When Busy Is Less Indulging: Impact of Busy Mindset on Self-Control Behaviors

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An increasing number of consumers, in recent times, have reported feeling busier than ever. The current research examines how the subjective perception of busyness—which is referred to as a *busy mindset* in the current research —impacts consumers' decision-making. Building on different streams of research in sociology and self-view, the current research proposes that a busy mindset bolsters people's sense of self-importance, which, in turn, can increase self-control. Thus, a busy mindset is predicted to facilitate people's ability to exert self-control. Seven studies, including a field study, provide support for this busy mindset hypothesis across various self-control domains. Findings from these studies provide support for the underlying process related to self-importance in multiple ways, while also addressing alternative accounts related to stress and the desire for productivity. Finally, findings from the current research delineate important managerially relevant boundary conditions for the proposed busy mindset effect.

Keywords: busyness, time, indulgence, self-control, self-view

The word "busy" has become one of the key descriptors of modern-day consumers, with an increasing number of consumers reportedly feeling busier than ever (Adam 2013; Darrah, Freeman and English-Lueck 2007; Schulte 2014). Accordingly, in recent times, an increasing number of brand advertisements empathize with consumers' busy lifestyles (Gross 2004; Gross and Sheth 1989). Apple's popular Siri advertisement featuring Martin Scorsese focuses on the busy day of the celebrated director. Advertisements for Dunkin Donuts position it as the real food for a "busy lifestyle." Despite the increasing number of marketing appeals referring to consumers' busy lifestyles and widespread portrayals of a busy life in the popular media, however, we know little about how a subjective perception of self as busy, induced as a result of an exposure to busyness-related cues in media, impacts consumer decision-making. The current research fills this gap by examining how the mere *perception of self* as busy, which we refer to as a busy mindset, impacts consumers' decision-making. We examine this question in an important context of self-control dilemmas, which are characterized by a conflict between gratifying immediate hedonic impulses and the pursuit of delayed long-term benefits (Baumeister, Heatherton, and Tice 1994).

One stream of research that relates to the current research is that on time pressure, which explores the impact of a lack of time on choices. Research in this domain has shown that time pressure leads consumers to primarily rely on their affective system (Siemer and Reisenzein 1998),

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which can result in lapses of self-control (Cohen, Pham, and Andrade 2008). To the extent that being busy is related to a lack of time, research on time pressure would predict that activating a busy mindset could impair people's ability to exert self-control, leading consumers to give in to their immediate hedonic impulses. The current research, however, diverges from research on time pressure in an important way. Unlike past research on time pressure, the current research focuses on how merely perceiving the self as busy, without experiencing a lack of time, impacts people's behaviors. Specifically, while keeping the amount of time available constant, we examine how the perception of self as busy affects consumers' ability to exert self-control.

The current research explores the possibility that contrary to what research on time pressure would suggest, a busy mindset—that is, merely perceiving oneself as busy without being under time pressure—could increase people's ability to exercise self-control. Why might this be the case? Research in sociology suggests a positive association between perceptions of busyness and self-importance (Gershuny 2005, 2011; McGinnity and Russell 2007; Rutherford 2001), thus implying that a busy mindset is likely to bolster people's sense of self by enhancing their self-importance. Furthermore, research suggests that self-importance can positively impact self-control (Mischel, Shoda, and Peake 1988; Steele 1988; Tesser 1988). Based on the above, we propose that a busy mindset is likely to facilitate self-control behaviors by bolstering one's sense of self-importance.

Our findings make important theoretical and managerial contributions. First, to the best of our knowledge, this is the first research to examine the role of *subjective* busyness on self-control behaviors. While past work has shown that subjective busyness differs from objective time pressure (Gershuny 1992, 2000; Zuzanek, Becker, and Peters 1998), no work has hitherto examined how busyness as a subjective perception impacts consumer decision-making. Given that our consumption environment is abundant in cues that could impact our subjective perception of busyness, this is an important question to examine. Second, we contribute to research on health and well-being by showing that contrary to what is commonly assumed (Menzies 2009; Parker and DeCotiis 1983), a busy mindset could have a positive rather than a negative impact on consumer well-being; it can facilitate consumers' self-control behaviors. Finally, our work provides guidance to marketers by showing that appeals making busyness salient should be used for services and products that are not perceived as indulgent. Importantly, many current marketing initiatives (e.g., the Dunkin Donuts ad) run contrary to this guidance.

In the sections that follow, we first present our conceptual framework related to a busy mindset. We then present seven studies, including a field study, that examine our research question. We conclude with a discussion summarizing our results, and then present the theoretical and managerial implications of our work.

CONCEPTUAL BACKGROUND

In this section, we first draw upon relevant research on time pressure and research in sociology to distinguish time pressure from a busy mindset. We then lay out our proposition related to the impact of a busy mindset on self-control.

Time Pressure and Self-Control Behaviors

A large body of research on consumer decision-making has focused on how time pressure or an objective lack of time can impact consumer behaviors and decision-making (see Svenson and Maule 1993 for a review). Time pressure has been conceptualized as the state of being under the pressure to finish a task within a limited time period, typically insufficient to complete the task, which induces feelings of anxiety and stress (Maule and Hockey 1993; Maule, Hockey, and Bdzola 2000). Accordingly, past research has primarily manipulated time pressure by giving participants less than the required time to complete a task—for example, inducing time pressure by asking participants to finish a task in 30 seconds that has been pretested to take one minute, or giving participants a short deadline (see Svenson and Maule 1993 for a review). Prior research, thus, has viewed time as a resource and time pressure as a state of lacking processing resources to finish a task (Payne, Bettman, and Johnson 1993; Svenson and Maule 1993).

Given that a lack of processing resources can result in an increased reliance on the affective system, leading people to focus on gratifying their immediate hedonic impulses (Cohen et al. 2008; Loewenstein 1996), research on time pressure would suggest that consumers under time pressure are likely to give in to their impulses and exhibit lapses of self-control. To illustrate, when faced with a choice between a vice option that leads to immediate hedonic gratification but has negative long-term health consequences (e.g., a chocolate brownie) and a virtue option that has positive long-term health consequences but does not lead to immediate hedonic gratification (e.g., an apple), consumers under time pressure are likely to choose the vice option (chocolate brownie).

To the extent that a state of being busy is related to a lack of time, research on time pressure would predict that busyness should impair people's ability to exert self-control.

However, to fully understand whether a busy mindset—that is, merely perceiving the self as busy—would impact self-control behaviors just as time pressure would or lead to diverging effects, it is important to first conceptualize the busy mindset, and understand the conceptual differences between a busy mindset and time pressure.

Busy Mindset versus Time Pressure

Busy mindset, as examined in the current research, has three defining characteristics. First, drawing upon past research (Gershuny 2005), we propose that busyness is a subjective perception of having a lot to do or being occupied with tasks, which arises from individuals' subjective assessment of their activity patterns. Although the amount of time available to accomplish the list of tasks can impact assessments of how busy one is, subjective perceptions of busyness can vary across individuals and situations, independent of concerns for time pressure (Gershuny 1992, 2000). In sum, a busy mindset is a perception of having a lot to do, and does not necessitate a looming deadline or a long list of tasks to be completed under time pressure.

Second, while time pressure is characterized by a negative affective state (Maule and Hockey 1993), there is some evidence suggesting that perception of busyness is favored, as people consider busyness a privilege (Gershuny 2005) and a sign of a good life (Neff 2006). Thus, as long as the perception of busyness is not due to tasks one is forced to engage in or tasks one has to finish under time duress, a busy mindset is unlikely to lead to a negative affective state.

Finally, drawing upon research suggesting that the perception of busyness is positively related to work activities, but negatively related to leisure or social activities (Bellezza, Paharia, and Keinan 2017), we argue that for a busy mindset to be induced, activities an individual is occupied with should be primarily related to work, not leisure. Drawing upon past research (Iso-Ahola 1980; Neulinger 1974), we define work as those activities that are instrumental for achieving a livelihood, which includes not only activities one engages in for earning a livelihood in the present (e.g., a paid job) or in the future (e.g., course assignments), but also those activities one engages in for maintaining a livelihood (i.e., nonpaid work, such as daily chores).

In sum, we propose that people perceive themselves as busy when they simply feel they are occupied with work or have a lot of work to do, whereas time pressure is triggered by the feeling that they have insufficient time to complete the tasks at hand. To further confirm whether this distinction between the proposed busy mindset and time pressure is shared by the general population, we conducted a preliminary study. One hundred twenty participants (69 female, M_{age} = 36 years), recruited from Amazon Mechanical Turk (MTurk), were randomly assigned to one of two conditions (busy vs. time pressure). In the busy (time pressure) condition, participants were asked to think about what "I'm busy" ("I feel pressed for time") means. In both conditions, participants viewed six statements presented in a random order: 1) I am occupied, 2) I have a lot to do, 3) I am working hard, 4) I don't have enough time to finish everything, 5) I am worried about completing all the tasks, and 6) deadline is approaching. They then ranked these statements in the order of how well the statements reflect the meaning of "I'm busy" ("I feel pressed for time").

In line with our definition of a busy mindset, 86.67% of participants chose one of three statements—I am occupied, I have a lot to do, I am working hard—as the top statement that reflects the meaning of "I'm busy." On the other hand, 75% of participants chose one of the other three statements—I don't have enough time to finish everything, I am worried about completing all the tasks, deadline is approaching—as the top statement that reflects the meaning of "I feel pressed for time." As detailed in tables 1 and 2, this pattern remained the same even when we combined participants' top two choices (ranked 1 and 2) or top three choices (ranked 1, 2, and 3). Notably, 56.67% of participants chose "I am occupied" as the statement that reflects the meaning of "I'm busy" the best, whereas only 5% of participants chose the same statement as the one that reflects the meaning of "I feel pressed for time" the best. Similarly, 45% of participants chose "I don't have enough time to finish everything" as the statement that reflects the meaning of "I feel pressed for time" the best, whereas only 5% of participants chose the same statement as one that reflects the meaning of "I'm busy" the best.

As the aforementioned discussion suggests, while both time pressure and a busy mindset relate to the overall concept of busyness, a busy mindset and time pressure have important conceptual differences. The conceptual differences between the two constructs suggest that the predictions drawn from research on time pressure might not generalize to a busy mindset, especially when it is not accompanied by time pressure. Next, we turn to a body of research in sociology and self-view to make predictions on how a busy mindset impacts self-control behaviors.

Busy Mindset, Self-Importance, and Self-Control Behaviors

Research in sociology has shown that perceptions of busyness are more likely to be characteristic of the privileged and the skilled than the underprivileged and the unskilled (Gershuny 2005, 2009). In general, skilled and capable individuals—that is, "important" people in our society—tend to be busy (Gershuny 2009, 2011). This is not surprising, as *ceteris paribus*, individuals with high levels of human capital have a higher incentive to keep themselves busy than those with low levels of human capital (Becker 1965; Linder 1970). People who are regarded as important in our society get a higher return for the investment of their time, and their work tends to be more meaningful and central to their identity. Moreover, important people are generally sought after, and in demand, thus making them busier. This has created a social phenomenon where being busy has become a characterization of

TABLE 1

RANK PERCENTAGE FOR "I'M BUSY"

	Rank 1	Rank 1, 2	Rank 1, 2, 3
I am occupied	56.67%	68.34%	81.66%
I have a lot to do	26.67%	73.34%	83.34%
I am working hard	3.33%	26.66%	69.99%
I don't have enough time to finish everything	5.00%	15.00%	31.68%
I am worried about completing all the tasks	5.00%	10.00%	20.01%
Deadline is approaching	3.33%	6.66%	13.32%

NOTE.—Rank 1 column adds up to 100%; Rank 1, 2 column adds up to 200%; and Rank 1, 2, 3 column adds up to 300%.

TABLE 2

RANK PERCENTAGE FOR "I FEEL PRESSED FOR TIME"

	Rank 1	Rank 1, 2	Rank 1, 2, 3
I am occupied	5.00%	6.66%	15.00%
I have a lot to do	20.00%	40.00%	60.00%
I am working hard	0.00%	1.66%	5.01%
I don't have enough time to finish everything	45.00%	68.34%	83.34%
I am worried about completing all the tasks	16.67%	45.00%	71.67%
Deadline is approaching	13.33%	38.34%	65.01%

NOTE.—Rank 1 column adds up to 100%; Rank 1, 2 column adds up to 200%; and Rank 1, 2, 3 column adds up to 300%.

important people. Some research (Gershuny 2000, 2005; McGinnity and Russell 2007; Rutherford 2001) further suggests that this relationship between being important and busyness could work in the reverse direction as well, such that busyness could serve as a "badge of honor" in society. Providing support for this proposition, recent research (Bellezza et al. 2017) has shown that people indeed perceive busy people as people of high status.

Drawing upon research suggesting a positive association between busyness and perceived importance when evaluating others, we propose that activating a busy mindset could signal to the self that one is an individual of high value—that is, an important person. Simply stated, we propose that activating a busy mindset can enhance an individual's sense of self-importance.

Self-importance, as we refer to in this research, is defined as one's own evaluation of the self in the domain of how important one is. In this regard, self-importance is one specific dimension of global self-view, a multidimensional and hierarchical construct that is shaped by specific self-evaluations on various dimensions (Marsh and Shavelson 1985; Shavelson and Bolus 1982; Shavelson, Hubner, and Stanton 1976). For instance, inducing feelings of being important, generous, or attractive could all enhance an individual's global self-view. However, we argue that a busy mindset would impact only those dimensions of the self that are related to importance, but not those that are unrelated to self-importance, a proposition supported by the findings of the pilot study (see web appendix for details). Given that we hypothesize the effect of a busy mindset to be specific to the dimension of self-importance rather than an effect generalizable to *all* dimensions, the current research focuses only on the self-importance dimension.

While there is no work specifically linking self-importance to self-control behaviors, some research on self-view suggests the possibility that a bolstered sense of self-importance may facilitate self-control behaviors. Research in this domain, for example, shows that an enhanced global self-view, or a general sense that one is worthy (e.g., self-esteem; James 1890; Pyszczynski et al. 2004), capable (i.e., self-efficacy; Bandura 1989), and adequate (i.e., affirmed self; Cohen and Sherman 2014) can facilitate choosing long-term benefits for the self over immediate hedonic temptations. Furthermore, a positive self-view is associated with one's capacity to delay immediate gratification and wait for larger rewards in the future (Mischel, Shoda, and Peake 1988). Other research on self-view suggests that people are motivated to make choices that help them maintain a positive self-view (Steele 1988; Tesser 1988). Since the ability to practice self-control can send a self-signal regarding the kind of person one is (Prelec and Bodner 2003), individuals with enhanced self-importance are likely to make choices that maintain their enhanced self-view by not yielding to an immediate temptation. In sum, past research on self-view suggests that a bolstered sense of self-importance should positively impact self-control decisions.

Drawing upon a synthesis of the perspectives noted above, we propose that a busy mindset, when activated without time pressure, enhances self-importance, which in turn facilitates self-control behaviors. In the section that follows, we discuss an important boundary condition for our proposed busy mindset effect.

Does a Busy Mindset Influence Everyone's Self-Importance Equally?

Past research on self-view has shown that it is impacted the most by the dimension of the self that one regards as central to themselves (Crocker and Park 2012; Crocker and Wolfe 2001). For example, prosocial behavior will boost self-view for individuals who regard being generous as central to who they are, but not for those who regard being generous as peripheral to who they are. This suggests that perceiving oneself as busy should increase self-importance for those who regard being busy as central to what makes life valuable, meaningful, and important, but less for those who regard being busy as unimportant.

One construct that captures the contingency of self-importance on busyness is work ethic, which is based on the Weberian notion of the Protestant work ethic (Weber

1904), and has been adopted by psychologists to denote a belief system that reflects the motivation to work hard and avoid idleness (Cassidy and Lynn 1989; Furnham 1984; McClelland 1967). Work ethic is a stable disposition, which captures the desire to keep oneself occupied without wasting time idly (Mirels and Garrett 1971).

Although the Protestant work ethic is a foundational belief widely shared among Americans and deeply ingrained in American culture (Adams 1931; Furnham 1984), some share this belief less than others. Important to our theorizing, research has shown that differences in an individual's work ethic, as measured by the work ethic scale, are related to how one's self-view is impacted by one's use of time (Blood 1969; Merrens and Garret 1975). Specifically, those who have a high work ethic view work as worthy and derive more importance, meaning, and satisfaction from keeping themselves busy as compared with those who have a low work ethic—that is, those who tend to view work as an activity one is forced to engage in (Blood 1969; Merrens and Garret 1975). Therefore, if a busy mindset enhances self-importance, this should be true for those whose self-importance is more dependent on keeping themselves busy (i.e., individuals with a high work ethic), but not for those whose self-importance is less dependent on keeping themselves busy (i.e., individuals with a low work ethic). In sum, we hypothesize that an individual difference related to work ethic is likely to moderate the relationship between a busy mindset and self-control behaviors, such that the effect of a busy mindset on self-control behaviors should be attenuated for those low on work ethic.

OVERVIEW OF STUDIES

Seven studies, including a field study, provide support for the main hypothesis, which suggests that a busy mindset is likely to increase self-control by enhancing one's sense of self-importance. First, three studies (studies 1, 2A, and 2B) test the main hypothesis in a food consumption context and demonstrate that activating a busy mindset reduces indulgent food consumption. Study 1 examines our hypothesis in a field setting, while the next two studies provide managerially important implications by 1) manipulating busy mindset using a commonly used marketing tool, print advertising (study 2A), and 2) demonstrating that our findings can be maneuvered by varying product framing (study 2B). Study 3 explores the busy mindset construct more thoroughly by examining what induces a busy mindset and when it is accompanied by negative affect. Study 4 demonstrates an important boundary condition for the busy mindset effect by examining the moderating role of individual difference related to work ethic (Weber 1904). The final two studies provide evidence for the underlying mechanism by 1) examining the moderating role of self-importance (study 5), and 2) measuring self-importance induced in response to a busy mindset (study 6).

In order to provide convergence for the effect, we employed various busy mindset manipulations as well as self-control behaviors. In studies 1, 2A, and 4, we used a subtle manipulation of a busy mindset, including exposing people to a visual sign (study 1), exposing them to a print advertisement (study 2A), and activating a busy mindset in a preceding unrelated task (study 4). In all other studies (studies 2B, 3, 5, and 6), we used a more direct manipulation of a busy mindset—a writing task. Moreover, since self-control dilemmas manifest in various domains of life (Baumeister 2002), in the current research, we test the generalizability of the proposed busy mindset effect across different important self-control decisions one makes in daily life. As alluded to earlier, the common factor underlying the varied self-control decisions used in the current research is that all of these decisions are characterized by a conflict between giving in to immediate hedonic impulses and the pursuit of delayed long-term benefits. Specifically, across studies, we measure self-control in food consumption (studies 1, 2A, 2B, and 5; Mukhopadhyay, Sengupta and Ramanathan 2008), the academic domain (study 3; May and Irmak 2014), and the financial domain (studies 4 and 6; Laran 2009).

STUDY 1: FOOD DECISION AT A COLLEGE DINING HALL

Study 1 tests the main hypothesis in a natural context by conducting a field study. We conducted a field study at the main dining hall of a large West Coast university during 10 days spread over a time span of three weeks during summer. We conducted this study on Tuesday, Wednesday, Thursday, and Friday each week; the customer traffic on the remaining three days of the week was significantly lower, according to the dining hall manager. Building on past research showing that environmental cues, such as visual signs, can activate in consumers' minds specific concepts about the self (Forehand and Deshpandé 2001), we manipulated the mindset using visual signs (posters and standing menus) in the dining hall. The study followed a single factorial (busy vs. summer vs. no-sign) between-subjects design, and days were randomly assigned to a condition (four days to a no-sign condition and three days each to the other two conditions). The no-sign condition served as the baseline, while the summer condition was included to control for a mere sign effect. We predicted that when busy signs were posted, students would eat less unhealthily as compared to when the summer signs were posted or when no signs were posted.

We created two different types of visual signs, which were professionally produced to blend well with the

existing signs in the dining hall. The busy sign read "Good to go, for busy ABC (name of the school) students!" whereas the summer sign read, "Good to go, for summer ABC students!" One large poster was placed behind the daily menu display beside the main entrance. Five smaller visual signs, which resembled a standing menu, were placed at a highly visible spot on every station: salad station, grill station, pizza station, deli station, and special station. All visual signs were posted in the morning when the dining hall opened and taken down after it was closed.

Our data comes from the daily sales report from the dining hall. This data included the names of all the items sold on each day and the number of each item sold. An average number of 571 items (range: 401 to 829), from a total of 84 unique items, were sold each day. Building on past research (Carels, Harper, and Konrad 2006; Cornil and Chandon 2013), which has shown that the perception of food as healthy versus unhealthy is most strongly determined by the degree of fat content in a food, we looked at how fatty the food consumption was on each day to assess unhealthy eating. We coded calories and fat calories for each item using the WebMD calorie counter, and in consultation with the manager from the dining hall.[1] Specifically, we averaged the number of calories consumed per day and the amount of fat calories consumed per day. Drawing upon past research (Cornil and Chandon 2013; study 2), fat calories consumed at a daily level served as our main dependent variable. If a busy mindset facilitates self-control behavior, this should be reflected by healthier eating—that is, a decrease in the fat calories consumed on the day when busy signs were displayed.

Results

Fat Calories. We first examined whether there is a significant week effect or a day effect on our main dependent variable. We found no significant week effect ($F < 1$, $p = .798$), but there was a significant day effect ($F(3, 6) = 13.61$, $p = .004$, $\eta_p^2 = .87$). Therefore, we included three dummy variables to control for day effect in our main analyses. In addition, we included total calories, which was a strong predictor of fat calories ($F(1, 8) = 412.06$, $p < .001$, $\eta_p^2 = .98$), as a covariate to control for the difference in the amount of consumption. The focal variable of interest is the total amount of fat consumed, rather than overall consumption. A one-way General Linear Model (GLM) performed on fat calories including day type and total calories as covariates revealed a significant effect of day type ($F(3, 3) = 12.26$, $p = .034$, $\eta_p^2 = .92$), total calories ($F(1, 3) = 282.77$, $p < .001$, $\eta_p^2 = .99$), as well as the mindset condition ($F(2, 3) = 22.69$, $p = .015$, $\eta_p^2 = .94$).[2] Planned contrast analyses revealed that there was a significant difference between the busy ($M = 48730.29$) and the no-sign ($M = 51740.80$; $F(1, 3) = 44.75$, $p = .007$, $\eta_p^2 = .94$) conditions, and a marginally significant difference between the busy and the summer ($M = 50396.07$; $F(1, 3) = 6.84$, $p = .08$, $\eta_p^2 = .70$) conditions.[3] Moreover, there was a marginal difference between the summer and the control ($F(1, 3) = 5.56$, $p = .10$, $\eta_p^2 = .65$) conditions.

Number of Unhealthy Items Sold. In order to examine the robustness of our findings, we conducted additional analyses examining the number of unhealthy food items sold in each condition. Two independent coders, blind to the condition and hypotheses, categorized all the food items sold at the dining hall as "unhealthy," "neutral," or "healthy." The two coders agreed on 84.06% of the items, and the rest were resolved based on discussions between the coders. In the end, 22.62% of food items were categorized as healthy (e.g., veggie wrap, salad), 35.71% as unhealthy (e.g., double cheeseburger, pepperoni pizza), and the rest as neutral (e.g., chicken quesadilla, turkey burger). The number of unhealthy items sold at a day level served as our dependent variable.

We first examined whether there is a significant week, or a day effect. We found neither a significant day effect nor a significant week effect ($ps > .3$). A one-way GLM revealed a marginally significant difference in the number of unhealthy items sold across the three conditions ($F(2, 7) = 3.86$, $p = .074$, $\eta_p^2 = .52$). Importantly, the number of unhealthy items sold in the busy condition ($M = 120.67$, SD = 21.08) was significantly lower, compared with the number of unhealthy items sold in the no-sign condition ($M = 166.83$, SD = 23.35; $F(1, 7) = 6.08$, $p = .043$, $\eta_p^2 = .47$) as well as the number of unhealthy items sold in the summer condition ($M = 168.66$, SD = 29.02; $F(1, 7) = 5.75$, $p = .048$, $\eta_p^2 = .45$). There was no significant difference in the number of healthy items sold across the three conditions ($F < 1$), although directionally, the number of healthy items sold was higher in both the busy ($M = 158.00$, SD = 8.72) and the summer ($M = 164.67$, SD = 17.24) conditions, compared with the no-sign condition ($M = 144.25$, SD = 26.00).

Discussion

The findings of study 1 provide support for the main busy mindset hypothesis in a natural setting, thus providing a strong managerial contribution. Specifically, we show

1 We excluded four items that could not be appropriately identified due to data limitation. For example, "deli daily special" is linked to four different sandwiches, but which one was "deli daily special" on a given day was not specified.

2 Of note, large partial eta square values obtained in this study are likely driven by the design of this study and the nature of data. This study was analyzed at the day level, and each mindset condition included only three or four days. Therefore, DF error was only 3 and SS error (960820) was only 6.61% of SS mindset (14533151.78).

3 The means for fat calories are marginal means, controlling for the covariates.

that when busyness was made salient via visual signs, people chose to consume less unhealthy food and fewer fat calories. Next, two studies provide converging evidence for the effect by testing the main hypothesis in a more controlled setting, using different busy mindset manipulations.

STUDY 2A: CARL'S JR. VERSUS SUBWAY

Study 2A tests the basic effect in a more controlled setting, using one of the most commonly used marketing communication tools: brand advertisements. We manipulated busy mindset by varying the tagline of a print advertisement for a fast food restaurant, such that participants were exposed to either a neutral tagline or a tagline that made busyness salient. Moreover, to provide stronger support for our hypothesis, we created advertisements for two different fast food brands; one was perceived as indulgent and the other was *not* perceived as indulgent. Our prediction was that being exposed to the tagline, which makes busyness salient, should reduce the desire for the advertised food, but only when it is perceived as indulgent, and thus conflicts with the higher-order goal of health. However, the nature of the tagline should not impact one's desire for the food, when the advertised food is not perceived as indulgent and thus does not explicitly conflict with the higher-order goal of health.

Method

Two hundred one students (113 female, $M_{age} = 21$ years) at a large West Coast university participated in the study in exchange for a free gift. The study employed a 2 (tagline: busy vs. control) $\times$ 2 (brand: indulgent vs. nonindulgent) between-subjects design. Participants were randomly assigned to the four conditions.

The study was introduced as a print advertisement evaluation survey. Participants viewed and evaluated one of four print advertisements created for either Carl's Jr. (indulgent) or Subway (nonindulgent), which were chosen on the basis of a pretest (see web appendix). The print advertisement for Carl's Jr. featured "X-tra bacon double-double," whereas the print advertisement for Subway featured "turkey breast sandwich" (both were hypothetical menu options). Other aspects of the print advertisement, such as color, placement of images, and fonts, were closely controlled for (see appendix). For both the fast food brands, we created two different versions of the print advertisements by modifying only the tagline of the advertisements: The busy tagline read, "It's good to go, for busy college students," whereas the control tagline read, "It's good to go, for college students." An independent study confirmed that this manipulation successfully increased the perception of busyness without increasing negative affect (see web appendix). Participants indicated their likelihood of getting the food featured on the print advertisement at that moment, on a seven-point scale (1 = not at all likely, 7 = very likely). Finally, they indicated their gender and age, were debriefed, and thanked.

Results

A two-way GLM revealed a significant interaction between the tagline and the brand ($F(1, 197) = 4.11$, $p = .044$, $\eta_p^2 = .02$) factors. As predicted, when the advertised food was perceived as indulgent (Carl's Jr.), a busy tagline ($M = 3.45$, SD = 2.07) reduced participants' likelihood of getting the advertised food, compared with the control tagline ($M = 4.24$, SD = 1.79; $F(1, 197) = 4.77$, $p = .03$, $d = .41$). However, when the advertised food was not perceived as indulgent (Subway), participants in the busy tagline condition ($M = 4.54$, SD = 1.69) were no different from those in the control tagline condition ($M = 4.29$, SD = 1.69) in how much they desired the advertised food ($F < 1$; figure 1).

Discussion

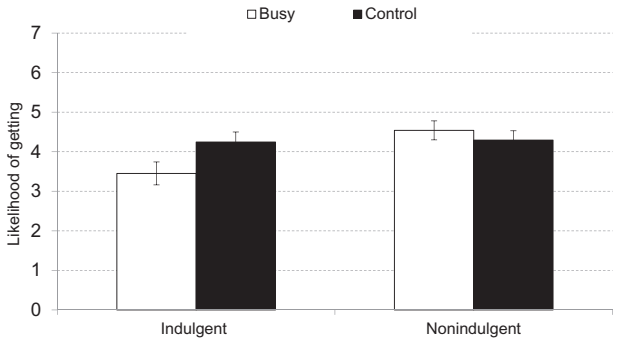
The results from study 2A replicate the basic effect that a busy mindset facilitates self-control behaviors in food decisions. To elaborate, findings of this study show that the use of a busy tagline in a print advertisement, compared with the use of a control tagline, led to a decreased likelihood of getting the advertised food when it was perceived as indulgent. Importantly, this effect was not observed for the nonindulgent brand. One limitation of study 2A is that the food featured on the ad differed between the indulgent brand and the nonindulgent brand. Although our pretest results show no difference between the two brands in terms of liking or visiting frequency, one may be concerned about other factors that may vary between the food featured by the indulgent brand versus the nonindulgent brand. The next study addresses this concern by holding the food type constant across conditions and varying the framing of the same food as indulgent or healthy.

STUDY 2B: FRAMING AS INDULGENT VERSUS HEALTHY

Study 2B aimed to test the robustness of our findings by varying the framing of the same food as indulgent or healthy, while addressing two managerially relevant questions. Our findings from study 2A suggest that activating a busy mindset can backfire for brands perceived as indulgent. In this study, we ask whether this busy mindset effect found in the previous studies could be maneuvered by merely framing a product as indulgent or healthy. In addition, we examine the amount people choose to consume, rather than the choice between options, because the decision of how much to consume contributes to critical social issues such as overeating, obesity, and food waste

FIGURE 1

LIKELIHOOD OF GETTING INDULGENT VERSUS NONINDULGENT FOOD AS A FUNCTION OF MINDSET—STUDY 2A



NOTE.—ERROR BARS ARE STANDARD ERRORS.

(Hall et al. 2009; Nestle 2003). We predicted that when a busy mindset is induced, people should choose to consume less food when the food is framed as indulgent but not when it is framed as healthy.

Method

One hundred seventy participants (86 female), recruited from a large West Coast university, participated in this study in exchange for a free snack. The study followed a 2 (mindset: busy vs. control) × 2 (frame: indulgent vs. healthy) between-subjects design. Participants were randomly assigned across four conditions.

We manipulated busy mindset using a writing task, which was presented as a lifestyle survey. In the control condition, participants were asked to think about and then write down three things/activities they do on their typical day on campus. In the busy condition, participants were told that a recent survey revealed that students of this university are busier than those of other universities within the city. Participants in the busy condition were then asked to think about and write down three things/activities that keep them busy. Subsequently, all participants were led to a table where a jar of cookies was placed. In order to manipulate framing of the cookies, we chose an ambiguous-looking cookie that could be viewed as either a sugar cookie or an oatmeal cookie. Experimenters presented the cookies as either "delicious sugar cookies" (indulgent frame) or "healthy oatmeal cookies" (healthy frame). Participants were asked to take as many as they wanted. Additionally, we varied the visual sign, which was posted behind the cookie jar. In the indulgent frame condition, the sign read, "take some delicious sugar cookies with you!" whereas in the healthy frame condition, the sign read, "take some healthy oatmeal cookies with you!" Experimenters surreptitiously recorded the number of cookies taken by each participant. Number of cookies chosen to consume served as our main dependent variable.

Results

A two-way GLM revealed a significant interaction between the mindset and the frame ($F(1, 166) = 11.74$, $p < .001$, $\eta_p^2 = .07$) factors. As expected, when the cookie was framed as indulgent, participants in the busy mindset condition ($M = 1.43$, SD = 1.50) took significantly fewer cookies than those in the control condition ($M = 2.45$, SD = 1.85; $F(1, 166) = 6.54$, $p = .011$, $d = .61$; figure 2). Unexpectedly, we also observed the reverse effect; when the cookie was framed as healthy, participants in the busy mindset condition ($M = 2.40$, SD = 2.29) took significantly more cookies than those in the control condition ($M = 1.48$, SD = 1.71; $F(1, 166) = 5.24$, $p = .023$, $d = .46$).

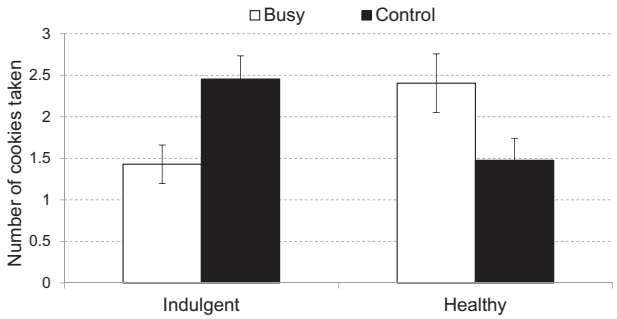
Discussion

The findings of the current study show that a busy mindset led participants to take significantly fewer cookies to consume when the cookies were framed as indulgent, but not when they were framed as healthy. Interestingly, when the cookies were framed as healthy, those in the busy mindset condition chose to consume more cookies as compared with those in the control condition. Notably, this effect was not observed in study 2A for the nonindulgent brand, Subway. We suspect this difference may be driven by the use of explicit "healthy" framing in the current study, which was not used in study 2A. Specifically, oatmeal is recommended for health, and in the current study, we explicitly referred to the cookie as "healthy" in the healthy framing conditions. It is therefore possible that making the healthy aspect salient led participants to perceive that the food item is consistent with the higher-order goal of health, thus leading those in the busy mindset condition to take more oatmeal cookies. In sum, this result suggests a possibility that busy appeals could be helpful for products and services when they are explicitly framed as healthy. However, future research is needed to examine this effect further.

Three studies (studies 1, 2A, and 2B) demonstrated that activating a busy mindset reduced indulgence in food consumption context. One may argue that making busyness salient could result in stress, thereby impacting desire for an indulgent food. However, a stress-based account is unlikely to explain our results for the following reasons. First, research on the impact of stress on food consumption is mixed, with some research suggesting it increases food consumption (Adam and Epel 2007; Sinha and Jastreboff 2013), and other research suggesting it decreases food consumption (Bogdan and Pizzagalli 2006; Takahashi 2004).

FIGURE 2

NUMBER OF INDULGENT VERSUS HEALTHY FRAMED COOKIES TAKEN AS A FUNCTION OF MINDSET—STUDY 2B



NOTE.—ERROR BARS ARE STANDARD ERRORS.

It is therefore difficult to make clear predictions based on research on stress. Second, research suggesting that stress reduces food consumption predicts a general dampening of appetite due to stress (Bogdan and Pizzagalli 2006; Takahashi 2004). Thus, a stress-based account would have predicted a significant main effect of a busy mindset on the desire for food, irrespective of whether the brand of food is perceived as indulgent or not—a prediction inconsistent with the findings of studies 1 through 2B. We further address this issue in the following studies by employing dependent variables not related to food consumption (studies 3, 4, and 6) as well as by providing direct support for our proposed underlying mechanism related to self-importance (studies 5 and 6).

STUDY 3: BUSY MINDSET CONSTRUCT

This study had three primary objectives. First, drawing upon past literature, which suggests that state of busyness is primarily associated with work-related activities (Bellezza et al. 2017), we examine the proposition that a busy mindset would be induced only when the perception of a lot to do is primarily related to work, but not when it is primarily related to social activities. A second objective of this study is to examine the impact of forced busyness—that is, when the perception of a lot to do relates to work one is *forced* to do (i.e., forced labor)—on self-control. We predicted that, given that forced labor is associated with work-related activities, perception of busyness resulting from forced labor should also induce a busy mindset. However, forced labor is a state of being under duress, akin to the state of being under time pressure, and thus should also lead to negative affect. Accordingly, we predicted that a busy mindset associated with forced labor should not increase self-control.

A final objective of this study was to examine the busy mindset effect in a context not related to food consumption. Specifically, we examine a common self-control dilemma for students, which involves a conflict between the higher-order goal of academic excellence and the desire for immediate rest and comfort. We predicted that activating a busy mindset would increase the preference for academic goal over immediate rest.

Method

Two hundred sixty-seven students (158 female, M_{age} = 20 years; two missing demographic responses) at a large Asian university completed the study in exchange for course credit. The study followed a single-factorial (mindset: busy vs. busy-forced labor vs. busy-social vs. control) between-subjects design. Participants were randomly assigned to the four conditions.

For mindset manipulation, we adapted the writing task used in study 2B. Specifically, participants in the busy (control) condition were asked to write three activities that keep them busy (they do on campus). Those in the busy-forced labor condition were asked to think about and write down three activities they are forced to do that keep them busy. In the busy-social condition, participants were asked to think about and write down three activities that keep their social lives busy. Thereafter, in another purportedly unrelated survey, participants indicated how busy they are (1 = not at all busy, 7 = very busy) and their affective state on three items presented in a random order: happy, bad, and stressed (1 = not at all, 7 = very much). Reverse-coded happy was averaged with bad and stressed to form a composite score for negative affective state (Cronbach's α = .66).

Subsequent to the mindset manipulation, all participants engaged in another survey, purportedly designed to gauge interest in a new option the course instructor was considering. Participants were first informed that getting good grades in college is linked to various positive long-term effects in life. They were then informed that the instructor is considering giving them an option of either earning extra credit or taking a free day (adapted from May and Irmak 2014). Participants indicated their preference for extra credit over a free day on two items: 1) If offered such an opportunity, how likely would you be to do the extra credit surveys? (1 = not at all likely, 7= very likely), and 2) If offered such an opportunity, would you more strongly prefer taking the free day or completing surveys for extra credit? (1= strongly prefer free day, 7 = strongly prefer extra credit). These two items were averaged (Pearson r = .72) to form a composite score for preference for extra credit, which served as our main dependent variable. Finally, participants indicated their gender and age, and were debriefed and thanked.

Results

Manipulation Check. A one-way GLM revealed a significant effect of the mindset manipulation on busy perception ($F(3, 263) = 3.58$, $p = .015$, $\eta^2_p = .039$). As predicted, compared with the control condition ($M = 4.31$, SD = 1.70), perceptions of busyness were significantly higher in the busy condition ($M = 4.88$, SD = 1.47; $F(1, 263) = 4.56$, $p = .034$, $d = .36$), as well as in the busy-forced labor condition ($M = 5.06$, SD = 1.41; $F(1, 263) = 8.16$, $p = .005$, $d = .48$). Finally, there was no difference in the busy perception between control and busy-social ($M = 4.46$, SD = 1.48; $F < 1$) conditions, thus indicating that for the busy mindset to be induced, tasks one is engaged with should primarily be associated with work-related activities.

Negative Affective State. A one-way GLM revealed a significant effect of the mindset manipulation on negative affective state ($F(3, 263) = 7.19$, $p < .001$, $\eta^2_p = .076$). Compared with participants in the control condition ($M = 3.59$, SD = .95), those in the busy-forced labor condition experienced significantly higher negative affect ($M = 4.27$, SD = 1.15; $F(1, 263) = 13.97$, $p < .001$, $d = .65$). However, negative affect for participants in the control condition (M = 3.59, SD = .95) did not differ from those in the busy condition ($M = 3.76$, SD = 1.13) or for those in the busy-social condition ($M = 3.51$, SD = .97; both Fs < 1).

Preference for Extra Credit. A one-way GLM revealed a significant effect of the mindset manipulation on preference for extra credit ($F(3, 263) = 5.17$, $p = .002$, $\eta^2_p = .056$). Compared with participants in the control condition ($M = 5.06$, SD = 1.52), those in the busy condition ($M = 5.69$, SD = 1.26) showed significantly higher preference for the extra credit option ($F(1, 263) = 4.82$, $p = .029$, $d = .45$). Those in the busy-forced labor condition ($M = 4.62$, SD = 1.80) showed directionally lower preference for the extra credit, compared with those in the control condition; however, this difference did not reach significance ($F(1, 263) = 2.40$, $p = .123$, $d = .26$). Finally, there was no difference in preference for the extra credit option between those in the control condition and those in the busy-social condition ($M = 4.87$, SD = 1.87; $F < 1$).

Discussion

Study 3 provides convergent evidence for the effect by demonstrating that a busy mindset facilitates self-control in an academic setting. Specifically, the results show that activating a busy mindset increases preference for an extra credit (i.e., more work) over free day (i.e., immediate rest).

Findings of this study further show that when participants were asked to focus only on social-life-related activities, it did not induce a busy mindset and consequently the increased self-control behavior was not observed. This finding is consistent with the proposition that in order for a busy mindset to be induced, activities one perceives to be occupied with should *primarily* be work-related. A content analysis of activities listed by participants revealed that when participants were asked to think about what they are busy with (i.e., without any specific prompt to think about work-related activities), they naturally thought about work-related activities, providing further support for the proposition that busyness perception is mainly associated with work (see web appendix for details). In addition, this study shows that while thinking of activities one is forced to engage in induced a busy mindset, it also increased negative affect. Moreover, for participants in the busy-forced labor condition, the increased self-control behavior was not observed. In contrast, those in the busy condition did not experience higher negative affect, compared with those in the control condition, and demonstrated increased self-control in a subsequent task. These findings further rule out a stress-related account.

Given that busy-social and busy-forced labor conditions reveal results inconsistent with our conceptualization of a busy mindset construct, the following studies drop these two conditions, and provide support for the underlying mechanism by focusing on two primary conditions (busy and control).

STUDY 4: MODERATING ROLE OF WORK ETHIC

This study sought to demonstrate an important boundary condition for our effect by testing the moderating role of work ethic. As discussed before, work ethic is a stable disposition, which captures the desire to keep oneself occupied without wasting time (Mirels and Garrett 1971). Importantly, differences in an individual's work ethic, as measured by the work ethic scale (Cassidy and Lynn 1989), have been shown to capture the difference related to the degree to which one derives meaning and importance in life from one's use of time (Blood 1969; Merrens and Garret 1975). Therefore, we propose that if enhanced self-importance underlies the positive effect of a busy mindset on facilitating self-control behaviors, this should be true for individuals who see being busy as a signal of self-importance—that is, those who are high on work ethic. However, this effect should be attenuated for individuals who do not see being busy as a signal of self-importance—that is, those low on work ethic.

We test the aforementioned hypotheses in the context of a choice conflict between smaller, sooner reward and larger, later reward, measured by a classic delayed discounting task (Ainslie 1975; Thaler 1991). Since receiving a reward immediately is tempting, but waiting yields a better outcome in the end, enhanced self-control would be

manifested in a greater likelihood to wait (i.e., a decreased discounting rate). We predicted that work ethic would moderate the relationship between a busy mindset and ability to exert self-control, such that the effect of a busy mindset on decreased discounting rate will be attenuated for those low on the work ethic scale. Finally, this study employed yet another busy mindset manipulation, a sentence scrambling task, in order to provide converging evidence for the busy mindset effect.

Method

We opened the study, which remained active until 9 p.m. EST of the same day, for 120 US-based participants on MTurk. One hundred six US-based participants completed the study. One participant whose discounting rate could not be computed due to a zero value in the denominator was excluded prior to any analyses, leaving us with a total sample of 105 participants (49 female, M_{age} = 37 years). The study employed a single-factorial (mindset: busy vs. control) between-subjects design, with work ethic as the measured variable. Participants were randomly assigned to the two conditions.

We manipulated mindset using a scrambled sentence task, which required participants to form a complete sentence using four out of the five given words (adapted from Srull and Wyer 1979). There were 25 scrambled sentences to complete in total. In the busy mindset condition, 15 out of the 25 sentences were related to busyness (e.g., "I am busy today," "I keep myself occupied"), whereas in the control condition, all 25 sentences were neutral (e.g., "The pen is hers," "The building is tall"). An independent study confirmed that this manipulation successfully induced a busy mindset (see web appendix).

Subsequent to the scrambled sentence task, we measured participants' affective state on eight seven-point scale items (1 = good, 7 = bad; 1 = happy, 7 = sad; 1 = calm, 7 = agitated; 1 = at ease, 7 = worked up; 1 = peaceful, 7 = stressed; 1 = anxious, 7 = relaxed; 1 = exerted, 7 = not exerted; 1 = not aroused, 7 = aroused). The presentation order was counterbalanced. A factor analysis on the eight affective state measures yielded two distinct factors with good-bad, happy-sad, calm-agitated, ease-worked up, peaceful-stressed loading on to one factor (negative affect; Cronbach's α = .90) and not aroused-aroused, exerted-not exerted (reverse-coded), anxious-relaxed (reverse-coded) loading on to a second factor (arousal; Cronbach's α = .59). A one-way ANOVA revealed no difference in either the negative affect ($F(1, 103) = .10$, $p = .748$) or the arousal level ($F(1, 103) = .17$, $p = .683$) between the busy mindset and the control conditions. Thus, mood and arousal will not be discussed further.

Subsequent to the mindset manipulation, all participants engaged in a delayed discounting task. Specifically, all participants were asked to imagine that they had won $100 in a cash sweepstake. They were then told that they had two options in terms of how to redeem the prize: they could have the money today or get more money by waiting for some time. They were asked to indicate the amount of money they would require in one month (three months, six months, and one year) from now to make the option of waiting as attractive as receiving $100 today. Drawing upon prior research (Myerson, Green, and Warusawitharana 2001), we consider the area under the empirical discounting function as a measure of discounting rate. The area under the curve can vary between 0.0 (steepest possible discounting) and 1.0 (no discounting). We predicted that a busy mindset should lead to a reduced desire for immediate gratification (i.e., less discounting), which should be reflected by a larger size of the area under the empirical discounting function. At the end, participants responded to the work ethic scale (Cassidy and Lynn 1989), which includes seven items (e.g., "I easily get bored if I don't have something to do," "I like to work hard"; 1 = strongly disagree, 7 = strongly agree), followed by a few demographic questions including age and gender. Thereafter, participants were debriefed and thanked.

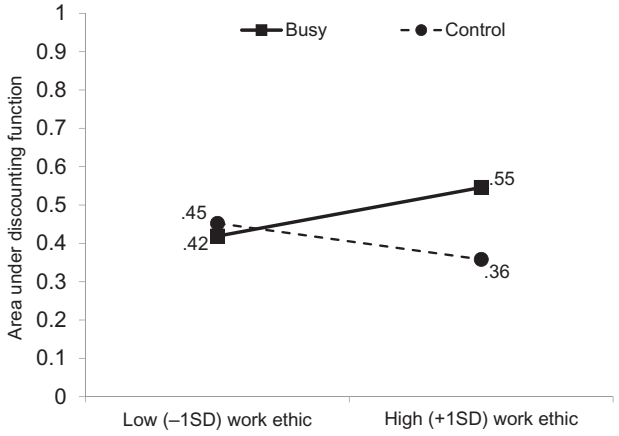
Results

Discounting rate was significantly skewed (skewness = .61, Shapiro-Wilk W = .96, $p = .002$); thus, before running the analyses, we square-root-transformed the discounting rate (Chandon, Morwitz, and Reinartz 2004; McGraw, Warren, and Kan 2014). A mixed GLM performed on the square-root-transformed discounting rate including the mindset factor as a categorical variable and work ethic as a continuous variable revealed a marginally significant effect of mindset ($F(1, 101) = 3.20$, $p = .077$, $\eta_p^2 = .03$). Specifically, participants in the busy mindset condition (M = .47, SD = .24) showed a decreased discounting rate compared to those in the control condition (M = .40, SD = .22; means and standard deviations are untransformed). More importantly, the interaction term between the mindset and work ethic was significant ($F(1, 101) = 5.91$, p = .017, $\eta_p^2 = .06$).

In addition, a spotlight analysis (Spiller et al. 2013) performed at one SD above the mean of work ethic revealed a significant difference between the levels of the mindset factor, such that participants in the busy mindset condition showed a decreased discounting rate, compared with those in the control condition (B = .14, $t(101) = 2.93$, $p = .004$). However, a similar spotlight analysis performed at one SD below the mean of work ethic did not reveal a significant difference in discounting rate as a function of the mindset factor (B = –.02, $t(101) = –.50$, $p = .616$; see figure 3). Further probing the interaction using a floodlight analysis (Spiller et al. 2013) revealed that just at .11 SD above the mean of the work ethic scale, participants in the busy mindset condition begin to show a significantly decreased

FIGURE 3

AREA UNDER DISCOUNTING FUNCTION AT HIGH AND LOW LEVELS OF WORK ETHIC AS A FUNCTION OF MINDSET—STUDY 4



NOTE.—AREA UNDER DISCOUNTING FUNCTION IS A RAW SCORE: 0 IS THE STEEPEST POSSIBLE DISCOUNTING AND 1 IS NO DISCOUNTING.

discounting rate compared to those in the control condition ($B = .07$, $t(101) = 1.98$, $p = .05$).

Discussion

Results from study 4 demonstrate an important boundary condition for the busy mindset effect; that is, a busy mindset facilitates self-control behaviors to the degree that one believes that keeping oneself busy is good. Specifically, these findings show that a busy mindset decreased discounting rate among those who view busyness as reflective of their value system (i.e., those who have a high work ethic). However, this effect was attenuated for those who view busyness as *not* reflective of their value system (i.e., those who have a low work ethic) and thus tend to view work as a forced activity. The next two studies provide support for the underlying mechanism related to self-importance.

STUDY 5: DAMPENING OF SELF-IMPORTANCE

Study 5 aimed to provide support for the underlying process related to self-importance by manipulating it directly. We argue that if our conceptualization related to self-importance is valid, then the effect of busy mindset on self-control behaviors should be attenuated when the sense of self-importance, bolstered as a result of a busy mindset, is dampened in an intervening task.

Method

One hundred seventy undergraduate students (82 females) attending summer sessions at a large West Coast university voluntarily participated in our study in exchange for a free snack. The study followed a 2 (mindset: busy vs. control) $\times$ 2 (self-importance: dampened vs. not dampened) between-subjects design. Participants were randomly assigned to the four conditions.

We manipulated mindset using a writing task, which was presented as a survey designed to understand student lifestyles during the summer. In the busy (control) condition, participants were told that a recent survey we conducted revealed that students who stay on campus during summer are busier (engage in different kinds of activities) than students who leave campus during summer. Participants in the busy (control) condition were then asked to think about and write down three things/activities that keep them busy (i.e., that they tend to do) on campus.

Thereafter, participants answered three questions: while two were filler questions, one was designed to manipulate dampening of self-importance. The two filler questions ("Do you live on campus?" and "How many people do you live with?") were included in order to keep the survey consistent with the cover story and not raise suspicion related to the primary hypothesis of the study. The last question asked participants to indicate how many people in their lives consider them an important person. In order to manipulate dampening of self-importance, the response scale varied across conditions. In the self-importance not-dampened condition, the scale ranged from 1 to 5, whereas in the self-importance dampened condition, the scale ranged from 10 to 50. Research suggests that responding toward the bottom of a scale should lead participants to make corresponding inferences about themselves (Schwarz 1999). Consequently, responding on the 10–50 scale, which would lead participants to respond toward the bottom of the scale, should dampen self-importance, compared with responding on the 1–5 scale.

Subsequent to finishing the student lifestyles survey, participants chose their free snack from one of two options, selected on the basis of an independent study (see web appendix): an indulgent option (chocolate brownie) and a healthy option (apple). The choice of the free snack served as our main dependent variable. One participant, who changed his choice of snack after the study was completed, was removed prior to any analyses, leaving us with a total sample of 169 participants. At the end of the study, all participants answered a few demographic questions. In order to examine any differences related to time pressure due to classes, along with demographics participants were also asked to report the number of class units they were enrolled in. Finally, participants were debriefed and thanked. There was no difference in the number of class units participants across conditions were enrolled in ($F < 1$).

Results

Self-Importance Manipulation Check. As predicted, participants in the self-importance not-dampened condition perceived themselves to be significantly more important ($M = 4.61$, SD = .79) than those in the self-importance dampened condition ($M = 2.06$, SD = 1.26; $F(1, 167) = 248.57$, $p < .001$, $d = 2.42$).

Snack Choice. As predicted, a logistic regression modeling the probability of choosing an apple (healthy option) over a brownie (indulgent option) revealed a significant interaction between the mindset and self-importance factors (Wald $\chi^2 = 4.20$, $p = .040$). Specifically, consistent with the findings from the previous studies, when self-importance was not dampened, participants in the busy mindset condition were more likely to choose an apple as compared with the control condition (Wald $\chi^2 = 6.05$, $p = .014$, odds ratio = 3.03; figure 4). However, when self-importance was dampened in an intervening task, there was no difference in the likelihood of choosing an apple between the two conditions (Wald $\chi^2 < 1$, odds ratio = .83).

Discussion

Findings of study 5 provide strong support for the underlying process related to self-importance. Specifically, as in the previous studies, when self-importance was not dampened, a busy mindset facilitated self-control. However, when self-importance was dampened in an intervening task, this effect of a busy mindset on self-control was attenuated.

One may argue that the effect of a busy mindset on healthy choice was decreased when self-importance was dampened because responding toward the bottom of the scale on the question of how many people consider you an important person might have made participants feel bad, leading them to choose an indulgent option to restore their negative mood. However, an independent study we conducted revealed that the self-importance manipulation used in the current study successfully dampened importance, without impacting mood (see web appendix for details). Further, if the mood repair motive existed, then dampening the self-importance should have led participants in the control condition to choose an indulgent option over a healthy option, which was not the case. Therefore, mood repair is unlikely to explain our results. The final study provides further support for the underlying process by conducting a mediation analysis.

STUDY 6: MEDIATION BY SELF-IMPORTANCE

This study has three main objectives. First, it aims to provide direct support for our underlying mechanism by examining the mediating role of self-importance. In order to achieve this objective, we measured self-importance subsequent to the busy mindset manipulation. A second objective of the current study was to rule out an alternative argument related to the desire for productivity. Specifically, one could argue that a busy mindset induces a desire to be more productive, thus enhancing people's desire to eat healthy or choose an extra credit option. In this study, therefore, we measured self-control by asking participants to indicate their saving behaviors, a measure unlikely to be explained by a desire to be productive. Saving involves a conflict between the desire to spend and the higher-order goal to save for securing the future, and thus requires people to exert self-control. Finally, to explore whether effects of time pressure on self-control would diverge from that of a busy mindset, as we have predicted, the current study also measured time pressure. We predicted that time pressure should reduce saving behaviors, whereas a busy mindset should increase saving behaviors. Moreover, any positive effect of busy mindset on saving behaviors is likely to be attenuated when a busy mindset is accompanied by a high level of time pressure.

Method

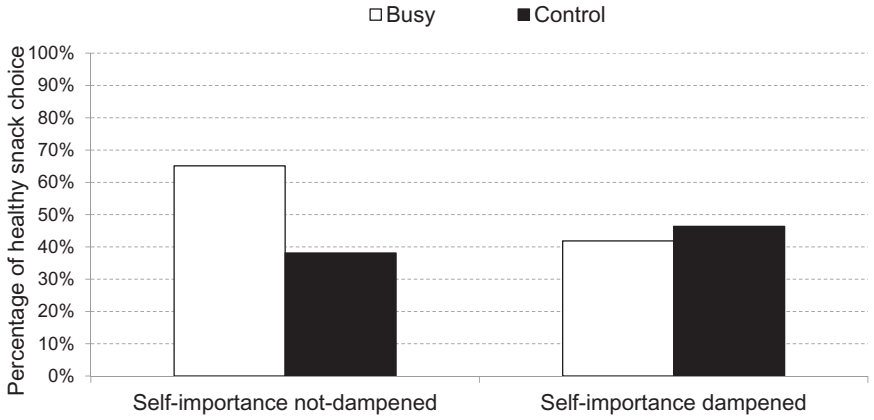
We opened the study, which remained active until 9 p.m. EST of the same day, for 150 US-based participants on MTurk. One hundred nineteen participants (71 female, $M_{age} = 35$ years) completed the study. Since the study involved questions on monthly income and saving decisions, we recruited only those who were employed. The study followed a single-factorial (mindset: busy vs. control) between-subjects design. Participants were randomly assigned to the two conditions.

We manipulated mindset using a writing task, which was presented as a lifestyle survey. In the control condition, participants were informed that the survey was designed to understand different activities Americans engage in, and they were asked to think about and then write down three activities they engage in on a typical day. In the busy mindset condition, participants were informed that recent research had revealed that Americans are busier than the citizens of other developed countries and the survey was designed to help us understand this issue better. Participants in the busy mindset condition were then asked to think about and write down three activities that kept them busy. As a manipulation check, participants were then asked to indicate how busy they are (1 = not at all busy, 7 = very busy).

Subsequently, we measured self-importance on five nine-point scale items (1 = not at all; 9 = very much): 1) I feel like an important person, 2) I feel that I am an indispensable person to others, 3) I feel that my presence is important to my friends and family, 4) I feel like my life has important meaning, and 5) I feel that my life is valuable.

FIGURE 4

PERCENTAGE OF HEALTHY SNACK CHOICE AS A FUNCTION OF MINDSET AND SELF-IMPORTANCE—STUDY 5



Responses were averaged (Cronbach's $\alpha = .94$) to form a composite self-importance score.

Thereafter, all participants engaged in a financial decisions survey introduced to them as a survey designed to learn more about how much people tend to save for their future. Participants were informed that financial decisions people make, specifically with respect to how much they save, have a direct impact on their long-term future, with more savings leading to a more secure future. Participants were asked to indicate their monthly income before taxes (in USD). Participants were then asked to decide how much of this monthly income they would like to save and indicate the amount (in USD) they would put in their saving account. The percentage of income to save (saving/income) served as our main dependent variable (adapted from Garbinsky, Klesse, and Aaker 2014).[4] Following past research (Garbinsky et al. 2014), one participant who indicated a saving amount greater than the monthly income was removed prior to analyses. Two other participants whose saving percentage could not be computed due to zero income were removed, leaving us with a final sample of 116 (71 females, $M_{age} = 35$ years).

Subsequent to making their saving decisions, in a purportedly unrelated survey on time usage, participants were asked to think about and write down the number of things/activities they needed to do (work-related commitments, class work, house work, other commitments, etc.) in the next 24 hours. Subsequently, keeping their schedule for the next 24 hours in mind, they were asked to answer two questions designed to assess time pressure (1 = not at all, 9 = very much): 1) I feel really pressed for time, and 2) I really feel the pressure of time passing by quickly (adapted from Ackerman and Gross 2003). Answers on these two questions were averaged to form a composite time pressure score (Pearson $r = .87$). Finally, participants indicated their gender and age, and were debriefed and thanked.

Results

Busy Manipulation Check. A GLM performed on the busy perception revealed that participants in the busy condition ($M = 5.87$, SD = 1.05) perceived themselves as busier than those in the control condition ($M = 4.17$, SD = 1.95; $F(1, 114) = 35.60$, $p < .001$, $d = 1.09$), indicating that our mindset manipulation was successful.

Self-Importance. A one-way GLM revealed that those in the busy mindset condition experienced a bolstered sense of self-importance ($M = 7.25$, SD = 1.27), compared with those in the control condition ($M = 5.56$, SD = 2.35; $F(1, 114) = 23.96$, $p < .001$, $d = .89$).

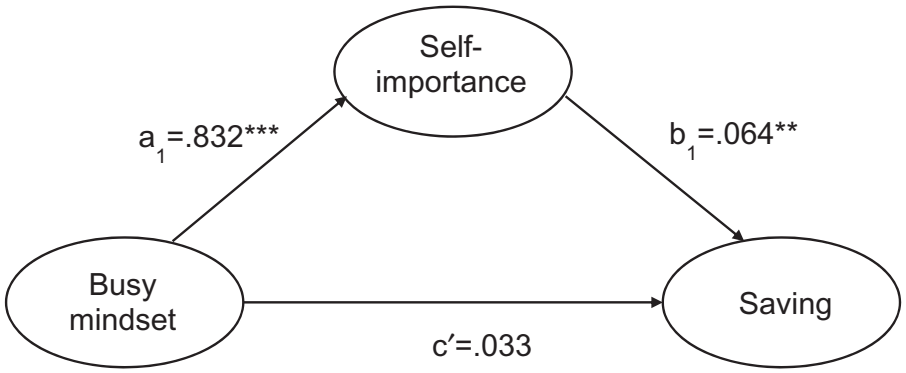
Saving Decision. As predicted, a one-way GLM revealed a significant effect of the mindset manipulation on saving ($F(1, 114) = 4.90$, $p = .029$, $d = .42$). Participants in the busy condition indicated a higher percentage of saving ($M = .27$, SD = .24) than those in the control condition ($M = .18$, SD = .16).

Mediation Analysis. We standardized all the variables (Pieters 2017) and conducted a mediation analysis with the mindset factor (0 = control, 1 = busy) as the independent variable, saving percentage as the dependent variable, and

4 Prior to measuring participants' desire to save, we also collected another measure for self-control using more subjective items (e.g., "If I wanted to, I would have no problem practicing self-control"). Results on this measure show the same pattern as the main dependent variable (see web appendix).

FIGURE 5

MEDIATION MODEL—STUDY 6



NOTE.—COEFFICIENTS ARE UNSTANDARDIZED; $^{**}p < .01$, $^{***}p < .001$.

standardized self-importance as the mediator. PROCESS model 4 (Hayes 2012) with 10,000 bootstrap samples revealed that the indirect effect of busy mindset through self-importance was significant ($a_1b_1 = .053$, SE = .021, 95 % CI [.018, .100]; figure 5).

Time Pressure and Saving Decision. We first examined the impact of mindset manipulation on time pressure. A one-way GLM revealed a nonsignificant effect of the mindset manipulation on time pressure ($F < 1$, $p = .504$), ensuring that the mindset manipulation did not impact perceived time pressure. Next, we examined the impact of time pressure on saving. A regression analysis revealed that time pressure predicted saving negatively (B = –.03, $t(114) = –3.27$, $p = .001$). When we regressed both time pressure and the busy mindset (control coded as 0 and busy mindset coded as 1) simultaneously on saving, busy mindset predicted saving positively (B = .08, $t(113) = 2.10$, $p = .038$), while time pressure predicted saving negatively (B = –.03, $t(113) = –3.18$, $p = .002$).

We further examined how the effect of a busy mindset on saving varies at different points of time pressure. A busy mindset increased saving significantly until time pressure reached .16 SD above the mean (B = .08, $t(113) = 1.98$, $p = .05$) and marginally significantly until time pressure reached .49 SD above the mean (B = .07, $t(113) = 1.64$, $p = .10$). These results are consistent with our argument that we expect to observe the busy mindset effect when time pressure is not high. Further, we also observed that when the time pressure was significantly low (i.e., those who responded below 2 on the time pressure scale, which is the point where the bottom 7.8% of participants fall), the effect of busy mindset on saving behaviors was reduced (B = .11, $t(113) = 1.61$, $p = .11$). This is not surprising, given that those who don't feel any time pressure are unlikely to subjectively perceive themselves as busy compared to the others. Finally, of note, all our results reported earlier, including mediation analysis, hold when time pressure is included as a covariate in the model.

Discussion

Results from study 6 provide strong support for our underlying mechanism related to self-importance. Specifically, these findings show that a busy mindset leads to enhanced self-importance, which thereby increases self-control. These findings further rule out an alternative account related to the desire for productivity. Specifically, a productivity-related account cannot explain the mediation by self-importance. Moreover, desire to be more productive is unlikely to be related to one's desire to save more money each month.

Finally, this study demonstrates that the effect of time pressure on self-control behaviors is divergent from that of a busy mindset. Specifically, our findings show that while a busy mindset positively impacted self-control behaviors, time pressure negatively impacted self-control behaviors. Moreover, in line with our proposition, findings of the current study show that a busy mindset increases self-control behaviors when it is *not* accompanied by a high level of time pressure. When busy mindset is accompanied by a high level of time pressure, any positive effect of busy mindset on self-control behaviors is attenuated.

GENERAL DISCUSSION

In the early 1900s, notable British economist John Maynard Keynes predicted that by 2028, living conditions would improve so much that we would have to work only three to four hours a day (Keynes 1936). However, we are

still rampantly talking about how busy we are. Many plausible hypotheses on why we are busy have been proposed, but perhaps a simple explanation is that busyness might be a state of mind people *prefer* to be in. As we argue, busyness makes us feel that every moment of our lives matters, and thus we choose to have more of it. The current research extended this thought and tested the corollary of the argument that busyness enhances one's self-view by enhancing self-importance. We further examine how the bolstered sense of self-importance, induced as a result of exposure to busyness-related cues, impact self-control.

Across seven studies, including a field study, we show that a busy mindset enhances one's self-importance, which in turn facilitates self-control behaviors. We provide support for our underlying process related to self-importance by 1) demonstrating that the busy mindset effect attenuates when self-importance is dampened (study 5), and 2) showing that the positive effect of a busy mindset on facilitating self-control behavior is mediated by self-importance (study 6). We also delineate important boundary conditions for the proposed busy mindset effect. Study 4 demonstrates that the positive effect of a busy mindset on self-control holds only to the degree that one believes busyness is good, but attenuates for those who do not share this belief (i.e., low work ethic). Further, study 6 shows that the proposed busy mindset effect holds only when it is *not* accompanied by a high level of time pressure. Finally, across studies, we delineate when a busy mindset is induced and leads to enhanced self-control (studies 3 and 6), and rule out alternative explanations related to stress (studies 2A, 2B, 3, 5, and 6) and the desire for productivity (study 6).

Importantly, across studies, we test our argument using varied busy mindset manipulations, including subtle marketing cues, and using several measures of self-control behaviors, including financial decisions, preference for immediate gratification, and actual consumption behaviors. Notably, we replicate our results in a natural setting, thus providing stronger external validity to our findings. In sum, we provide convincing evidence for our proposition that a busy mindset facilitates self-control, and this is because of a bolstered sense of self-importance.

Managerial Implications

Our findings have important managerial implications for both marketers and policy makers. First, despite a growing number of busy appeals in marketing, we do not know how the use of such busy appeals impacts consumers' preferences. The simple assumption is that since consumers are busy, busy appeals should make the product relevant and thus more favorable. However, this is an untested assumption. In the current research, we examined this important question and further examined when the use of a busy appeal can help versus hurt. Our findings show that the use of busy appeals could backfire for brands perceived as indulgent. For instance, Dunkin Donuts advertisements using a busy appeal may reduce consumers' desire for donuts. Our findings from study 2B provide preliminary evidence showing that framing the product as healthy versus indulgent could reverse this effect, such that busy appeals are likely to be profitable when the brand or product is perceived as healthy. Of course, this would be true only when some ambiguity existed about the nature of the product. These findings thus provide important guidelines for marketers considering the use of busy appeals.

Second, our findings have important implications for consumers and policy makers who are concerned with people's ability to exert self-control. Given the rise of many societal problems associated with a lack of self-control, as displayed by behaviors such as overeating and food waste (Hall et al. 2009; Nestle 2003), much research has focused on what causes consumers to choose immediate hedonic gratification over long-term benefits. For example, individual characteristics such as consumer impulsivity (Puri 1996), as well as external cues such as salient life events (Liu and Aaker 2007), mortality salience (Ferraro, Shiv, and Bettman 2005), and product packaging (Argo and White 2012), have been shown to influence self-control behaviors. Lately, researchers have been particularly interested in understanding how self-control behaviors could be facilitated, and one intervention that has received wide attention is mindful eating (Papies, Barsalou, and Custers 2012). Mindful eating, however, takes a minimum training of 45 minutes and continual practice applied to 200 food decisions for it to be effective (Wansink and Chandon 2014). This makes the intervention of mindful eating highly unlikely and unattractive for modern consumers, who are busy. Our findings suggest that perhaps activating a busy mindset may be an easier and more effective nudge to facilitate self-control behavior. This is also counterintuitive to what is commonly believed in the field, as busyness is often assumed to be bad for health and well-being, and therefore is rarely considered an intervention for self-control behaviors. Thus, our findings offer a unique and interesting intervention that could be used by policy makers to nudge consumers toward health and well-being.

Finally, more generally, we know that the growing sense of busyness reported by modern consumers, a phenomenon important for managers and policy makers to understand, does not necessarily stem from an actual lack of time, but from subjective perception (Gershuny 1992, 2000). This indicates that implications drawn from research on time pressure may not be very relevant to understand how subjective perception of busyness impacts behaviors. Therefore, we not only provide important practical guidelines for managers by examining the role of subjective perception of busyness, but also point to the fact that managers should be cautious about coming to decisions purely based on research on time pressure. For example, as we show, busy appeals should facilitate self-control

choices for consumers under no time pressure. However, research on time pressure would suggest that such appeals might hurt self-control behaviors for consumers who are rushing for the next event on their schedule; the findings of study 6 indeed suggest that busy appeals can negatively impact self-control for those under considerable time pressure.

Theoretical Implications

Our findings make important theoretical contributions. Despite past evidence suggesting that the subjective perception of busyness and the lack of time, or time pressure, may not be the same (Gershuny 1992, 2000; Zuzanek et al. 1998), researchers, especially experimental researchers in the field of psychology and marketing, have narrowly focused on the objective lack of time, or time pressure. Hence, even with many years of research on this topic, we know little about how subjective perception of busyness impacts people's choices and behaviors. Some may even argue that we know a lot about busy people based on inferences drawn from the time pressure literature; however, such inferences are likely to be erroneous. Our findings demonstrate that a subjective perception of busyness leads to effects that are opposite to that of time pressure under some conditions. This empirical finding, along with conceptual distinctions argued earlier, provides convincing evidence for a busy mindset as an important construct that is different from time pressure.

It should be noted, though, that since time pressure and a busy mindset do relate to the broader concept of busyness, in reality both constructs might coexist in varying degrees. One could, for example, argue that the difference between busyness and time pressure is a matter of *degree*; that is, busyness is a mild form of time pressure. The current research suggests that this is unlikely to be the case. An individual could feel "time pressed" even with a moderate level of workload if one feels *forced* to do more than one desires to do at the moment. In line with this intuition, our findings from study 3 show that those who thought about activities that they were *forced* to be busy with experienced a negative affective state, which is also a key characterization of time pressure, even though their perceived level of busyness ($M = 5.06$, SD $= 1.41$; $F < 1$, $p = .491$) did not differ from those who were asked to write about the activities that keep them busy ($M = 4.88$, SD $= 1.47$; $F < 1$, $p = .491$). Moreover, across studies, our results show that a busy mindset enhances the perception of self-importance, a finding unlikely to be explained by a time pressure–related account. However, future research can further explore this and other interesting conceptual similarities and differences between the two constructs.

Limitations and Future Research

Our work has a few limitations, which open up avenues for future research. In the current research, we focused on nonluxury consumption to capture self-control behaviors. An interesting question that arises is whether our findings would be applicable to consumption of luxury goods and/or overbuying. Purchases of luxury goods do not necessarily involve self-control *unless* one has a saving goal or a budget to follow. Hence, we predict that a busy mindset would impact luxury consumption if such consumption is perceived as conflicting with one's higher-order goal, such as an active saving goal. However, this remains an empirical question to be tested.

In the current research, we examine the impact of an activated busy mindset on two broad categories of self-control decisions. Specifically, in some studies, we examined people's likelihood to choose a healthy over an indulgent food option, while in the other studies, we examined people's likelihood to save or wait longer for a larger monetary reward. Across these domains, as we had predicted, we found that a busy mindset enhanced self-control. However, one limitation of the current research is that we do not examine if the mechanism through which self-importance enhances self-control differs across these two broad categories of self-control decisions. It is likely that self-importance leads to more healthy choices because a bolstered sense of the self might lead individuals to take better care of themselves. On the other hand, an enhanced sense of self-importance might lead individuals to choose to save more or wait longer for a larger monetary reward because doing so would help them maintain their enhanced self-view. Future research could examine the different mechanisms through which self-importance can enhance self-control in different domains.

The current research focused on looking at the impact of a busy mindset on conscious self-control behaviors. However, an emerging body of research has shown that self-control can be general, and can be embodied, and expressed physiologically (Gal 2012; Wadhwa and Kim 2015). One interesting extension, which could shed light on understanding the depth of link between a busy mindset and self-control behavior, would be to examine whether our busy mindset effect can be observed using an implicit measure of self-control, such as salivation for a hedonic item (Gal 2012; Wadhwa and Kim 2015).

DATA COLLECTION INFORMATION

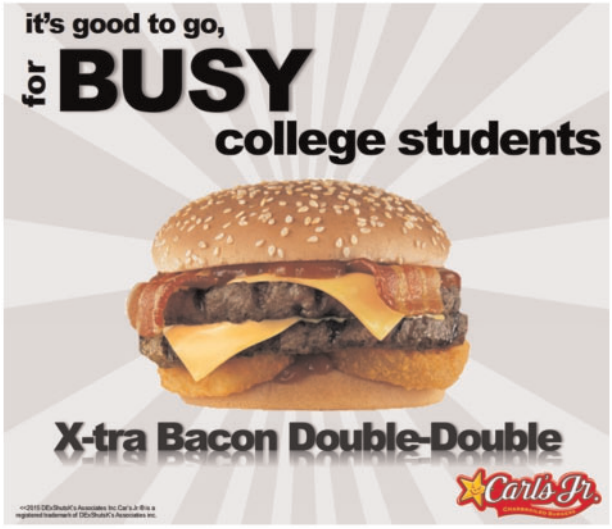
The first author supervised the collection of data for the first study by cafeteria managers at Pepperdine University in the summer of 2014. The first author supervised the collection of data for study 2A (spring of 2015) and study 2B (fall of 2014) by research assistants at the Cal State University. The first author supervised the collection of data for the third study (winter of 2017) by research assistants at Hong Kong University of Science and Technology. The first author collected data for the preliminary study (summer 2017), fourth study (spring of 2014), and sixth

study (summer of 2017) on Amazon Mechanical Turk. The first author supervised the collection of data for the fifth study by research assistants at Pepperdine University in the summer of 2014. The first author collected data for the pilot study (in the web appendix; summer of 2017) on Prolific Academic and conceptual replication study (in the web appendix; winter of 2016) on Amazon Mechanical Turk. The first author analyzed these data.

APPENDIX

PRINT ADVERTISEMENT (STUDY 2A)

Nonindulgent Brand – Control Tagline



Indulgent Brand – Busy Tagline

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