

RUNNING HEAD: SELF-CONTROL SUCCESS

Self-Control Success Through Motivated Use of Abstraction

A Senior Honors Thesis

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Abstract

Obesity is a national epidemic associated with a multitude of chronic medical conditions and the number of overweight individuals continues to rise. Dieting is a common strategy used in weight loss and frequently involves self-control conflicts, which occur when pressures in the local environment threaten to undermine an individual's larger concerns. Dieters regularly encounter salient food temptations, which threaten to undermine their global dieting goals. Self-control success occurs when an individual can overlook immediate temptations, in deference to their over-riding goals. Research suggests that construing events at higher levels of abstraction helps people better exert self-control. This study is intended to test whether dieters who spontaneously adopt high-level construals of a conflict situation are more likely to be successful. In this study, individuals were told they would be participating in a cookie taste-test. Participants' construal levels were then assessed using action identification items in which they chose between abstract and concrete descriptions of the taste test. Results provide some potential evidence that dieters who construed upcoming conflict situations abstractly were more likely to be successful. These findings may shed light on the growing obesity issue by highlighting the thought processes that may promote dieting success. This indicates that high-level construals, measured in the face of self-control conflicts, might eventually be used to detect successful dieters. It is also possible that construal-level training might be a useful intervention for unsuccessful dieters.

This work is dedicated to my grandfather and my parents. My grandfather always believed in my abilities and would have loved to witness this moment in my life. My parents are my most ardent supporters who encourage and motivate me at every turn.

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Obesity is a national epidemic and the number of overweight individuals continues to rise. Obesity is a serious health issue, associated with chronic conditions such as diabetes, high blood pressure, high cholesterol, and arthritis (Mokdad, Ford & Bowman, 2003). Obese individuals spend an average of \$1,429 more on health-care related costs per year than healthy-weight individuals (Finkelstein, Fiebelkorn & Wang, 2003). Americans spend more than \$33 billion a year on products and services related to weight-loss (Kruger, Galuska, & Serdula, 2004) and the national cost of obesity has been estimated at \$96.2 billion each year (Finkelstein, Fiebelkorn & Wang, 2004). 31% of U.S. adults are currently trying to lose weight. Common strategies include eating fewer calories, eating less fat, and exercising more (Kruger et al., 2004). Despite these efforts to lose weight, each year close to 300,000 adults in the U.S. die of causes associated with obesity (e.g., Mokdad, et al., 2003). These statistics tell us that many individuals are motivated to lose weight but suggest that problems exist with the ways in which people execute their weight loss attempts. This paper focuses on dieting as a major component of many weight loss attempts. Barriers to long term dieting success may lie in the tactics individuals adopt when faced with temptations in the environment that, if indulged in, may be harmful to their goal. The present study will examine the way dieters understand relevant self-control conflicts in an attempt to develop an assessment instrument by which to identify unsuccessful dieters. By focusing on a potentially problematic psychological mechanism in unsuccessful dieters, this research may also identify an important target of intervention. To address these issues, this research delves into the relationship between dieting success and the level of abstraction used to represent diet-relevant self-control conflicts.

A self-control conflict is defined as a situation in which a motive to pursue a smaller, more concrete reward is pitted against a motive to pursue a larger and more abstract reward (Fujita, in press). Self-control success, then, occurs when an individual chooses to behave in line with the larger/abstract reward rather than the smaller/concrete reward. This is often difficult given that the smaller more concrete reward tends to be more proximal and salient to the individual. Self-control failure, by contrast, occurs when people acting in line with the concrete, proximal reward (Fujita, in press).

Many researchers have attempted to understand the various factors that aid or hinder self-control. Shiv and Fedorikhin (1999) propose that there are two types of processes that can be used when exposed to a self-control choice (e.g. fruit salad vs. chocolate cake). The first process is affective in nature and is likely to be relatively automatic. This leads people to focus on their affective reactions when presented with choice alternatives. The second process is a more controlled process, which engages when a person has both the motivation and ability to process the choice alternatives more deeply. From this perspective, the controlled, cognitive process promotes self-control by enhancing consideration of the consequences of choosing each alternative. However, if either cognitive resources or motivation are limited, the controlled process cannot function appropriately and so people are driven by their automatic, affective reactions. This is thought to undermine self-control. Indeed Shiv and Fedorikhin (1999) demonstrated that people under high (vs. low) cognitive load are more likely to choose the chocolate cake over fruit salad.

According to Baumeister and colleagues (Baumeister, 1998), acts of self-control draw upon a limited resource, much like strength or energy. The term ego depletion is derived from this theoretical perspective and refers to the notion that individuals may be unable to exert self-

control due to prior acts which have temporarily expended the necessary resources (Baumeister, et al. 1998). For example, Baumeister found that after previously resisting the temptation to eat chocolate, participants gave up more easily in the face of a frustrating puzzle task. From their perspective, the first task depleted resources needed to overcome subsequent temptations. This depletion is thought to result in a temporary deficit in the ability to overcome one's immediate urges, making one more vulnerable to subsequent temptations. Self-control, in this sense, can be exhausted such that consecutive attempts will result in poorer performance until the resource is replenished. Therefore, successfully exerting self-control may hinder one's future self-control attempts.

Other researchers (e.g., Metcalfe & Mischel, 1999) propose a theory of "hot" versus "cool" systems in regards to self-control. The hot emotional system is associated with quick emotional processing, conditioned responding and affective primacy. The cool cognitive system weaves knowledge from multiple sources into a coherent, strategic and goal-oriented narrative (Metcalfe & Mischel, 1999). Self-control success then occurs when the "cool" system of cognition overpowers the emotional "hot" system. In this way, tasks that occupy cognitive resources hinder the "cool" system's ability to overpower the "hot" system resulting in self-control failure. In supporting research, children were presented with a desirable food treat. The child could then either wait until the experimenter returned and received two treats, or hit a bell and the experimenter returned immediately but the child only received the single treat. Self-control tasks that require delay of gratification require the individual to mobilize thoughts, to dampen their response to the "hot" system and sustain their restraint.

Each of the theoretical models described above provide useful insight into what self-control is and what factors can help or hinder its exertion. A relatively more recent approach that

addresses issues relevant to self-control is based on construal level theory (CLT; Trope & Liberman, 2003). This model may provide a unique framework through which to understand the disparate lines of research described earlier.

The Role of Subjective Construals

One foundational principle underlying decades of research in social psychology is the notion that the way an individual thinks about and understands the world is inherently subjective (e.g. Bruner, 1957; Gilbert & Ross, 1991). Imagine, for example, an argument between romantic partners. There are clearly objective facts related to the argument, but each partner has a unique subjective interpretation, or construal, of these facts. The argument exists because of this difference in subjective construals, and these interpretations will affect the way each individual thinks and behaves during the argument.

Previous research has shown that individuals' unique construals influence their judgments, evaluations, and behaviors (Balcetis & Dunning, 2006; Ditto & Lopez, 1992; Trope, Liberman & Wakslak 2007). One of several dimensions on which these subjective construals can differ is their level of abstraction (e.g. Trope & Liberman, 2003; Vallacher & Wegner, 1989). This notion that the meaning an individual derives from an action, object, or event can vary in abstraction is central to construal level theory (CLT; Trope & Liberman, 2003). Construal level distinguishes two types of construals, high- and low-level. High-level construals are abstract representations of events or objects that focus on the key or central features while extracting a decontextualized gist. Low-level construals are concrete representations that reflect secondary or subordinate qualities making the object or event unique. For instance, the act of "making a list" can be understood more concretely as "writing things down", or more abstractly as "getting organized" (Vallacher & Wegner, 1987; 1989). The concrete description focuses on how the task

of making a list is accomplished, while the latter abstract description highlights the broader outcome of making a list. In addition to actions, objects and events can also be represented at varying levels of abstraction. For example, an object such as “cereal” can be construed concretely at “Cheerios” or abstractly as “breakfast food.” An event such as a soccer game can be construed concretely as “running after a ball” or abstractly as “a competition of skill.” Research on CLT has demonstrated that construal level has an effect on numerous judgments, decisions, and behaviors (Trope, Liberman & Wakslak, 2007).

Construal Level and Self-Control

There is a great deal of evidence to suggest that construing events at higher levels of abstraction helps people to better exert self-control (e.g. Fujita, 2008; Fujita, Trope, Liberman & Levin-Sagi, 2006). In a study by Fujita and colleagues, participants were asked to complete an exercise in generating either superordinate category labels (high-level construal prime) or subordinate exemplars (low-level construal prime) for a number of common objects. The high-level construal condition primed participants to think in terms of categories which are considered more abstract while the low-level condition primed individuals to think in terms of more concrete exemplars. The effects of these primes carry over into subsequent temptation tasks. Participants then evaluated words commonly associated with temptations that undermined the goal of studying. Findings showed that individuals who were primed to high-level construals reported less positive evaluations of the temptations. This study demonstrated that, when manipulated to construe self-control conflicts at high-levels, individuals give more weight to more abstract concerns that support their goals, which enhances their self-control (Fujita et al., 2006; Fujita, 2008).

Beyond the numerous findings demonstrating that manipulating construal levels influences self-control, there is also some evidence that abstraction can be motivated. People appear to be aware, at some level, that abstraction promotes self-control, and utilize high-level construals spontaneously when they anticipate confronting temptations. For instance, dieters who learn that they will be taking part in a cookie taste test are more likely than non-dieters to describe the taste test in abstract terms. This suggests that, when faced with situational pressures that threaten to undermine their valued goals, some individuals are able to adopt high-level construals in anticipation of the conflict (Fujita & MacGregor, 2011). That is, if someone is a dieter and they are presented with a brownie, they may implicitly understand that adopting a high-level construal aides them in resisting the brownie because it threatens the success of their diet.

The Present Research

Because adoption of high-level construals is known to enhance pursuit of global goals, this seems to be a functional strategy that is likely to improve self-control when these individuals are actually faced with a conflict situation. Therefore, it seems likely that people who spontaneously utilize high-level construals in advance of a diet-relevant self-control conflict are more likely to be successful in their dieting behavior, than those who do not use this strategy. Although this seems logical, currently there is little research directly testing this idea. The current study is intended to assess whether the spontaneous utilization of high-level construals distinguishes those successful vs. unsuccessful at self-control. Specifically, we explore whether we can predict which dieters will be successful at resisting food temptations based on their subjective construals of those temptations. It seems likely that those who spontaneously adopt

higher levels of construal in the face of self-control conflicts will demonstrate more successful dieting behavior.

In the present study, dieting status was premeasured and both dieters and non-dieters were led to anticipate participating in a cookie taste test. We assessed their construal levels of the impending taste test, and then assessed dieting success by giving them a chance to actually eat cookies. We predicted that individuals who are more committed to dieting will be more likely to adopt high-level construals of this conflict. In addition, we expect these individuals to show higher levels of dieting success by eating fewer cookies in the actual taste test itself. Finally, we predicted that the relationship between participants' dieting commitment and their dieting success would be mediated by the level of construal they spontaneously adopt.

Method

Participants

Participants were 164 introductory psychology students (115 females) at The Ohio State University. The sample was between the ages of 18-34, and all received partial course credit in return for their involvement.

Materials & Procedure

Preliminary Session. Participants completed an online survey at least 24 hours prior to taking part in the laboratory session. The items contained within this survey were intended to assess the degree to which dieting serves as an important personal goal.

Dieting Goal Index. The preliminary survey assessed the extent to which participants were committed to a dieting goal. These questions included: "To what extent do you avoid high-fat, high-calorie foods?" "How concerned are you about eating healthy foods?" "To what extent do you make an effort to eat low-fat, low-calorie foods?" and "To what extent is maintaining a healthy diet important to you?" Answers were given on a 7-point Likert-type scale with anchor

labels of “Not at all” at 1 and “Extremely” at 7. These items were averaged to create an index with adequate reliability ($M = 4.36$, $SD = 1.21$, Cronbach’s $\alpha = .88$).

Laboratory Session. At least one day after filling out the online survey, participants came into the lab and completed the experiment in groups ranging from one to five. They were told they would be participating in a marketing research cookie taste test, and were each seated at a separate computer station. On the desk of each computer station was a clearly visible plastic Tupperware container holding five cookies. To be sure participants believed the taste test was imminent, the cookies were visible through the container. All experimental materials were contained in a computer file from which the students read the instructions and completed the study.

Cookie description. Participants were told that the cookies they would taste were designed to maximize taste, but were also extremely unhealthy with 300 calories and 12 grams of fat per cookie. They were then instructed to take a moment to think about the upcoming taste test.

Construal Measurement. Participants were then asked to complete a measure of action identification, based on the Behavioral Identification Form (Vallacher & Wegner, 1989). They were presented with three paired abstract and concrete descriptions of the marketing research taste test they were about to complete. For each pair, participants were told to select the way of thinking that better matched the way they were conceptualizing the taste test. Response options were comprised of: “eating cookies” vs. “trying new products,” “chewing a cookie” vs. “trying out a new snack,” and “tasting cookies” vs. “participating in marketing research.” Each answer was given on a 5-point Likert-type scale, ranging from the concrete to the abstract option. The behavior identification items were averaged to make a composite score for analysis ($M = 2.54$,

$SD = 1.15$), with higher numbers reflecting higher-level construals of the taste test. The scale also had adequate reliability (Cronbach's $\alpha = .78$).

Taste Test. Participants were then asked to begin eating the cookies at their station. They were told they must at least try one cookie, but that the total number eaten would be up to them. Then, while eating, participants answered questions about the cookies to further the ruse of the taste test, and to give them time to eat the cookies (e.g. "How is the chocolate chip to cookie ratio of the cookies?"; "How 'homemade' do the cookies taste?"). Finally, participants answered demographic questions (age, sex, language) and were fully debriefed, thanked for participating and dismissed from the experiment.

Success Measure. Success in this study was measured by the behavior of cookie eating. After participants left the experiment, the experimenter recorded the number of cookies eaten ($M = 1.28$). Those who ate fewer cookies during the study were said to be the more successful dieters.

Results

Dieting Goal Index regressed onto Success Measure

Initial analyses tested whether participants' dieting goal commitment levels were predictive of the number of cookies eaten. Participants' dieting goal commitment was regressed onto the number of cookies eaten, after the dieting goal variable had been mean-centered. As predicted, this analysis revealed that participants' dieting goal commitment significantly predicted the number of cookies they ate, such that those with higher levels of commitment to dieting ate fewer cookies ($b = -.15$, $SE = .06$, $p = .01$).

Dieting Goal Index regressed onto Construal

Subsequent analyses tested whether dieting goal commitment levels predicted

participants' tendency to spontaneously adopt high-level construals of an upcoming food-related self-control conflict. Participants' dieting goal commitment was mean-centered and then was regressed onto their scores on the construal measurement. As predicted, this analysis revealed that participants' dieting goal commitment significantly predicted their spontaneously adopted construal levels, such that individuals who were more committed to dieting tended to spontaneously adopt higher level construals of the upcoming cookie taste test ($b = .18, SE = .08, p = .03$).

Construal regressed onto Success

Participants who adopted higher-level construals in advance were expected to eat fewer cookies in the taste test. To test this, participants' spontaneously adopted construal levels were mean-centered and then regressed onto the number of cookies eaten. As predicted, this analysis revealed that the construal level participants spontaneously adopted when faced with the cookie taste test was a significant predictor of the number of cookies eaten, such that those who spontaneously adopted more abstract construals ate fewer cookies ($b = -.13, SE = .05, p = .01$).

Mediation

We predicted that the construal level participants spontaneously adopted in anticipation of the cookie taste test would mediate the effect of dieting goal commitment on number of cookies eaten. To test this, both dieting goal commitment and construal level were regressed onto number of cookies eaten. We predicted that the effect of participants' dieting goal commitment on the number of cookies eaten would disappear (or be significantly reduced) when accounting for construal level. However, this analysis revealed that dieting goal commitment was still a significant predictor of cookie eating, even after controlling for the effect construal level. This suggests that construal level did not significantly mediate the effect of dieting goal commitment

on cookie eating behavior. To statistically assess the mediation effect a Sobel test was conducted which confirmed that construal level was not a significant mediator in this regression (Sobel: $Z = -.11, p = .28$).

Discussion

Consistent with our first set of predictions, results from the current study demonstrated that participants committed to dieting spontaneously adopted high-level construals in the face of the dieting conflict of eating cookies. Secondly, our study demonstrated that people who were more committed to the dieting goal also ate fewer cookies. Thirdly, those participants who adopted high-level construals of the taste test also ate fewer cookies. Finally, although we predicted that the effect of participants' diet goal commitment on cookie eating would be mediated by their tendency to adopt high-level construals in anticipation of the taste test, our study failed to demonstrate that committed dieters ate fewer cookies as mediated by construal level.

Future Directions

Using cookie eating as a success measure. At first glance, these results may seem to undermine any claimed benefits of adopting high-level construals when faced with a self-control conflict. However, upon reflection, the cookie-eating task used in this study may have been flawed, and the measure of construal level may have been imprecise. These flaws may have introduced enough error into our measurement of both construal levels and self-control success and explain the lack of a mediational effect. It is possible that these measurement issues rather than any theoretical concerns may account for the findings. Difficulty finding evidence for construal level as a mediator may be due to several issues with the way the cookie-eating measure was operationalized in the current study. First, participants were only presented with

five, rather large, cookies at their stations. Participants may have recognized that the cookies they ate could be easily counted and may have shown restraint due to self-consciousness. Since the number of cookies provided was so small, it is also possible that participants did not appropriately feel that the number of cookies they were permitted to eat was truly up to their own discretion. In addition, the instruction to eat at least one cookie may have been taken to mean only one cookie *should* be eaten.

Future research addressing these concerns might provide a more sensitive test of our hypotheses. One could, for example, give each participant a larger bowl of smaller cookies from which to eat. If participants were presented with a seemingly unlimited number of smaller cookies in a large bowl, the ability to count the number of cookies eaten may not be as salient. If it seems unlikely that the number of cookies eaten can be monitored, less inhibited behavior should result. Additionally, the presence of other individuals (i.e. other participants and the experimenter) in the experimental room may have led the participants to feel watched or evaluated and thus eating behavior may have been curbed. Allowing participants to eat the cookies alone, in a more comfortable setting may also reduce eating inhibitions in future studies. Any attempts to enhance participants' comfort and to remove constraints from their eating behavior may improve the likelihood of producing the expected results.

Using behavioral identification as an assessment of construal level. Although dieting commitment did predict participants' spontaneously adopted construal levels, and these construal levels did predict dieting success, a critic might raise concerns regarding the way construal level was measured in the present study. All of the concrete descriptions used in the behavior identification measure included the word "cookies", whereas the abstract options did not. Therefore, it is possible that individuals were choosing the abstract option not based on

abstractness, but instead because they recognized the utility of avoiding thoughts related to cookies. Individuals may have selected these “non-cookie” options because the word “cookies” elicited a more visceral response which they recognized as detrimental. Future studies should use several construal measurements (e.g., picture vs. word thinking) to overcome this potential short-fall in the measurement of construal (Amit, Algom, & Trope, 2009). For example, a picture vs. word thinking task would ask individuals if they are imagining an upcoming conflict scenario in terms of pictures or words. Pictures are associated with concrete, low-level construals and words are associated with abstract, high-level construals. Pictures physically resemble what they refer to, and they depict specific, concrete objects. Pictures are thus singular representations of what they refer to. In contrast, words, do not physically resemble what they refer to, but instead denote a class of objects. In this way, words are more categorical representations (Amit, et al. 2009). If successful dieters do spontaneously adopt higher-level construals of food-related conflicts, we would predict that they would report greater word rather than picture thoughts. Such additional evidence would further bolster our theoretical model.

Using alternative measures of dieting goals. One potential methodological criticism lies in the reliance on retrospective self-report data to assess dieting concern in comparison to a more prospective and/or objective measure. Especially because dieting is a sensitive topic, self-report data leaves open the possibility that participants deceived the researcher or themselves regarding the true nature of past dieting and weight concerns. Objective measures like amount of money spend on dieting programs, consultations with a dietician, or number of dieting programs attempted would eliminate this shortcoming.

Other Future Extensions

The present research has demonstrated people concerned with dieting adopted higher-level construals in the face of an upcoming goal threat. Further research might be done to explore the extent to which high-level construals actually affect an individual's behavior both inside and outside of the laboratory. Even if future operationalizations in the laboratory are better able to pick up on mediation effects, it would still be useful to test this concept in a field study. In other words, it would be useful to test whether successful individuals are still able to utilize high-level construals to avoid temptation in real life, such as at a birthday party or when grocery shopping.

Although this study provides some evidence that those with higher dieting goals spontaneously adopt high-level construals when faced with a food-choice self-control conflict, future studies should extend this finding to other self-control domains (e.g. studying, exercising, saving money) to show the general utility of this strategy. For example, individuals who consider frugality a goal should utilize high-level construals in the face of a money-relevant conflict. This conflict could be buying a prized and desired but expensive item versus abstaining from the purchase due to practical financial needs. Such findings would help demonstrate that these findings can extend beyond dieting, and are relevant to the resolution of self-control conflicts more generally.

Implications for Promoting Dieting Success

The present study may help to shed light on the growing obesity issue by suggesting that the construal level one adopts can promote or undermine one's diet-relevant choices and can thereby influence dieting success. This study provides some evidence that spontaneous use of abstract construals may serve as a way of explaining why some dieters are generally successful while other, equally motivated, individuals constantly fail in their dieting efforts. If we can

identify some individuals that consistently fail to utilize high-level construals, this population may represent a potential target group for intervention.

The role of knowledge vs. ability to abstract. Given that the tendency to adopt high-level construals in anticipation of a self-control conflict may be one way to distinguish those who will be successful vs. unsuccessful at self-control, it is important to consider how this strategy could be acquired by those who think concretely in the face of self-control conflicts. To determine an intervention strategy, future research would first need to clarify whether individuals who do not utilize high-level construals do so due to a lack of knowledge or due to a lack of ability. Knowledge of the benefits of high-level construals could be tested by a study in which participants are asked which way of thinking about a dieting conflict they should use if one had a dieting goal. Newer work suggests that people can correctly identify higher-level construals as promoting self-control in the face of temptation (MacGregor & Fujita, 2011). Assessing whether there are individual differences in this knowledge is the next step in research. If people are aware of the strategy in hypothetical situations, but are still unsuccessful in real life, this would provide some evidence for a lack of ability to think abstractly when faced with a conflict. If people are unaware of the strategy, then this would suggest teaching the strategy as a first attempt at intervention. If teaching the strategy does not change success, then there would be some suggestive evidence for lack of ability to abstract.

Interventions. Unsuccessful dieters may not be utilizing high-level construals because they lack the knowledge that this strategy would be maximally effective. It may not be that individuals specifically choose to think concretely in the face of upcoming dieting conflicts, but rather they lack the knowledge that another method of thinking would be more beneficial. If lack of knowledge is hampering spontaneous utilization of high-level construals when anticipating

self-control conflicts, this opens up the possibility of intervention. Participants in future studies could undergo a CLT information session which instructs them how to view actions, objects and events in both abstract and concrete ways, and which method of thinking would best suit specific instances. Then individuals could be tested before and after the CLT informational session to assess whether the introduction of high-level construal strategies improved self-control upon the introduction of a subsequent diet-relevant conflict.

Alternatively, it is possible that individuals do not utilize high-level construals in the face of self-control conflicts due to a lack of ability, regardless of the knowledge that they possess. This poses a greater problem than simply a lack of knowledge of CLT and the benefits of high-level construals. If the knowledge is present in the individual, then training would be the crucial element in regards to the application of this knowledge. Participants who have learned how to adopt high-level construals would then have to be placed in multiple self-control conflicts and coached in the most helpful ways of construing the conflict at hand to best serve their larger goals.

Conclusion

This study is the first to attempt to show that spontaneously adopted construal levels mediate the effect goal commitment on self-control behavior. Although this study failed to find evidence of significant mediation by construal levels, several findings are consistent with predictions, and it seems plausible that the mediation may be being masked by messy assessment tools. Therefore, it seems possible that the predicted mediation could be found in the future, after a few operational changes. Understanding the role that construal levels play in self-control failure in this dieting example as well as future directions has important implications for treating and preventing obesity. In addition, expanding research on self-control to alternate domains

besides dieting, like money management, may have implications for other important societal and personal issues.

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Appendix A

Prescreening Measures: Dieting Goal Index

To what extent to do you avoid high-fat, high-calorie foods?

1	2	3	4	5	6	7
Not at all						Extremely

How concerned are you about eating healthy foods?

1	2	3	4	5	6	7
Not at all						Extremely

To what extent do you make an effort to eat low-fat, low-calorie foods?

1	2	3	4	5	6	7
Not at all						Extremely

To what extent is maintaining a healthy diet an important goal to you?

1	2	3	4	5	6	7
Not at all						Extremely

Appendix B

Laboratory Measures

Construal Measurement: Behavior Identification Task

People can identify and think about objects and events in different ways. Some of these ways of thinking help us to achieve our goals and others make goal attainment more difficult.

Of the options presented for each question, which way of thinking about the marketing research taste test that best matches the way you are currently thinking.

Please circle the number that corresponds to your choice.

12)a)

1	2	3	4	5
eating cookies				trying new products

b)

1	2	3	4	5
chewing a cookie				trying out a new snack

c)

1	2	3	4	5
tasting cookies				participating in marketing research

Tables and Figures

Table 1. Correlation Table

Correlation Table

	Dieting Goal	Behavior Identification	Cookie Eating
Dieting Goal	1	.187*	-.283*
Behavior Identification		1	-.174*
Cookie Eating			1

Figure 1. The above table shows the correlation between the variables used in the mediation analysis. The * symbol denotes a p-value of less than .05.

Figure 2. Mediation Diagram

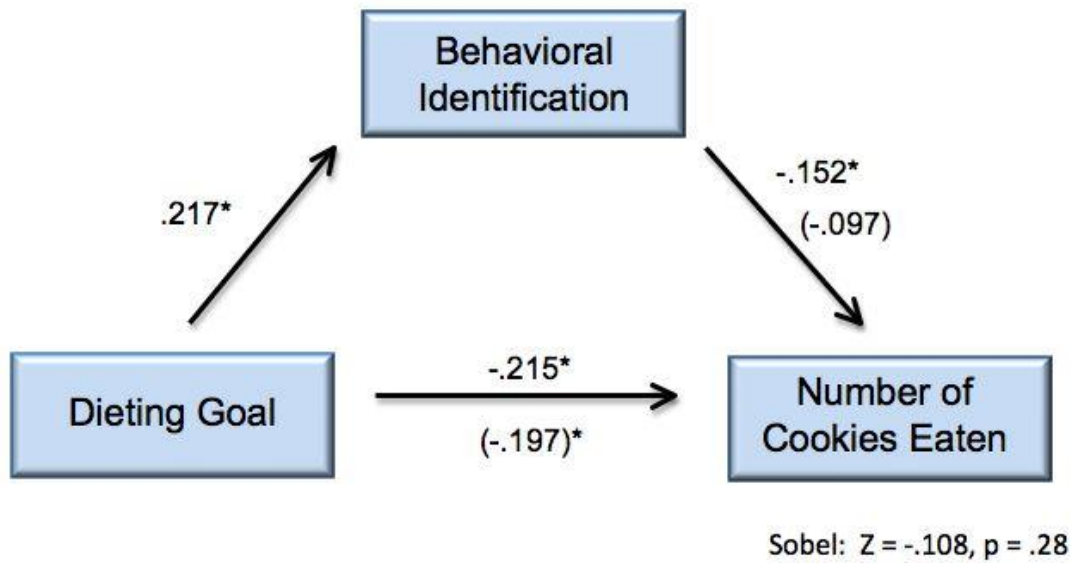


Figure 2. The above figure outlines the predicted mediation. Each arrow indicates a regression analysis was performed. The * symbol denotes a p-value less than .05.