	0.038	0.065	-0.024
	(-0.004, 0.118)	(-0.033, 0.109)	(-0.11, 0.18)	(-0.04, 0.17)	(-0.122, 0.074)
Health Interest	0.091**	0.039	0.112*	0.087	0.084
	(0.034, 0.148)	(-0.029, 0.107)	(0.00, 0.22)	(-0.01, 0.18)	(-0.013, 0.181)
Health Perception	-0.066***	-0.006	-0.026	-0.008	-0.044
	(-0.098, -0.033)	(-0.043, 0.031)	(-0.11, 0.05)	(-0.06, 0.05)	(-0.098, 0.010)
Nutrition Knowledge	0.196***	0.154***	0.257**	0.208***	0.191**
	(0.128, 0.264)	(0.080, 0.229)	(0.09, 0.42)	(0.10, 0.32)	(0.077, 0.305)
On a Special Diet		0.113*	0.135	0.133	0.097
		(0.016, 0.210)	(-0.10, 0.37)	(-0.01, 0.28)	(-0.074, 0.268)
Age					
40-59	0.017	0.120*	-0.148	0.006	0.02
	(-0.074, 0.107)	(0.015, 0.225)	(-0.34, 0.05)	(-0.14, 0.16)	(-0.128, 0.169)
60+	0.154**	0.207***	0.024	0.097	0.202*
	(0.061, 0.248)	(0.101, 0.314)	(-0.18, 0.23)	(-0.06, 0.25)	(0.032, 0.372)
Gender					
Female	0.092*	0.046	-0.019	0.038	0.026
	(0.019, 0.165)	(-0.037, 0.128)	(-0.19, 0.15)	(-0.08, 0.16)	(-0.104, 0.155)
Other	-0.384	-0.137	-0.135	-0.029	-1.061
	(-0.876, 0.108)	(-0.747, 0.472)	(-0.68, 0.41)	(-0.78, 0.72)	(-2.471, 0.349)
BMI > 25	0.02	-0.049	0.112	0.004	0.067
	(-0.056, 0.097)	(-0.134, 0.037)	(-0.06, 0.29)	(-0.12, 0.13)	(-0.068, 0.202)
Education	0.186***			0.210**	0.09
	(0.107, 0.265)			(0.08, 0.34)	(-0.045, 0.226)
White	-0.03	0.038	-0.083		
	(-0.109, 0.049)	(-0.055, 0.131)	(-0.26, 0.10)		

Table 10 Poisson Subsample 11-15 Results Cont.

Dependent Variable: Total Number of Healthy Choices					
	Not on a Special Diet	**Bachelor's Degree**	**No Bachelor's Degree**	**White**	**Non-white**
Income					
$15,000-30,000	0.057	0.0005	0.081	0.035	0.026
	(-0.108, 0.222)	(-0.204, 0.205)	(-0.23, 0.39)	(-0.22, 0.29)	(-0.214, 0.266)
$30,000-45,000	0.06	0.05	0.135	0.086	-0.008
	(-0.094, 0.215)	(-0.130, 0.229)	(-0.17, 0.44)	(-0.15, 0.32)	(-0.271, 0.256)
$45,000-60,000	0.217**	0.133	0.123	0.174	0.082
	(0.064, 0.370)	(-0.050, 0.316)	(-0.16, 0.41)	(-0.06, 0.41)	(-0.162, 0.325)
$60,000-75,000	0.112	-0.082	0.184	0.054	-0.129
	(-0.057, 0.281)	(-0.277, 0.114)	(-0.18, 0.54)	(-0.21, 0.32)	(-0.432, 0.175)
$75,000-90,000	0.096	-0.021	-0.053	0.047	-0.154
	(-0.085, 0.277)	(-0.220, 0.178)	(-0.49, 0.38)	(-0.22, 0.31)	(-0.451, 0.144)
$90,000 +	0.141	0.004	0.1	0.059	0.019
	(-0.011, 0.293)	(-0.165, 0.172)	(-0.23, 0.43)	(-0.17, 0.28)	(-0.211, 0.248)
Constant	0.563***	1.395***	0.141	0.536*	1.071***
	(0.248, 0.879)	(1.013, 1.777)	(-0.59, 0.87)	(0.03, 1.04)	(0.555, 1.587)
Observations	408	278	228	364	142
Log Likelihood	-1,220.54	-886.607	-645.545	-1,107.41	-432.821
Akaike Inf. Crit.	2,481.08	1,813.21	1,331.09	2,254.82	905.642

Note: *p<0.05; **p<0.01; ***p<0.001; Intercept: Special Diet: not on a special diet, Age: 18-39, Gender: male, BMI: less than 25, Education: no bachelor's degree, Race: non-white, Income: less than 15K

Table 11 Negative Binomial Subsample 1-5 Results

Dependent Variable: Total Number of Healthy Choices					
	Overweight	**Normal and Underweight**	**Males**	**Females**	**60+ Age Group**
Treatment	0.151*	-0.146	0.001	0.076	0.06
	(0.009, 0.292)	(-0.305, 0.012)	(-0.16, 0.16)	(-0.07, 0.22)	(-0.124, 0.244)
CFC Score (time preference)	-0.047	0.031	-0.055	0.029	-0.127*
	(-0.125, 0.031)	(-0.073, 0.135)	(-0.15, 0.04)	(-0.07, 0.12)	(-0.241, -0.013)
Health Importance	0.052	0.058	0.124*	-0.013	0.067
	(-0.057, 0.161)	(-0.070, 0.185)	(0.00, 0.25)	(-0.14, 0.12)	(-0.101, 0.234)
Health Interest	0.099	0.055	0.069	0.101	0.094
	(-0.001, 0.200)	(-0.061, 0.172)	(-0.05, 0.19)	(-0.01, 0.21)	(-0.054, 0.243)
Health Perception	-0.052	-0.025	-0.074*	-0.007	-0.048
	(-0.109, 0.006)	(-0.097, 0.047)	(-0.14, 0.00)	(-0.08, 0.06)	(-0.125, 0.029)
Nutrition Knowledge	0.207**	0.236***	0.286***	0.151*	0.231*
	(0.083, 0.331)	(0.097, 0.376)	(0.15, 0.42)	(0.02, 0.29)	(0.051, 0.411)
On a Special Diet	0.111	0.083	0.288**	0.012	0.071
	(-0.053, 0.275)	(-0.139, 0.305)	(0.09, 0.49)	(-0.16, 0.19)	(-0.181, 0.323)
Age					
40-59	0.056	-0.069	0.099	-0.113	
	(-0.113, 0.226)	(-0.260, 0.121)	(-0.09, 0.29)	(-0.29, 0.06)	
60+	0.17	0.033	0.206*	0.027	
	(-0.012, 0.353)	(-0.169, 0.234)	(0.02, 0.39)	(-0.16, 0.21)	
Gender					
Female	0.109	-0.035			0.016
	(-0.031, 0.249)	(-0.188, 0.118)			(-0.168, 0.199)
Other	-0.114				
	(-0.664, 0.435)				
BMI > 25			-0.099	0.137	0.066
			(-0.25, 0.06)	(-0.01, 0.29)	(-0.126, 0.259)
Education	0.147*	0.260**	0.146	0.236**	0.255*
	(0.005, 0.289)	(0.087, 0.432)	(-0.02, 0.31)	(0.08, 0.39)	(0.054, 0.457)
White	-0.096	0.05	-0.076	-0.003	-0.081
	(-0.247, 0.055)	(-0.124, 0.225)	(-0.25, 0.10)	(-0.16, 0.16)	(-0.316, 0.154)

Table 11 Negative Binomial Subsample 1-5 Results Cont.

Dependent Variable: Total Number of Healthy Choices					
	Overweight	**Normal and Underweight**	**Males**	**Females**	**60+ Age Group**
Income					
$15,000-30,000	0.055	0.199	0.262	-0.13	0.109
	(-0.200, 0.310)	(-0.190, 0.589)	(-0.08, 0.61)	(-0.43, 0.17)	(-0.277, 0.495)
$30,000-45,000	0.052	0.152	-0.005	0.071	0.123
	(-0.190, 0.294)	(-0.221, 0.525)	(-0.34, 0.33)	(-0.20, 0.35)	(-0.239, 0.484)
$45,000-60,000	0.183	0.184	0.196	0.119	0.218
	(-0.070, 0.435)	(-0.169, 0.538)	(-0.13, 0.52)	(-0.14, 0.38)	(-0.171, 0.607)
$60,000-75,000	0.012	0.075	0.089	-0.08	0.038
	(-0.284, 0.307)	(-0.320, 0.471)	(-0.29, 0.47)	(-0.39, 0.23)	(-0.355, 0.430)
$75,000-90,000	0.029	-0.021	0.029	-0.063	0.301
	(-0.283, 0.341)	(-0.426, 0.383)	(-0.40, 0.46)	(-0.36, 0.23)	(-0.205, 0.807)
$90,000 +	0.119	0.035	0.068	0.062	-0.009
	(-0.120, 0.358)	(-0.305, 0.376)	(-0.40, 0.46)	(-0.21, 0.34)	(-0.382, 0.365)
Constant	0.682**	0.358	0.378	0.759*	1.028*
	(0.164, 1.199)	(-0.351, 1.067)	(-0.32, 1.08)	(0.09, 1.42)	(0.165, 1.890)
Observations	294	212	245	254	140
Log Likelihood	-825.192	-597.239	-676.807	-723.517	-401.275
theta	5.337*** (0.816)	5.689*** (1.012)	6.105*** (1.067)	5.434*** (0.880)	6.525*** (1.499)
Akaike Inf. Crit.	1,690.38	1,232.48	1,391.62	1,485.03	838.551

Note: *p<0.05; **p<0.01; ***p<0.001; Intercept: Special Diet: not on a special diet, Age: 18-39, Gender: male, BMI: less than 25, Education: no bachelor's degree, Race: non-white, Income: less than 15K

Table 12 Negative Binomial Subsample 6-10 Results

	Dependent Variable: Total Number of Healthy Choices				
	40-59 Age Group	**39 and Below Age Group**	**Above Average Response Time**	**Below Average Response Time**	**On a Special Diet**
Treatment	0.026	0.058	-0.032	0.06	0.026
	(-0.161, 0.214)	(-0.117, 0.234)	(-0.205, 0.142)	(-0.071, 0.191)	(-0.209, 0.260)
CFC Score (time preference)	0.005	0.057	-0.038	-0.012	-0.111
	(-0.096, 0.106)	(-0.048, 0.161)	(-0.144, 0.067)	(-0.088, 0.063)	(-0.241, 0.019)
Health Importance	0.033	0.025	0.068	0.038	0.023
	(-0.119, 0.186)	(-0.099, 0.150)	(-0.065, 0.202)	(-0.067, 0.144)	(-0.168, 0.214)
Health Interest	0.150*	0.037	0.063	0.072	0.103
	(0.003, 0.297)	(-0.077, 0.151)	(-0.070, 0.196)	(-0.020, 0.164)	(-0.076, 0.282)
Health Perception	0.007	-0.058	-0.057	-0.011	0.117**
	(-0.063, 0.078)	(-0.141, 0.025)	(-0.126, 0.013)	(-0.068, 0.046)	(0.037, 0.197)
Nutrition Knowledge	0.048	0.318***	0.310***	0.175**	0.208*
	(-0.121, 0.216)	(0.176, 0.460)	(0.155, 0.465)	(0.056, 0.294)	(0.023, 0.392)
On a Special Diet	0.103	0.168	0.113	0.187*	
	(-0.112, 0.318)	(-0.048, 0.385)	(-0.103, 0.328)	(0.020, 0.355)	
Age					
40-59			0.074	-0.032	-0.13
			(-0.159, 0.308)	(-0.188, 0.123)	(-0.384, 0.124)
60+			0.151	0.098	-0.053
			(-0.085, 0.386)	(-0.077, 0.273)	(-0.358, 0.252)
Gender					
Female	-0.02	0.148	0.003	0.056	-0.173
	(-0.200, 0.160)	(-0.024, 0.319)	(-0.165, 0.172)	(-0.074, 0.187)	(-0.396, 0.050)
Other		-0.168		-0.156	1.11
		(-0.728, 0.393)		(-0.711, 0.398)	(-0.179, 2.399)
BMI > 25	0.112	-0.092	0.07	-0.026	0.096
	(-0.080, 0.305)	(-0.266, 0.082)	(-0.115, 0.255)	(-0.164, 0.112)	(-0.154, 0.346)
Education	0.220*	0.084	0.186*	0.206**	0.187
	(0.026, 0.413)	(-0.093, 0.262)	(0.004, 0.368)	(0.068, 0.344)	(-0.053, 0.426)
White	-0.009	-0.023	0.024	-0.059	0.075
	(-0.206, 0.189)	(-0.194, 0.147)	(-0.160, 0.207)	(-0.207, 0.088)	(-0.179, 0.330)

Table 12 Negative Binomial Subsample 6-10 Results Cont.

	Dependent Variable: Total Number of Healthy Choices				
	40-59 Age Group	**39 and Below Age Group**	**Above Average Response Time**	**Below Average Response Time**	**On a Special Diet**
Income					
$15,000-30,000	0.074	0.112	0.099	0.016	0.067
	(-0.309, 0.458)	(-0.230, 0.453)	(-0.213, 0.411)	(-0.268, 0.300)	(-0.298, 0.432)
$30,000-45,000	0.117	0.086	0.189	-0.016	0.098
	(-0.237, 0.471)	(-0.256, 0.428)	(-0.124, 0.501)	(-0.281, 0.249)	(-0.263, 0.458)
$45,000-60,000	0.253	0.113	0.251	0.144	0.004
	(-0.126, 0.632)	(-0.178, 0.404)	(-0.081, 0.582)	(-0.115, 0.403)	(-0.346, 0.355)
$60,000-75,000	0.259	-0.343	-0.128	0.118	-0.362
	(-0.136, 0.655)	(-0.765, 0.079)	(-0.490, 0.233)	(-0.177, 0.413)	(-0.868, 0.145)
$75,000-90,000	0.112	-0.135	-0.078	0.037	-0.515*
	(-0.289, 0.513)	(-0.527, 0.258)	(-0.501, 0.346)	(-0.262, 0.336)	(-0.982, -0.048)
$90,000 +	0.309	-0.015	0.004	0.08	-0.155
	(-0.038, 0.656)	(-0.309, 0.279)	(-0.307, 0.315)	(-0.168, 0.327)	(-0.478, 0.169)
Constant	0.386	0.442	0.455	0.695*	0.761
	(-0.369, 1.140)	(-0.236, 1.119)	(-0.283, 1.193)	(0.163, 1.227)	(-0.292, 1.815)
Observations	179	187	166	340	98
Log Likelihood	-504.372	-510.481	-473.868	-948.526	-284.003
theta	5.139*** (0.972)	5.876*** (1.185)	6.635*** (1.414)	4.964*** (0.681)	9.024** (2.749)
Akaike Inf. Crit.	1,044.74	1,058.96	987.736	1,939.05	608.006

Note: *p<0.05; **p<0.01; ***p<0.001; Intercept: Special Diet: not on a special diet, Age: 18-39, Gender: male, BMI: less than 25, Education: no bachelor's degree, Race: non-white, Income: less than 15K

Table 13 Negative Binomial Subsample 11-15 Results

Dependent Variable: Total Number of Healthy Choices					
	Not on a Special Diet	**Bachelor's Degree**	**No Bachelor's Degree**	**White**	**Non-white**
Treatment	0.019	0.028	0.031	0.04	0.038
	(-0.099, 0.137)	(-0.108, 0.164)	(-0.15, 0.21)	(-0.08, 0.16)	(-0.162, 0.238)
CFC Score (time preference)	0.001	-0.072	0.047	-0.048	0.015
	(-0.068, 0.070)	(-0.149, 0.005)	(-0.08, 0.17)	(-0.12, 0.03)	(-0.095, 0.126)
Health Importance	0.068	0.049	0.041	0.079	-0.029
	(-0.025, 0.161)	(-0.065, 0.163)	(-0.10, 0.18)	(-0.03, 0.18)	(-0.179, 0.122)
Health Interest	0.088*	0.034	0.117*	0.086	0.104
	(0.002, 0.174)	(-0.075, 0.143)	(0.01, 0.23)	(-0.01, 0.18)	(-0.042, 0.250)
Health Perception	-0.075**	-0.015	-0.037	-0.017	-0.064
	(-0.126, -0.023)	(-0.076, 0.045)	(-0.12, 0.04)	(-0.07, 0.04)	(-0.149, 0.022)
Nutrition Knowledge	0.207***	0.175**	0.255**	0.215***	0.204*
	(0.101, 0.312)	(0.055, 0.295)	(0.09, 0.42)	(0.11, 0.32)	(0.028, 0.380)
On a Special Diet		0.109	0.141	0.136	0.074
		(-0.052, 0.271)	(-0.09, 0.37)	(-0.01, 0.28)	(-0.200, 0.348)
Age					
40-59	0.013	0.131	-0.16	0.015	0.015
	(-0.128, 0.154)	(-0.037, 0.300)	(-0.35, 0.04)	(-0.14, 0.17)	(-0.214, 0.244)
60+	0.144	0.220*	0.014	0.113	0.185
	(-0.004, 0.292)	(0.047, 0.394)	(-0.19, 0.22)	(-0.04, 0.27)	(-0.086, 0.457)
Gender					
Female	0.1	0.061	0.002	0.06	0.044
	(-0.015, 0.216)	(-0.073, 0.195)	(-0.17, 0.17)	(-0.06, 0.18)	(-0.158, 0.245)
Other	-0.292	-0.185	-0.101	0.01	-1.031
	(-0.914, 0.330)	(-1.092, 0.723)	(-0.68, 0.48)	(-0.63, 0.65)	(-2.693, 0.631)
BMI > 25	0.013	-0.052	0.117	-0.0003	0.084
	(-0.108, 0.134)	(-0.191, 0.088)	(-0.05, 0.29)	(-0.12, 0.12)	(-0.126, 0.294)
Education	0.197**			0.216**	0.094
	(0.074, 0.320)			(0.08, 0.35)	(-0.120, 0.307)
White	-0.045	0.031	-0.087		
	(-0.170, 0.080)	(-0.119, 0.181)	(-0.27, 0.10)		

Table 13 Negative Binomial Subsample 11-15 Results Cont.

Dependent Variable: Total Number of Healthy Choices					
	Not on a Special Diet	**Bachelor's Degree**	**No Bachelor's Degree**	**White**	**Non-white**
Income					
$15,000-30,000	0.108	0.009	0.125	0.08	0.06
	(-0.143, 0.360)	(-0.325, 0.343)	(-0.19, 0.44)	(-0.19, 0.35)	(-0.316, 0.437)
$30,000-45,000	0.078	0.064	0.141	0.105	0.015
	(-0.159, 0.316)	(-0.231, 0.359)	(-0.17, 0.45)	(-0.14, 0.35)	(-0.400, 0.429)
$45,000-60,000	0.235	0.171	0.135	0.228	0.089
	(-0.003, 0.472)	(-0.128, 0.471)	(-0.15, 0.42)	(0.00, 0.46)	(-0.294, 0.473)
$60,000-75,000	0.136	-0.078	0.214	0.08	-0.107
	(-0.127, 0.399)	(-0.393, 0.237)	(-0.15, 0.58)	(-0.20, 0.36)	(-0.576, 0.362)
$75,000-90,000	0.095	-0.012	-0.053	0.061	-0.16
	(-0.188, 0.377)	(-0.333, 0.309)	(-0.52, 0.41)	(-0.21, 0.33)	(-0.619, 0.299)
$90,000 +	0.16	0.026	0.112	0.088	0.065
	(-0.073, 0.394)	(-0.248, 0.300)	(-0.22, 0.45)	(-0.14, 0.32)	(-0.297, 0.426)
Constant	0.481*	1.304***	0.062	0.37	0.989*
	(0.006, 0.956)	(0.694, 1.915)	(-0.68, 0.80)	(-0.13, 0.87)	(0.202, 1.775)
Observations	408	278	228	364	142
Log Likelihood	-1,130.73	-813.513	-607.764	-1,022.54	-401.867
theta	5.217*** (0.672)	5.382*** (0.796)	5.681*** (1.061)	5.250*** (0.705)	5.648*** (1.222)
Akaike Inf. Crit.	2,301.45	1,667.03	1,255.53	2,085.08	843.734

Note: *p<0.05; **p<0.01; ***p<0.001; Intercept: Special Diet: not on a special diet, Age: 18-39, Gender: male, BMI: less than 25, Education: no bachelor's degree, Race: non-white, Income: less than 15K

Choice Set Items (Order Randomized for each participant):

1. Blue Diamond Almonds – Roasted and Salted; Plain
2. Cheezits – Original; Reduced Fat
3. Coke – Classic; Zero Sugar
4. Hershey's – Milk Chocolate; Special Dark
5. Pringles – Original; Fat Free
6. Fiber One – Chewy Bar, Chewy Bar Protein
7. Goldfish – Whole Grain; Original
8. Jif – Reduced Fat; Original
9. Lipton Green Tea – Original; Diet
10. Quaker Chewy Bar – Original; 25% Less Sugar
11. Oreo Minis – Original; 100 Calorie Thins
12. Ritz Crackers – Original; Whole Wheat
13. Snack Pack Pudding – Original; Sugar Free
14. Lays – Original; Oven Baked
15. Jell-o – Original; Sugar Free
16. Gatorade – Original; G2 Lower Sugar
17. Dole Peaches – Original; No Sugar Added
18. Skinny Pop – Original; Artificial Cheddar
19. Ranch Dressing – Original; Fat Free
20. Jell-o Pudding – Original; Sugar Free

Treatment Audio

Welcome to the body scan practice, take a moment to either sit or lie down as we begin to deepen our practice. Gently close your eyes in whatever position you're in right now. You can use your breath as an anchor in this moment to just ground ourselves into the now. And now bringing awareness to the feet noticing sensations in the soles of the feet, the toes, the top of the feet, and up into the ankle joint and bringing a sense of curiosity to this practice, as if you've never noticed these sensations before. Shifting the awareness up from the feet and ankles into the legs. And shifting up from there into the hips. And shifting attention up from there now into the torso being aware of the back region, the chest, the abdomen. Being aware of the now arms and the hands, choosing to shift awareness to these areas. Now in this space of awareness choose to bring attention to the shoulders, shoulders are often a place of tension and stress, just being aware of what's here. And up from there now to the neck. And from the neck to the face,

noticing sensations in the entirety of the face. And breathing in breathing out and releasing any awareness of the head, and the face, and the torso, and arms. and the hips, and the legs, and the feet and just coming back to the breath. And as we come to the end of this practice just acknowledging the choice of taking this time out to deepen your practice. Connecting with our bodies is an act of self-care in this way.

Control Audio (read from: https://en.wikipedia.org/wiki/Glacier)

A glacier is a persistent body of dense ice that is constantly moving under its own weight. A glacier forms where the accumulation of snow exceeds its ablation (melting and sublimation) over many years, often centuries. Glaciers slowly deform and flow under stresses induced by their weight, creating crevasses, seracs, and other distinguishing features. They also abrade rock and debris from their substrate to create landforms such as cirques and moraines. Glaciers form only on land and are distinct from the much thinner sea ice and lake ice that form on the surface of bodies of water.

On Earth, 99% of glacial ice is contained within vast ice sheets also known as continental glaciers in the polar regions, but glaciers may be found in mountain ranges on every continent including Oceania's high latitude Oceanic island countries such as New Zealand. Between latitudes 35°N and 35°S, glaciers occur only in the Himalayas, Andes, and a few high mountains in East Africa, Mexico, New Guinea and on Zard Kuh in Iran. With more than 7,000, Pakistan has more glaciers than anywhere except the polar regions. Glaciers cover about 10% of Earth's land surface; continental glaciers cover more than 13 million square kilometers or about 98% of Antarctica's 13.2 million square kilometers, with an average thickness of 2,100 meters. Greenland and Patagonia also have huge expanses of continental glaciers. The volume of glaciers

not including the ice sheets of Antarctica and Greenland has been estimated at 170,000 cubic kilometers.

Glacial ice is the largest reservoir of fresh water on earth. Many glaciers from temperate, alpine, and seasonal polar climates store water as ice during the colder seasons and release it later in the form of melt water as summer temperatures cause the glacier to melt creating a water source that is especially important for plants, animals, and human uses when other sources may be scant. Within high altitude and Antarctic environments, the seasonal temperature difference is often not sufficient to release melt water.

Since glacial mass is affected by long term climatic changes, for example precipitation, mean temperature, and cloud cover, glacial mass changes are considered among the most sensitive indicators of climate change and are a major source of variations in sea level.
A large piece of compressed ice or a glacier appears blue as large quantities of water appear blue. This is because water molecules absorb other colors more efficiently than blue. The other reason for the blue color of glaciers is the lack of air bubbles. Air bubbles, which give a white color to ice, are squeezed out by pressure increasing the density of the created ice.

The word glacier is a loanword from French and goes back, via Franco-Provençal, to the Vulgar Latin glaciārium, derived from the Late Latin glacia, and ultimately Latin glaciēs, meaning "ice". The processes and features caused by or related to glaciers are referred to as glacial. The process of glacier establishment, growth and flow is called glaciation. The corresponding area of study is called glaciology. Glaciers are important components of the global cryosphere.

Glaciers are categorized by their morphology, thermal characteristics, and behavior. Alpine glaciers form on the crests and slopes of mountains. A glacier that fills a valley is a valley

glacier, or alternatively an alpine glacier or mountain glacier. A large body of glacial ice astride a mountain, mountain range, or volcano is termed an ice cap or ice field. Ice caps have an area less than 50,000 square kilometers by definition.

Glacial bodies larger than 50,000 km2 (19,000 sq mi) are called ice sheets or continental glaciers. Several kilometers deep, they obscure the underlying topography.
Only nunataks protrude from their surfaces.

IRB Approval

UNIVERSITY OF ARKANSAS

To:	Kaylea B Hopfer BELL 4188
From:	Douglas James Adams, Chair IRB Committee
Date:	04/28/2020
Action:	**Exemption Granted**
Action Date:	04/28/2020
Protocol #:	2001246274
Study Title:	Time Sensitive Covid-19 Related Study on The Impacts of Mindfulness and Immune System Information on Food Choices: a Hypothetical Experiment

The above-referenced protocol has been determined to be exempt.

If you wish to make any modifications in the approved protocol that may affect the level of risk to your participants, you must seek approval prior to implementing those changes. All modifications must provide sufficient detail to assess the impact of the change.

If you have any questions or need any assistance from the IRB, please contact the IRB Coordinator at 109 MLKG Building, 5-2208, or irb@uark.edu.

cc: Di Fang, Investigator
Rodolfo M Nayga Jr., Investigator
Darya L Zabelina, Investigator

Qualtrics Survey

Mindful Eating Project

Start of Block: Prolific ID

Q101 Before you start, please switch off phone notifications/ e-mail/ music so you can focus on this study.

Thank you!

Please enter your **Prolific ID** here:

_____

End of Block: Prolific ID

Start of Block: Consent Form

Q76 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q50

WHAT YOU SHOULD KNOW ABOUT THE RESEARCH STUDY ***Who is the Principal Researcher?*** Kaylea Hopfer
Graduate Research Assistant, Department of Agricultural Economics and Agribusiness
Email: kbhopfer@uark.edu ***Who is the Faculty Advisor?*** Di Fang
Assistant Professor, Department of Agricultural Economics and Agribusiness
E-mail: difang@uark.edu
Phone: (479) 575-6839 Darya Zabelina
Assistant Professor, Department of Psychological Science
Email: dlzabeli@uark.edu
Phone: (479) 575-5807 Rodolfo M. Nayga Jr.
Professor and Tyson Chair in Food Policy Economics,
Department of Agricultural Economics and Agribusiness.

E-mail: rnayga@uark.edu
Phone: (479) 575-2299 ***What is the purpose of this research study?*** *The purpose of this study is to observe people's food choices.* ***Will I receive compensation for my time and inconvenience for participating in this study?*** *You will be compensated monetarily for your participation.* Y *What am I being asked to do? You will be presented with a number of questions, in which you will be asked to make choices among several food alternatives with different characteristics (nutritional content).* ***What are the possible risks or discomforts?*** *The participation in this experiment does not imply any risk to you.* ***What are the possible benefits of this study?*** *Results of this study will be used to improve methodological approaches used in experimental economics to assess individuals' food choice preferences.*

How long will the study last? *The survey will last 30-45 minutes.*
What are the options if I do not want to be in the study? *If you do not wish to be in the study, you are free to leave.*
How will my confidentiality be protected? *All information will be kept confidential to the extent allowed by applicable State and Federal law. ID#'s of participants will be distributed at random at the onset of the experiment and records linking ID#'s to individual participants will not be kept except to ensure participants completed the study.*
Will I know the results of the study? *At the conclusion of the study you will have the right to request feedback about the results. You may contact Kaylea Hopfer, kbhopfer@uark.edu*
What do I do if I have questions about the research study? *You have the right to contact the Principal Researcher or Faculty Advisor as listed below for any concerns that you may have. Kaylea Hopfer Graduate Research Assistant, Department of Agricultural Economics and Agribusiness Email: kbhopfer@uark.edu Or Di Fang Assistant Professor, Department of Agricultural Economics and Agribusiness E-mail: difang@uark.edu You may also contact the University of Arkansas Research Compliance office listed below if you have questions about your rights as a participant, or to discuss any concerns about, or problems with the research. Ro Windwalker, CIP Institutional Review Board Coordinator, Research Compliance University of Arkansas 109 MLKG Building Fayetteville, AR 72701-1201 Ph: 479-575-2208 E-mail: irb@uark.edu* **Approved IRB #** 2001246274 **By clicking the arrow below I ensure all cellular devices will be turned off and put away for the duration of the study.** *I understand the purpose of the study as well as the potential benefits and risks that are involved. I understand that participation is voluntary. I understand that no rights have been waived by signing the consent form. I have been given a copy of the consent form. Finally, I declare that at the conclusion of this study I will receive compensation for the participation in this study.*

End of Block: Consent Form

Start of Block: Oath

Q58 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q48 Your responses are completely anonymous and cannot be linked to you in any way, shape, or form. The information collected here will not be used for any purpose other than this study.

Do you commit to carefully reading and providing thoughtful and accurate answers to the questions in this survey?

- ○ I will read and carefully provide my best answers (1)
- ○ I will not read and carefully provide my best answers (2)
- ○ I cannot promise either way (3)

Page Break

End of Block: Oath

Start of Block: TMS Mindfulness 1

Q82 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Below is a list of things that people sometimes experience. Please read each statement. Please indicate the extent to which you agree with each statement. In other words, how well does the statement describe you, right now?

	Not at all (2)	A Little (3)	Moderately (4)	Quite a Bit (5)	Very Much (6)
I experience myself as separate from my changing thoughts and feelings. (19)	○	○	○	○	○
I am more concerned with being open to my experiences than controlling or changing them. (20)	○	○	○	○	○
I am curious about what I might learn about myself by taking notice of how to react to certain thoughts, feelings, or sensations. (21)	○	○	○	○	○
I experience my thoughts more as events in my mind than as a necessarily accurate reflection of the way things 'really' are. (22)	○	○	○	○	○

I am curious to see what my mind is up to from moment to moment. (23)	○	○	○	○	○
I am curious about each of the thoughts and feelings that I am having. (24)	○	○	○	○	○
I am receptive to observing unpleasant thoughts and feelings without interfering with them. (25)	○	○	○	○	○
I am more invested in just watching my experiences as they arise, than in figuring out what they could mean. (26)	○	○	○	○	○
I approach each experience by trying to accept it, no matter whether it is pleasant or unpleasant. (27)	○	○	○	○	○

I remain curious about the nature of each experience as it arises. (28)	○	○	○	○	○
I am aware of my thoughts and feelings without over identifying with them. (29)	○	○	○	○	○
I am curious about my reactions to things. (30)	○	○	○	○	○
I am curious about what I might learn about myself by just taking notice of what my attention gets drawn to. (31)	○	○	○	○	○

End of Block: TMS Mindfulness 1

Start of Block: Instructions

Q96 Please listen to the **entirety** of the following audio clip, **do not** advance before completion. Have your volume at a **comfortable** level when listening to the audio, if possible, **using headphones is ideal.**

End of Block: Instructions

Start of Block: Control audio here

Q87 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q99 Please click "play" and listen at a comfortable audio volume, the survey will advance once the audio file has completed.

End of Block: Control audio here

Start of Block: Experiment audio here

Q86 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q98 Please click "play" and listen at a comfortable audio volume, the survey will advance once the audio file has completed.

End of Block: Experiment audio here

Start of Block: TMS Mindfulness 2

Q91 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q90 We are interested in what you just experienced following the audio file. Below is a list of things that people sometimes experience. Please read each statement and indicate the extent to which each statement describes what you are currently experiencing?

	Not at All (1)	A Little (2)	Moderately (3)	Quite a Bit (4)	Very Much (5)
I experienced myself as separate from my changing thoughts and feelings. (1)	○	○	○	○	○
I was more concerned with being open to my experiences than controlling or changing them. (2)	○	○	○	○	○
I was curious about what I might learn about myself by taking notice of how to react to certain thoughts, feelings, or sensations. (3)	○	○	○	○	○
I experienced my thoughts more as events in my mind than as a necessarily accurate reflection of the way things 'really' are. (4)	○	○	○	○	○

I was curious to see what my mind is up to from moment to moment. (5)	○	○	○	○	○
I was curious about each of the thoughts and feelings that I was having. (6)	○	○	○	○	○
I was receptive to observing unpleasant thoughts and feelings without interfering with them. (7)	○	○	○	○	○
I was more invested in just watching my experiences as they arose, than in figuring out what they could mean. (8)	○	○	○	○	○
I approached each experience by trying to accept it, no matter whether it is pleasant or unpleasant. (9)	○	○	○	○	○

I remained curious about the nature of each experience as it arose. (10)	○	○	○	○	○
I was aware of my thoughts and feelings without over identifying with them. (11)	○	○	○	○	○
I was curious about my reactions to things. (12)	○	○	○	○	○
I was curious about what I might learn about myself by just taking notice of what my attention gets drawn to. (13)	○	○	○	○	○

End of Block: TMS Mindfulness 2

Start of Block: task cheap talk

Q86 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q85 In the following section, you will be asked 20 choice questions. In each of these choice questions, you will be asked to choose a product between two product alternatives. The alternatives shown in each set are of equal price. You can choose one and only one of the two alternatives in each choice question. The product alternatives in each choice question will vary depending on the nutritional content. Assume that the products presented are the only available products in each choice question. Even if you normally buy products in different packaging, we would like you to choose your preferred product alternative in each of the 20 choice questions.

Page Break

Q87 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q88 Studies show that people tend to act differently when they face hypothetical decisions. In other words, they say one thing and do something different. For example, some people would say they would choose an item in a hypothetical situation, but when faced with non-hypothetical or real choices (e.g., in supermarket), they will not actually choose the item that they said they would choose. We want you to behave in the same way that you would if you really had to choose between products in a retail store.

End of Block: task cheap talk

Start of Block: Item 1

Q75 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q57 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ 3 (3)

End of Block: Item 1

Start of Block: Item 2

Q74 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q59 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 2

Start of Block: Item 3

Q73 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q61 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- (1)
- (2)

End of Block: Item 3

Start of Block: Item 4

Q72 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q63 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- (1)
- (2)

End of Block: Item 4

Start of Block: Item 5

Q71 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q65 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 5

Start of Block: Item 6 chewy bars

Q70 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q67 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 6 chewy bars

Start of Block: Item 7

Q69 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q69 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 7

Start of Block: Item 8

Q68 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q71 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 8

Start of Block: Item 9

Q67 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q73 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 9

Start of Block: Item 10

Q66 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q75 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 10

Start of Block: Item 11 oreos

Q65 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q77 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 11 oreos

Start of Block: Item 12

Q64 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q79 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 12

Start of Block: Item 13

Q63 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q81 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 13

Start of Block: Item 14

Q62 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q83 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 14

Start of Block: Item 15

Q61 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q85 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 15

Start of Block: Item 16

Q60 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q87 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 16

Start of Block: Item 17

Q59 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q89 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 17

Start of Block: Item 18

Q58 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q91 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- ○ (1)
- ○ (2)

End of Block: Item 18

Start of Block: Item 19 ranch

Q57 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q93 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- (1)
- (2)

End of Block: Item 19 ranch

Start of Block: Item 20

Q56 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q95 Please choose the product you prefer
recall that each item is the **SAME PRICE**

- (1)
- (2)

End of Block: Item 20

Start of Block: MAAS Mindfulness

Q45 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

MAAS Please answer the following statements according to how they “really reflect” your experience rather than what you think your experience should be. Please rate how you feel IN GENERAL

	Always (1)	Very Often (2)	Somewhat Often (3)	Somewhat Rarely (4)	Very Rarely (5)	Never (6)
I could be experiencing some emotion and not be conscious of it until some time later. (19)	○	○	○	○	○	○
I break or spill things because of carelessness, not paying attention, or thinking of something else. (20)	○	○	○	○	○	○
I find it difficult to stay focused on what's happening in the present. (21)	○	○	○	○	○	○
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way. (22)	○	○	○	○	○	○

I tend not to notice feelings of physical tension or discomfort until they really grab my attention. (23)	○	○	○	○	○	○
I forget a person's name almost as soon as I've been told it for the first time. (24)	○	○	○	○	○	○
It seems I am "running on automatic" without much awareness of what I'm doing. (25)	○	○	○	○	○	○
I rush through activities without being really attentive to them. (26)	○	○	○	○	○	○
I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there. (27)	○	○	○	○	○	○

I do jobs or tasks automatically, without being aware of what I'm doing. (28)	○	○	○	○	○	○
I find myself listening to someone with one ear, doing something else at the same time. (29)	○	○	○	○	○	○
I drive places on "automatic pilot" and then wonder why I went there. (30)	○	○	○	○	○	○
I find myself preoccupied with the future or the past. (31)	○	○	○	○	○	○
I find myself doing things without paying attention. (32)	○	○	○	○	○	○
I snack without being aware that I'm eating. (33)	○	○	○	○	○	○

End of Block: MAAS Mindfulness

Start of Block: CFC Time preference task

Q46 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q139 Please rate how you feel IN GENERAL

	Not at all like me (1)	Not like me (2)	Not much like me (3)	Neutral (4)	Somewhat like me (5)	Like me (6)	Very much like me (7)
I consider how things might be in the future, and try to influence those things with my day-to-day behavior (1)	○	○	○	○	○	○	○
Often I engage in a particular behavior in order to achieve outcomes that may not result for many years (12)	○	○	○	○	○	○	○
I only act to satisfy immediate concerns, figuring the future will take care of itself (11)	○	○	○	○	○	○	○
My behavior is only influenced by the immediate (i.e., a matter of days or weeks) outcomes of my actions (10)	○	○	○	○	○	○	○

My convenience is a big factor in the decisions I make or the actions I take (9)	○	○	○	○	○	○	○
I am willing to sacrifice my immediate happiness or well-being in order to achieve future outcomes (8)	○	○	○	○	○	○	○
I think it is important to take warnings about negative outcomes seriously, even if the negative will not occur for many years (7)	○	○	○	○	○	○	○

I think it is more important to perform a behavior with important distant consequences than a behavior with less important immediate consequences (6)	○	○	○	○	○	○	○
I generally ignore warnings about possible future problems because I think the problems will be resolved before they reach crisis-level (5)	○	○	○	○	○	○	○
I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time (4)	○	○	○	○	○	○	○

I only act to satisfy immediate concerns, figuring that I will take care of future problems that may occur at a later date (3)	○	○	○	○	○	○	○
Since my day-to-day work has specific outcomes, it is more important to me than behavior that has distant outcomes (2)	○	○	○	○	○	○	○
When I make a decision, I think about how it might affect me in the future (13)	○	○	○	○	○	○	○
My behavior is generally influenced by future consequences (14)	○	○	○	○	○	○	○

End of Block: CFC Time preference task

Start of Block: health and exercise.

Q47 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q42 Please indicate to what extent you agree or disagree with the following statements.

	Strongly disagree (1)	Disagree (2)	Somewhat disagree (3)	Neither agree nor disagree (4)	Somewhat agree (5)	Agree (6)	Strongly agree (7)
Health is very important to me. (1)	○	○	○	○	○	○	○
Health means a lot to me. (2)	○	○	○	○	○	○	○
I care a lot about health. (3)	○	○	○	○	○	○	○
I appreciate healthy food very much. (4)	○	○	○	○	○	○	○
It is important to me that the food I eat on a typical day is good for my physical and mental health. (5)	○	○	○	○	○	○	○

It is important to me that the food I eat on a typical day keeps me healthy. (6)	○	○	○	○	○	○	○
It is important to me that the food I eat on a typical day is nutritious. (7)	○	○	○	○	○	○	○
Compared with people at my age, my health is excellent. (8)	○	○	○	○	○	○	○
Compared with people at my age, my current physical health is excellent. (9)	○	○	○	○	○	○	○

Compared with people at my age, my current mental health is excellent. (10)	○	○	○	○	○	○	○
I am as healthy as anyone I know at my age. (11)	○	○	○	○	○	○	○

Page Break

Q51 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q44 How would you evaluate your knowledge regarding the nutrient content of foods you regularly buy?

- ○ Very bad (1)
- ○ Bad (2)
- ○ Neither bad nor good (3)
- ○ Good (4)
- ○ Very good (5)

Q52 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q46 For how many of the foods you regularly buy do you think you know the nutrient content well?

- None of them (1)
- Few of them (2)
- Half of them (3)
- Most of them (4)
- All of them (5)

Page Break

Q53 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q48 Of the food products that use terms like "low-fat," "high fiber," "light," or "health benefits," about how many do you believe are accurate in that description?

- None of them (1)
- Few of them (2)
- Half of them (3)
- Most of them (4)
- All of them (5)

End of Block: health and exercise.

Start of Block: diet

Q55 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q37 Are you currently following a special diet?

- No (1)
- Yes (4)

End of Block: diet

Start of Block: diet if yes

Q54 Timing
First Click (1)
Last Click (2)
Page Submit (3)
Click Count (4)

Q55 What type of diet are you following?

- Vegan (4)
- Gluten Free (5)
- Dairy Free (6)
- Whole 30 (7)
- Other (8)

End of Block: diet if yes

Start of Block: Diet if yes and other

Q93 Please specify your diet.

_____

End of Block: Diet if yes and other

Start of Block: Demographics

*

age How old are you?

_____

X→

What is your gender?

- Male (1)
- Female (2)
- Other (3)

X→

Which of the following best describe your race?

- American Indian, Native American, Alaska Native (1)
- Asian or Asian American (2)
- Black, African American, African (3)
- Latino or Latina (4)
- Middle Eastern or Arab (5)
- Native Hawaiian or Other Pacific Islander (6)
- White or Caucasian (7)
- Multi-racial (8)

What is your highest level of education?

- Less than high school (1)
- High school graduate (2)
- Some college (3)
- 2 year degree (4)
- 4 year degree (5)
- Professional degree (6)
- Doctorate (7)

What do you estimate your household's annual total gross income to be (total income before taxes and deductions)

- Less than $15,000 (1)
- $15,000 - 29,999 (2)
- $30,000 - 44,999 (3)
- $45,000 - 59,999 (4)
- $60,000 - 74,999 (5)
- $75,000 - 89,999 (6)
- $90,000 - 104,999 (7)
- $105,000 - 119,999 (8)
- Above $120,000 (9)

Are you a native English speaker?

- ○ Yes (1)
- ○ No (2)

Q54 How much do you weigh? Please enter a whole number in pounds.

_____

Q56 How tall are you?

- ○ Feet (1) _____
- ○ Inches (2) _____

End of Block: Demographics