

Theory of Reasoned Action and Theory of Planned Behavior on College Students' Eating Habits

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### Abstract

This study used a quantitative survey to examine whether the Theory of Reasoned Action (TRA) affects college students' behavioral intention (N=74) to eat healthy, such as cooking at home, drinking water frequently, and eating more vegetables. Results showed that both attitude and norms were related to students' behavioral intentions, but attitudes demonstrated a stronger effect. The study also utilized the Theory of Planned Behavior (TPB) to examine if attitudes, norms, and perceived behavioral control influenced intention to eat fast-food. The data suggests attitudes and perceived behavioral control was a significant predictor of behavioral intention. However, norms did not relate to intentions. Implications for forming dietary health campaigns and future research are discussed.

*Keywords:* Health campaign, college students, eating habits, Theory of Planned Behavior, Theory of Reasoned Action, healthy eating, fast-food

## Introduction

In 2014, the Centers for Disease Control and Prevention reported that 36% of adults, ages 18 and older, in Florida were overweight, a BMI between 25 and 30, and 26.2% were reported as obese, a BMI greater than 30 (CDC, 2014). Although eating healthy has grown as a concern at a national level, these percentages have not shown signs of significant improvement over the past several years. Fast-food restaurants and their unhealthy meal options have proven to be a large contributor to poor eating habits that lead to becoming overweight and obese (Bowman & Vinyard, 2004). With the millennial generation proving to be a prime target for fast-food marketers, it is essential to find ways to communicate messages on how to eat healthier and choose healthy food. Studies suggest, in order from taste, cost, nutrition, convenience, pleasure, and weight control, several factors determine how adults make decisions for their meals (Glanz, Basil, Maibach, Goldberg, & Snyder 1998; Horgen and Brownell 2002; Kim, K., Cheong, Y., & Zheng, L. 2009).

Knutson (2012) found that 67% of college students ranked price as a top 3 factor when deciding which restaurant their next fast-food meal would come from. Additionally, 43% were affected by discounts, 25.5% by add-on ingredients, and 43% by combination meals (Knutson, 2000). These percentages seem to signal a very price and value conscious consumer. Horgen and Brownell (2002), suggest that price decreases were effective in encouraging healthier meal choices, but were less effective when paired with health messages, because consumers assumed the meal would taste worse. These undesired results from health messages that are paired with healthy meal choices leads into a message framing issue. Overall, providers of unhealthy foods have been very successful, an estimation of one in four Americans entering a fast-food restaurant each day did so in part due to motivation from message framing (Rydell, et. al, 2008).

In a 2009 study by Kim, Cheong, and Zheng, food was split into two categories functional and hedonic. Functional, inferring it is chosen for its nutritional value, and hedonic, inferring it is chosen for the satisfaction of consuming it. Results showed that health messages were most effective for hedonic foods and taste messages were most effective for functional foods (2009). These trends seem to indicate that food choices are strongly influenced by the way the paired message affects the consumer. The recent trend of fast-food retailers using value priced combination meals combines low price with a message that is simple to understand and displays their meals as quick and convenient. In the present study, effective and successful health campaigns are discussed, along with factors (e.g. overweight, transitioning to college, and gender differences) of college students' eating habits, followed by an explanation of the Theory of Planned Behavior and the Theory of Reasoned Behavior.

### **Health Campaigns**

In order to combat the undesirable effects of health messages about healthy food (ie. customers assuming the meal will taste worse), formative research must be done in order to craft effective health campaigns. Rice, Ronald, and Atkin (2013) describe formative research as a preliminary phase of research useful for determining the most promising approaches for a campaign while revealing ineffective and counterproductive components. Through utilizing comprehensive formative research, one can create sophisticated strategies and effective messages in order to enhance campaign effectiveness (Rice et. al, 2013).

Successful public health campaigns reach large audiences and leave a lasting memory that influences future actions of those that were targeted. In order to achieve maximum attitude, the public needs to reach over ten exposures to the advertisement (Schmidt & Eisend, 2015). In 2002, DeJong analyzed current and past mass media campaigns designed to address high-risk

drinking among college students. The major problem was that these campaigns were not effective in reaching their target audience. While results were mostly inconclusive, DeJong recommended in order for future campaigns to be successful one must avoid fear appeals, select the right message source, select a mix of media channels, and maximize media exposure (DeJong, 2002).

While that is one way to be successful, future researchers and campaign directors must define their conceptualization of success variable by variable to correctly measure effectiveness (Rice et. al, 2013). According to Rice et. al (2013), measurement should occur before or during one's conceptualization of success. Rice et. al also go on to break down effectiveness into three levels, definitional, cost-effectiveness, and programmatic effectiveness. Definitional effectiveness "pertains to the success that groups have in defining a social phenomenon as a social problem"; cost-effectiveness "emphasizes whether communication campaigns are more or less cost-effective than other forms of intervention"; and programmatic effectiveness measures campaign performance against preset goals and objectives (Rice et. al, 2013).

### **College Students' Eating Habits**

Many studies report inadequate eating habits in college students (Deshpande, Basil, & Basil, 2009). The majority of college students are not abiding by dietary or physical activity guidelines (Huang, 2003). Students that are attending a two-year college rather than a four-year college are more likely to be overweight or obese (Lowry, Galuska, Fulton, Wechsler, Kann, & Collins, 2000). This contributes to the necessity for a further understanding of overweight in this target audience and development of preventive interventions (Huang, 2003).

Another important factor is the transition that occurs in higher education. The change from living at home to college life can worsen the eating habits of college students (Grace,

1997). Nutrition professionals are concerned, because dietary beliefs and behaviors that are present during college can continue through adulthood and have a great influence in future health (Dinger, & Waigandt, 1997).

There are also differences between genders. First, male students are more likely than females to be overweight. Females, however, were found to be more likely to try to lose weight (Lowry, Galuska, Fulton, Wechsler, Kann, & Collins, 2000). Second, a higher percentage of men compared to women reported eating fast-foods at least once a week (Driskell, Meckna, Scales, 2006). Also, more than half of men did not report the consideration of portion sizes, compared to 53% of women who reported considering small sizes when ordering (Driskell, Meckna, & Scales, 2006). Lastly, 37% of men and 51% of women reported taking into consideration what they believed to be healthier when choosing from a fast-food restaurant menu (Driskell, Meckna, & Scales, 2006).

### **Theory of Planned Behavior**

The Theory of Planned Behavior (TPB) is a conceptual framework used to understand human social behavior of why do we do what we do and act the way we act (Ajzen, 1991). The theory claims behavioral intentions are the products of three constructions: attitude toward the behavior, subjective norms, and perceived behavioral control. A combination function of intentions and perceived behavioral control leads to the performance of a behavior. The main premise of this theory suggests a positive attitude and high intentions lead an individual to more likely engage in performing the behavioral or act, and vice-versa (Ajzen, 2002).

Attitude toward the act or behavior focuses on an individual's belief on if a certain behavior or act is favorable or unfavorable (Ajzen, 1991). An attitude refers to the evaluation of the behavior assessing the behavior being enjoyable and beneficial or harmful. Subject norms

propose the significance of surroundings around the individual targets behavior and act influences an individual's normative belief (Ajzen, 2002). Norms of encouragement and common interest in the behavior or act are based on the surrounding social environment, network, and cultural norms. The last construct is perceived behavioral control which expresses a person's belief on the level of difficulty in performing a behavior (Ajzen, 1991). Perceived behavioral control is categorized into two elements as perceived self-efficacy, (i.e., the capability and confidence an individual feels in order to execute the designed behavior), and perceived controllability, (i.e., the perception that a person has the capabilities to overcome potential barriers and challenges) (Ajzen, 2002).

The Theory of Planned Behavior was adapted by other researchers to understand how students intend to consume healthy food. The TPB has been found to predictively explain healthy eating intentions and behavioral intentions through cross-sectional studies and observed over a six year interval (Conner, Norman, & Bell, 2002). Behaviors regarding to health relations was found largely influential within one's personal motivation (Godin & Kok, 1996). According to Conner and Sparks (2005), subjective norms, descriptive norms, and perceived social support suggests a positive correlation yet individually distinct enough to show between a relationship between TPB and eating healthy. In their findings, subjective norms are the dominant social influence for the intentions of the context of healthy eating. The behavior of eating fast-food over healthy food is influenced by multiple social, environmental, and strategic factors, thus it is important to examine how the three TPB constructs can impact individual's behavioral intentions.

Attitude towards a person's motivation in health related behavior is suggested relatively significant for the intentions (Godin & Kok, 1996) by affective i.e. behavior to be enjoyable or

not, and instrumental attitudes, behavior to be beneficial or harmful. In addition, attitudes were the strongest and significant predictor of intentions towards eating a healthy diet (Conner & Sparks, 2005). Thus, it is essential for the present study to examine how attitude towards college students influence their intentions in eating healthy.

Subjective norms have been found to be low for eating healthy and exercising behaviors (Godin & Kok, 1996). This result was not surprising, because based on previous studies and researchers, social norm variables are consistently low in contribution of behavioral intentions (Godin & Kok, 1996). In other studies, two additional norms are examined; descriptive norms, (i.e., the perceptions of other's performance of the behavior or act), and perceived social support, (i.e., being supportive to an individual's attempts to perform the behavior or act), to be empirical to impact upon intentions (Conner & Sparks, 2005). As a result, subjective norms are generally expected to signify low intentions towards eating healthy and with other possible components may impact this outcome.

Perceived behavioral control is as important as attitude in order to perform a behavior or act (Godin & Kok, 1996). For example, perceived behavioral control was found to be a great value for oral hygiene behaviors and low eating behaviors (Godin & Kok, 1996). Conner and Sparks (2005) study demonstrates perceived behavior control as the strongest predictor to healthy eating.

### **Theory of Reasoned Action**

Predating the Theory of Planned Behavior, there is the Theory of Reasoned Action (TRA), which is a model often used for the prediction of behavioral intention and/or behavior (Madden, Ellen, & Ajzen, 1992). The Theory of Planned Behavior is an extension of the TRA; the key difference is that the TPB "explicitly incorporates perceived behavioral control as an



antecedent to behavioral intentions” (Madden et. al, 1992). In a study done by Madden et. al (1992), results showed that that the TPB explained significantly more variance than the TRA while also being affected by the intensity of perceived behavioral control. While not as encompassing as the TPB, the TRA is still a very thorough model for studying behavioral intentions.

H1: The Theory of Reasoned Action will predict healthy eating intention such that a.) attitudes and b.) norms influenced behavioral intention to eat healthy.

H2: The Theory of Planned Behavior will predict intentions to eat fast-food such that a.) attitudes, b.) norms, and c.) perceived behavioral control influence behavioral intention to eat fast food.

### **Connecting Eating Habits, TRA/TPB, and Health Campaigns**

Obesity and a lack of nutrition are main health issues that our current society encounters (Deshpande, Basil, & Basil, 2009). The purpose of this study is to utilize the Theory of Reasoned Action and the Theory of Planned Behavior (TPB) to discover effective communication methods for a health campaign designed to make college students choose healthier eating options.

## **Method**

### **Participants**

This study examined college students’ dietary decisions by utilizing the Theory of Reasoned Action and the Theory of Planned Behavior. After initially collecting data from 114 individuals, the dataset was cleared to reflect inclusion criteria (i.e., college students, 18-25 years old who had eaten fast-food). Participants (N=74) were central Florida undergraduate and graduate students ranging from 18-25 years old (M=21.68, SD=1.53). We chose this age group, because most college students are not making adequate dietary decisions and this can continue

through adulthood and influence future health (Huang, 2003; Dinger & Waigandt, 1997.) Males made up 33.8% of the sample and 64.9% of participants were female. One participant did not report their sex. Participants were predominantly 47.3 % White/Caucasian, Hispanic/Latino 25.7%, 12.2% Asian/Asian-American, 10.8% self-identified as Black/African-American, and 2.7% Indian. One person did not report their race. All participants had eaten at or from a fast-food restaurant (e.g., Burger King, McDonalds, Wendy's) in the past.

### **Procedure**

A networking, snowball, sample was used for a cross-sectional survey concerning healthy food decisions that was distributed through online social networks. The online survey was made available for the participants to access over the course of one week during April 2016.

Participation was voluntary. A URL link was included in an e-mail distributed to undergraduate communication courses and was also posted on social media platforms. After individuals provided consent, they were directed to a website where they completed the survey using the URL link.

### **Measures**

The present study measured both healthy and unhealthy dietary decisions (i.e. behavioral intention to purchase as well as attitudes, subjective norms, and perceived behavioral control.) Questions on attitudes focused on participants' positive or negative feelings on dietary decisions. Subjective Norms measured the individuals' perceptions of social pressure to engage or not engage in healthy eating. Perceived behavioral control measured participants' view on their ability to purchase fast-food. Behavioral Intention measured the likelihood to eat fast-food and engage in healthy eating. Dunn, Mohr, Wilson, and Wittert's (2011) scales were adapted to our study with items such as 'I feel guilty if I eat fast-food' ( $\alpha=.84$ ), 'Most people who are important

to me think that I should eat fast-food regularly,' ( $\alpha=.78$ ) and 'Fast-food is very convenient' ( $\alpha=.84$ ).

**Attitudes.** Two scales (i.e. health benefits and experience) were measured using a 5-point Likert scale: strongly disagree, somewhat disagree, neither, somewhat agree, and strongly agree. Health benefits were measured by examining participant's attitude as to how they value the health effects of the meals they choose to eat. Then, experience was measured by using the responses to questions about how participants felt about past fast-food experiences and how they typically feel after a fast-food meal. Experience ( $M=14.96$ ,  $SD=3.84$ ,  $\alpha=.79$ ) and health benefits ( $M=10.96$ ,  $SD=3.68$ ,  $\alpha=.75$ ) each demonstrated adequate reliability. Survey items included, "I typically enjoy fast-food eating experiences," "I feel happy after eating fast-food," and "I feel happier after eating fast-food than I do after cooking at home." For health benefits, items includes "I consider the nutritional value before I choose most of my meals," and "I consider the effects of the ingredients in the meals I choose to eat."

**Subjective norms.** Two scales by using the responses to questions asking about friends and family's perception of healthy and unhealthy eating. A 5-point Likert scale was used as well as a Semantic Differential using the terms "never" to "always". Friends and family's perception of healthy eating ( $M=18.82$ ,  $SD=3.09$ ,  $\alpha=.73$ ) demonstrated adequate reliability. The scale included items such as, "My friends and family talk about eating healthy," "My friends and family enjoy eating healthy," and "My friends and family think people should eat healthy." Friends and family's perception of unhealthy eating ( $M=7.78$ ,  $SD=2.01$ ,  $\alpha=.67$ ) included survey items of "My friends and family enjoy fast-food," "My friends and family eat fast-food," and "My friends and family prefer fast-food."

**Perceived behavioral control.** This was measured by using four scales in relation to eating fast-food (affordable, location, speed of service, and accessibility.) These items were measured using a 5-point Likert scale and one Semantic Differential utilizing the terms never to always (e.g. how often do you eat fast-food from restaurants on or near your campus?). The four scales were averaged and demonstrated adequate reliability ( $M=47.03$ ,  $SD=6.64$ ,  $\alpha=.75$ ). Survey items included “I eat fast-food because I like the environment in the restaurant,” and “Fast-food restaurants are easy to afford.”

**Behavioral Intention.** Two scales (i.e. intentions of eating fast-food and intentions of making healthy decisions) were assessed using a 5-point Likert response scale with larger numbers indicating higher levels of agreement. Participants will receive responses of “Extremely Unlikely (EU), Unlikely (U), Neutral (N), Likely (L), Extremely Likely (EL)”. Intentions of eating fast-food ( $M=10.99$ ,  $SD=2.93$ ,  $\alpha=.87$ ) and intentions of making healthy decisions ( $M=16.07$ ,  $SD=3.87$ ,  $\alpha=.80$ ) each demonstrated adequate reliability. Intentions of eating fast-food survey items included “I intend to eat fast-food,” “I plan to eat fast-food in the future,” and “It is highly likely I will eat fast-food.” In our survey for intentions of making healthy decision items incorporate “I intend to buy healthy cooking ingredients,” “I intend to cook my own meals in a healthy manner,” and “I intend to look at the nutritional information in the products I buy.”

## Results

Regression analyses were conducted to test research hypotheses.

Hypothesis 1 stated The Theory of Reasoned Action will predict healthy eating intention such that a.) attitudes and b.) norms influenced behavioral intention to eat healthy. Results suggest our hypothesis was supported and statistically significant  $R^2=.38$ ,  $p<.05$ . Specifically, attitude ( $\beta=.514$ ,  $p<0.001$ ) and norms ( $\beta=.21$ ,  $p<.01$ ).

Hypothesis 2 stated The Theory of Planned Behavior will predict intentions to eat fast-food such that a.) attitudes, b.) norms, and c.) perceived behavioral control influence behavioral intention to eat fast-food. Results suggest our hypothesis was supported and statistically significant  $R^2=.51$ ,  $p<.001$ . Specifically, attitude ( $\beta=.40$ ,  $p<0.001$ ) and perceived behavioral control ( $\beta=.43$ ,  $p<0.001$ ) were significant predictors of behavioral intention, whereas norms was not ( $\beta=.06$ ,  $p=0.56$ ).

## **Discussion**

### **Summary of results**

This study examined whether TRA (attitudes and norms) would affect college students' behavioral intentions to eat healthy. The first hypothesis posited that attitudes and norms will influence behavioral intention to eating healthy based on TRA. Both attitudes and norms together accounted for 38% of variance, demonstrating positive attitudes of healthy eating benefits as well as friends and family's perception affected intentions to eat healthy. The data found attitude towards health benefits has a higher contribution than subjective norms to predict behavioral intention of eating healthy.

Simultaneously, another hypothesis was created by using TPB to determine the effect of attitude, norms, and perceived behavioral control influence on behavioral intention to eat fast-food. The results accounted for 51% of variance, demonstrating the intentions to consume fast-food were predicted by attitudes towards fast-food, norms towards fast-food, and perceived behavioral control (i.e. great value of affordability, location, service, and accessibility). In Latimer and Martin-Ginis' findings (2005), subjective norms was the strongest predictor of intention to consume fast-food. The present study also found that perceived behavioral control

was the most impactful, followed by attitude, and norms, which was the least impactful predictor of behavioral intentions to eat unhealthy.

By analyzing the results of both TRA and TPB, norms have a stronger effect on intentions to eat healthy, but a weaker prediction on intentions to consume fast-food. College students are influenced by their friends and family's perceptions more when they choose to eat healthy than when they choose to eat unhealthy. As for unhealthy behavioral intentions, our results showed that attitude and perceived behavior control are more influential than norms.

### **Implications For Health Campaigns**

Findings from the present study suggests that future health campaigns should focus on increasing perceived behavioral control and improving attitudes about eating healthy. Attitude, convenience, and affordability are all significant factors in choosing to eat fast-food meals. It is important to make consumers aware of healthy alternatives that are just as accessible and gratifying. Examples can include offering fruits and vegetables on the sides instead of fries or advertising campaigns that highlight accessibility, satisfaction, or promotional deals. Based on our findings, attitude and norms are significant to college students' intentions to eat healthy, thus campaigns should highlight and take advantage of these trends.

### **Limitations**

The limitations of the present study include a relatively small sample size and some participant attrition. In gathering participants for this study, we used a convenience network sample which opens up an external threat to validity. Scale reliability also caused an issue as well due to low reliability between perceived behavioral control items and low reliability between items measuring norms for unhealthy eating due to our survey only containing three items. During the calculation of results, some survey questions were not used (i.e., refer to

Appendix A items:Pro1-Pro4, Hb2, FFEH1, FFEH2, Freq1-Freq4, Aff5, Acc2, EH1-EH4.) and we do not recommend the use of these scales for further research.

### **Future Research**

A larger random sample would be helpful and increase reliability. An experiment design may be used to examine the actual behavior of college students' eating habits rather than only measuring intentions.

### **Conclusion**

College students' eating habits proved to be complex. Although people understand that fast-food is not healthy and they are aware of the nutritional effects, they continue to engage in unhealthy eating behavior. The results show that college students are more influenced by friends and family's perception on eating healthy than eating unhealthy. Attitude and perceived behavioral control are more influential than norms for unhealthy behavioral intentions. Future health campaigns can be crafted utilizing the same attractors to fast-food (i.e. increasing perceived behavioral control and improving attitudes) and will ideally have similar success to fast-food restaurants. It is crucial to study college students, because the majority are not eating healthy and their eating habits transition into their adulthood (Dinger, & Waigandt, 1997).

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Appendix A  
Appendix A: Codebook

**Consent.** Do you consent to participate in this research project?

\_1\_ Yes                      \_2\_ No

**Sex.** What is your gender?

\_1\_ Female                      \_2\_ Male

**Age.** I am \_\_\_ years old.

**Q1.** Do you currently attend a Central Florida College?

\_1\_ Yes                      \_2\_ No

**Year.** What year/level are you?

\_1\_ Freshman   \_2\_ Sophomore   \_3\_ Junior   \_4\_ Senior   \_5\_ Graduate +   \_6\_ Not a Student

**Race.** Which of the following best describes your race or ethnicity?

\_1\_ Asia/Asian American      \_2\_ Black/African American      \_3\_ White/Caucasian  
\_4\_ Hispanic/Latino      \_5\_ Indian      \_6\_ Other (Please specify) \_\_\_\_\_

**Q2.** Have you eaten fast-food (e.g., Wendy's, McDonalds, KFC) in the past year?

\_1\_ Yes                      \_2\_ No

**Attitude:**

**Ex1.** I typically enjoy fast-food eating experiences.

Strongly disagree 1                      2                      3                      4                      Strongly agree 5

**Ex.2** I feel happy after eating fast-food.

Strongly disagree 1      2      3      4      Strongly agree 5

**Ex3.** I feel happier after eating fast-food than I do after cooking at home

Strongly disagree 1      2      3      4      Strongly agree 5

**Ex4.** I enjoy fast-food

Strongly disagree 1      2      3      4      Strongly agree 5

**Ex5.** I typically remember my fast-food experiences fondly.

Strongly disagree 1      2      3      4      Strongly agree 5

**Pro1.** Combo deals, such as 4 items for \$4, make me feel good about my decision to eat fast-food.

Strongly disagree 1      2      3      4      Strongly agree 5

**Pro2.** I typically like restaurants that offer combo deals more than those that do not

Strongly disagree 1      2      3      4      Strongly agree 5

**Pro3.** I enjoy getting meals, from any retailer, for a good deal.

Strongly disagree 1      2      3      4      Strongly agree 5

**Pro4.** I like eating at restaurants with combo deals such as 4 for \$4, 2 for \$2, because they are easy to understand.

Strongly disagree 1      2      3      4      Strongly agree 5

**Hb1.** I consider the nutritional value before I choose most of my meals.

Strongly disagree 1      2      3      4      Strongly agree 5

**Hb2.** I consider fast-food to be GOOD or BAD for my health

BAD1                      2        3        4        GOOD5

**Hb3** . I consider the health effects, of the meals I choose, on my body.

Strongly disagree1                      2        3        4        Strongly agree5

**Hb4**. I consider the effects of the ingredients in the meals I choose to eat.

Strongly disagree1                      2        3        4        Strongly agree5

**Subjective norms**

**Perc1**. My friends and family talk about eating healthy

Never1                      2                      3        4                      Always 5

**Perc2**. My friends and family think fast-food restaurants are unhealthy

Strongly disagree1                      2        3        4        Strongly agree5

**Perc3**. My friends and family think people should not eat fast-food.

Strongly disagree1                      2        3        4        Strongly agree5

**Perc4**. My friends and family enjoy eating healthy.

Strongly disagree1                      2        3        4        Strongly agree5

**Perc5**. My friends and family think people should eat healthy

Strongly disagree1                      2        3        4        Strongly agree5

**Perc6**. My friends and family enjoy fast-food.

Strongly disagree1                      2        3        4        Strongly agree5

**FFEH1**. My friends and family prefer eating healthy.

Never1                      2                      3        4                      Always 5

**FFEH2.** My friends and family cook healthy food often.

Strongly disagree 1            2            3            4            Strongly agree 5

**FFEH3.** My friends and family eat fast-food

Never 1            2            3            4            Always 5

**FFEH4.** My friends and family prefer fast-food.

Never 1            2            3            4            Always 5

**Freq1.** My friends and family tell me to eat healthy.

Never 1            2            3            4            Always 5

**Freq2.** My friends and family tell me not to eat fast-food

Never 1            2            3            4            Always 5

**Freq3.** My friends and family tell me to cook healthy food

Never 1            2            3            4            Always 5

**Freq4.** My friends and family tell me it's okay to eat fast-food

Never 1            2            3            4            Always 5

**Perceived behavioral control**

**Aff1.** Fast-food restaurants are easy to afford.

Strongly disagree 1            2            3            4            Strongly agree 5

**Aff2.** I eat at fast-food restaurants because of the low price.

Strongly disagree 1            2            3            4            Strongly agree 5

**Aff3.** Prices are competitive at fast-food restaurants.

Strongly disagree1      2      3      4      Strongly agree5

**Aff4.** The food at fast-food restaurants is good value for the dollar

Strongly disagree1      2      3      4      Strongly agree5

**Aff5.** How much do you spend per visit

\$1-\$2.99      \$3-\$5.99      \$6--\$8.99      \$9+

**Loc1.** I eat fast-food because I like the environment in the restaurant

Strongly disagree1      2      3      4      Strongly agree5

**Loc2.** I utilize the drive-thru options when going to a fast-food restaurants.

Strongly disagree1      2      3      4      Strongly agree5

**Loc3.** Employees speak clearly at fast-food restaurants.

Strongly disagree1      2      3      4      Strongly agree5

**Loc4.** Employees are friendly at fast-food restaurants

Strongly disagree1      2      3      4      Strongly agree5

**SSer1.** How often does time affect your decisions about what to eat?

Never1      2      3      4      Always 5

**SSer2.** I eat fast-food because they are quick in service

Strongly disagree1      2      3      4      Strongly agree5

**SSer3.** I eat fast-food because I am too busy to cook at home

Strongly disagree1      2      3      4      Strongly agree5

**SSer4.** My food order at the fast-food restaurant is generally correct

Strongly disagree1      2      3      4      Strongly agree5

**SSer5.** The food at fast-food restaurants is served fresh

Strongly disagree1      2      3      4      Strongly agree5

**Acc1.** I mainly eat fast-food because it is convenient

Strongly disagree1      2      3      4      Strongly agree5

**Acc2.** Are there fast-food restaurants located on or near your college campus?

Yes                                  No                                  I don't know

**Acc3.** How often do you eat fast-food from restaurants on or near your campus?

Never1      2      3      4      Always 5

**Behavioral Intention**

**EFF1.** I intend to eat fast-food

Extremely Unlikely1      2      3      4      Extremely likely5

**EFF2.** I plan to eat fast-food in the future

Extremely Unlikely1      2      3      4      Extremely likely5

**EFF3.** It is highly likely I will eat fast-food

Strongly disagree1      2      3      4      Strongly agree5

**EH1.** I intend to eat healthy and clean

Extremely Unlikely1      2      3      4      Extremely likely5

**EH2.** I intend to have vegetables incorporated in my meals

Extremely Unlikely1      2      3      4      Extremely likely5



**EH3.** I intend to drink water frequently

Extremely Unlikely1    2    3    4    Extremely likely5

**EH4.** I intend to eat healthy food to keep a healthy weight

Extremely Unlikely1    2    3    4    Extremely likely5

**HD1.** I intend to buy healthy cooking ingredients

Extremely Unlikely1    2    3    4    Extremely likely5

**HD2.** I intend to cook my own meals in a healthy manner

Extremely Unlikely1    2    3    4    Extremely likely5

**HD3.** I intend to look at the nutritional information in the products I buy

Extremely Unlikely1    2    3    4    Extremely likely5

**HD4.** I intend to look at the nutritional information in the food I eat.

Extremely Unlikely1    2    3    4    Extremely likely5