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INVESTIGATING HOW UNHEALTHY SNACKING HABITS AFFECT SELF-LICENSING WITH AN ONLINE DAILY DIARY STUDY

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ADVISOR: ASST. PROF. SEZİN ÖNER

MASTER'S THESIS

ISTANBUL, JUNE, 2020

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Submitted to the School of Graduate Studies of Kadir Has University in partial fulfilment of the requirements for the degree of Master's in the Program of Psychology

ISTANBUL, JUNE, 2020

I, BERKE SEZER, hereby declare that;

This Master's Thesis is my own original work and that due references have been appropriately provided on all supporting literature and resources.

NAME AND SURNAME OF THE STUDENT

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DATE AND SIGNATURE

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

SEZER, BERKE. INVESTIGATING HOW UNHEALTHY SNACKING HABITS AFFECT SELF-LICENSING WITH AN ONLINE DAILY DIARY STUDY, MASTER'S THESIS, ISTANBUL, 2020.

The main purpose of this study is to investigate how two types of self-licensing (functional and dysfunctional self-licensing) are affected by unhealthy snacking habit in the context of snack consumption. Self-licensing, which is found to be associated with higher snack consumption, is the act of using justifications prior to gratifications. Previous research has found that while functional self-licensing decreases unhealthy snack consumption, dysfunctional self-licensing increases the amount of calories taken from unhealthy snacks. In this study, we aimed to replicate the findings of these two newly established constructs and investigate possible moderator variables that may increase or decrease the strength of these associations. Participants (N = 131) were asked to send their snack consumption every night for a week. As predicted, the results suggested that dysfunctional self-licensing predicted higher consumption of unhealthy snacks. However, we found no evidence for the negative relationship between functional self-licensing and unhealthy snack consumption. Moreover, we also failed to find supportive results for our hypothesized moderator relationships. Yet, our exploratory analyses showed interesting results that can be summarized as (a) higher unhealthy snacking habit and impulsivity predict higher caloric intake from individual snacks reported, (b) unhealthy snacking habit is associated with less healthy snack consumption. Finally, contribution of our results to the self-licensing literature and possible future studies that can be conducted are discussed.

Keywords: self-licensing, functional self-licensing, dysfunctional self-licensing, unhealthy snacking habits, snack consumption, daily diary study

ÖZET

SEZER, BERKE. KENDİNE İZİN VERMENİN SAĞLIKSIZ ATIŞTIRMA ALIŞKANLIĞINA BAĞLI DEĞİŞİMİNİN ONLİNE GÜNLÜK ÇALIŞMASI İLE İNCELENMESİ, YÜKSEK LİSANS TEZİ, İSTANBUL, 2020.

Bu çalışmanın ana amacı kendine izin vermenin iki türü olan işlevsel ve işlevsiz kendine izin vermenin sağlıksı atıştırma alışkanlığına olan değişiminin incelenmesidir. Daha önceki çalışmalarda artan atıştırmalık tüketimiyle ilişkili bulunan kendine izin verme, tatmin edici davranışlardan önce gerekçeler oluşturmaya vermek olarak tanımlanmıştır. Önceki bir çalışma işlevsel kendine izin vermenin sağlıksız atıştırmalık tüketimini düşürdüğünü bulurken, işlevsiz kendine izin vermenin yükselttiğini bulmuştur. Bu çalışmada, yeni kavramsallaştırılmış bu iki yapının bulgularını tekrarlamayı ve bu bulguların ilişkisini güçlendirebilecek ya da azaltabilecek olası düzenleyici değişkenleri incelemeyi amaçladık. Katılımcılardan (N = 131) bir hafta boyunca her gece gün içerisinde tükettikleri atıştırmalıkları yollamaları istendi. Tahmin edildiği üzere, sonuçlar işlevsiz kendine izin vermenin sağlıksız atıştırmalık tüketimini arttırdığını gösterdi. Bununla birlikte, işlevli kendine izin verme ve sağlıksız atıştırmalık tüketimi arasındaki negatif ilişkiye dair bir sonuç bulamadık. Daha fazlası, hipotez ettiğimiz düzenleyici değişken ilişkileri için de destek verici sonuçlar bulmakta başarısız olduk. Yine de, keşfedici veri analizlerimiz iki ana noktada özetleyebileceğimiz ilginç sonuçlar gösterdi: (a) sağlıksız atıştırmalık tüketme alışkanlığı ve dürtüselliği yüksek olan katılımcılar göndermiş oldukları atıştırmalıklar bireysel olarak incelendiğinde daha yüksek kalorili atıştırmalık tükettiler, (b) sağlıksız atıştırmalık alışkanlığı daha az sağlıklı atıştırmalık tüketimiyle bağlantılı bulundu. Son olarak, sonuçlarımızın kendine izin verme alanyazınına olan katkıları ve ilerde gerçekleştirilebilecek olası çalışmalar tartışıldı.

Anahtar Sözcükler: kendine izin verme, işlevsel kendine izin verme, işlevsiz kendine izin verme, sağlıksız atıştırmalık alışkanlığı, atıştırmalık tüketimi, günlük çalışması

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To my mother and brother.

CHAPTER 1

1. INTRODUCTION

Obesity is one of the most dangerous non-communicable diseases of our time (Kushner & Kahan, 2018). According to The Obesity Report of OECD (2017), the rate of obesity in Turkey is 22,3% and steadily increasing over the years. Obesity is comorbid with cardiovascular diseases, diabetes, hypertension and stroke, which are all chronic and fatal. Previous research has shown that obesity is highly related to eating behavior and to eating habits that develop in adolescence and young adulthood (for a review, see Roblin, 2007; Kuzbicka & Rachon, 2013). Thus, it is crucial for individuals to know which foods they should include in their diet as informed individuals. However, even when knowing which foods are healthy or not, one can easily find herself indulging in unhealthy foods. In other words, having dietary knowledge or intention to eat healthily does not automatically translate into actual behavior (Sheeran, 2002), but rather healthy eating may require more active self-regulation.

Previous research has extensively studied the intention-behavior gap of behaviors that require self-regulation (for a meta-analysis, see Webb & Sheeran, 2006). Self-regulation and self-control have been used interchangeably in the earlier literature but there is a stark difference between the two. Specifically, Carver and Scheier (1981, 1982) proposed self-regulation has three main ingredients which are standards, monitoring and operating. Standards refer to the desired state that the individual aims to accomplish by altering her behavior. However, the individual has to monitor the discrepancies, if there are any, between the desired state and current state in order to make the judgment of whether such behavior alteration is needed. Lastly, the individual has to control her actual behavior to reach the desired state. Self-regulation is comprised of all these processes which control behavior in the direction of a previously identified standard and monitoring of that control mechanism. This control mechanism is what we know as self-control. In this study, we will limit ourselves within the perimeter of self-control processes.

1.1. Self-control

Self-control has been conceptualized as being able to restrain one's urges and impulses for the sake of pursuing goals that are perceived to be more beneficial (e.g., long-term goals; Carver & Scheier, 1982; Inzlicht, Schmeichel & Macrae, 2014; Gillebaart & de Ridder, 2015). A prominent view of self-control argues that self-control resources are limited (Baumeister, Bratslavsky, Muraven, & Tice, 1998), which makes it more difficult for individuals to exert self-control after previously restraining oneself. Moreover, self-control is an effortful process that requires individuals to have enough psychological resources and motivation to resist impulses. In line, Milyavskaya and Inzlicht (2017) showed that the potency of tempting stimulus is one of the most significant predictors of goal attainment regardless of the degree of participants' self-control. This is because more tempting stimuli led to higher depletion of resources and fatigue which reduced the likelihood of goal attainment. On the other hand, recent research conceptualized self-control as rather an effortless pursuit, in that, people high in self-control are successful in counteracting against impulses not because they resist better but they feel less conflict when they encounter a tempting stimulus (Gillebaart & de Ridder, 2015). For example, higher trait self-control is associated with higher efficiency in dealing with motivational conflicts and more adaptive lifestyles, which in turn increases affective well-being and life-satisfaction (Hofmann et al., 2013). Self-control was also found to be leading the construction of adaptive habits. Adriaanse et al. (2014) found that unhealthy snacking habits mediated the negative relationship between self-control and unhealthy snack consumption. Conceptually replicating this study, Gillebaart and Adriaanse (2017) found the same mediation effect for exercise behaviors. However, in a study with unsuccessful dieters, self-control using implementation intentions (constructing if-then plans before facing temptations; Gollwitzer, 1999) is found to be reducing consumption of the tempting stimulus (Kroese, Adriaanse, Evers & de Ridder, 2011), showing possible ways to alter self-control processes. Overall, higher self-control has been shown to be beneficial for creating adaptive habits, affective regulation and healthy functioning.

Regardless of whether self-control processes are effortful or effortless, it is generally accepted that failing to restrain oneself is taken as a self-regulation failure. However, Kroese (2019) suggests that self-regulation failure is not the mere opposite of self-regulation success. More specifically, a single instance of indulging oneself with temptation does not necessarily mean a self-regulation failure because one piece of chocolate cake will not make one fat unless it is

consumed over and over again. Actually, planned hedonic deviations (e.g., cheat meal) from long-term goals (e.g., losing weight) has been found to benefit attaining these goals (Coelho do Vale, Pieters and Zeelenberg, 2016). In fact, people frequently indulge themselves with occasional treats, either successfully limiting to a cheat meal or a multitude of cheatings, by licensing themselves which is known in the literature as self-licensing.

1.2. Self-licensing

Imagine a person trying to restrict her daily caloric intake with the aim of losing weight. On some occasions the person may come across a food (e.g., a slice of chocolate cake) which will make her pleasant in the short-term. In these instances, the long-term goal of losing weight and the short-term goal of feeling pleasant conflict and the person faces a self-control dilemma. Previous research frequently presented this as a self-control dilemma in which the person may succeed at restraining herself by not giving in to the slice of chocolate cake or fail to do so. This "to indulge or not to indulge" dilemma has been found to arouse negative affect (e.g., guilt, regret, shame) if it is resolved by failing to exert self-control (Dahl, Honea & Manchanda, 2003; Patrick, Chun & MacInnis, 2009). In order to decrease this anticipated negative affect, people may use another strategy, namely self-licensing. Self-licensing is the act of using reasons and justifications for a discrepant behavior (i.e., the conflict between short-term and long-term goals) before enacting the behavior itself (De Witt Huberts et al., 2014a; De Witt Huberts et al., 2014b). This way what would be conceived as a possible failure of the long-term goal becomes acceptable for the individual and the individual feels less negative affect (Khan and Dhar, 2007; Study 3). If, continuing with the above example, the person comes up with a justification to eat the chocolate cake, then the person would self-license herself. In the context of eating behavior, these justifications are used in daily life all the time. Taylor and her friends (2014) identified 6 categories of justifications that are used by people in indulging themselves with high-calorie food. These justifications were availability (e.g., "The food has been made for me, so I should eat it"), compensatory behaviors (e.g., "I'll do some exercise to make up for it"), exceptions to the norm (e.g., "I shouldn't worry; I don't eat unhealthy things all the time"), deservingness (e.g., "I've had a hard day, I need a treat"), curiosity (e.g., "It looks gorgeous on the advert") and irresistibility (e.g., "It looks tasty"). Beside finding significant positive associations between use of justifications at baseline and consumption after 4 weeks in Study 2, Study 3 showed that participants with strong intentions to limit indulgence have consumed more M&M's when they were justification-primed (vs. no priming). This result indicates that

justifications are particularly problematic for people who aim to restrain indulgence because apparently justifications undermine the translation of good intentions into action (Taylor, Webb, & Sheeran, 2014). Thus, not all sorts of self-licensing lead to adaptive eating behavior but there are also instances where self-licensing can impede long-term goals.

The effects of self-licensing have been shown in different contexts. One of the initial findings come from the context of moral psychology (for a review, see Merritt, Effron, & Monin, 2010). Moral self-licensing works as a balancing mechanism, that is, people are more likely to act "immoral" after having enough credentials, such as previous prosocial behaviors (Mazar & Zhong, 2010; Monin & Miller, 2001). In one of these studies, Monin & Miller (2001) found that participants who established credentials by acting in a non-sexist (Study 1) or non-racist (Studies 2 and 3) way were more likely to reveal prejudiced attitudes subsequently.

Self-licensing was shown in the discretionary spending context as well. (Khan & Dhar, 2006; Mukhopadhyay & Johar, 2009). Khan and Dhar (2006) asked half of the participants (self-licensing condition) to imagine that they are volunteering in community service for three hours a week. Afterward, they were told to imagine that they were in a mall and got 50$ to spend either on a pair of designer jeans or vacuum cleaner (equally priced, 50$) which they are in need of both. Participants in the control condition were only presented with this task. The results show that participants in the self-licensing condition (58%) chose the pair of designer jeans significantly more than the control condition (28%). They argued that individuals were more likely to indulge in spending because the imagination of volunteer work was used as a justification to spend their money on the pair of designer jeans. On the other hand, since participants in the control condition did not have such justification, they chose to spend their money on the vacuum cleaner instead, which was considered as a more beneficial long-term investment.

Consistent findings have been documented in the context of eating behaviors as well (De Witt Huberts, Evers, & De Ridder, 2012; Prinsen, Evers & de Ridder, 2016; Taylor et al., 2013). De Witt Huberts et al. (2012) asked participants to complete a dyslexia screener that would be supposedly on the market after the validation tasks. One group of participants (effort condition) spent 5 minutes with the task and after a short break, they were asked to do the task again for reliability issues. Participants in the control condition, on the other hand, completed the task for 10 minutes (with a short break after 5 minutes as well). Thus, while both groups spent an equal amount of time on the task, the effort condition was led to believe that they completed the task twice. Afterward, in an ostensibly unrelated taste-task for another study, participants tried

different types of snacks and evaluated them. Though, what mattered was not their evaluation of the snacks but the amount consumed by the participants. Controlling for hunger, the results showed that participants in the effort condition consumed significantly more snacks than the control condition. Although participants did not differ in the amount of effort they exerted, they did differ in the number of snacks eaten because the effort condition constituted as a justification to license themselves. In a related vein, Prinsen et. al. (2016) investigated how the previous indulgence affects subsequent self-regulation dilemma. In their study, participants were given a vignette about a dieter who waits in a line of a bakery and sees a chocolate pie. In the license condition, the dieter buys the chocolate pie because it is sold only on that day to celebrate the bakery's 10th anniversary ("special occasion" justification). The control condition gives no such excuse to the dieter who buys it anyway. Subsequently, participants have to decide for the dieter in the vignette who sees another tempting treat (i.e., sausage croissant rolls). The results suggest that participants in the license condition felt less negative affect (guilt, Study 1 and 2; shame and regret, Study 2) and opted for the second snack as well. Both these studies show that the power of justification on the decision making processes of self-regulatory dilemmas. Whether it is effort or previous indulgence due to special occasions, having a justification leads to the indulgence of the tempting products.

Several mechanisms have been proposed to explain the self-licensing phenomenon. De Witt Huberts et al. (2014a) argued that people come up with justifications easier when they are behaving in line with their short-term goals. The reason is that individuals perceive prospective failure in committing to their long-term goal and the anticipation of a potential failure leads to negative emotions such as guilt and regret. Supporting evidence has been demonstrated in a number of studies (e.g., Xu & Schwarz, 2009; Khan & Dhar, 2006; Kivetz & Zheng, 2006). For example, Xu and Schwarz (2009) conducted two studies to test the effect of justifications on how individuals feel after indulgent consumption. In their first study, they showed that consumers expect to feel more negative and less positive affect when they let themselves indulge without a reason, compared to indulging with a reason. Furthermore, in the second study, they showed that the nature of the reason was also important in determining how consumers expect to feel. More specifically, while indulging as a way of consoling oneself was expected to increase negative affect, indulging to reward oneself was not related to further affective changes, overall suggesting that consumers believe to feel more negative affect if they indulge without a reason or with a reason of soothing themselves.

On the other hand, other researchers explained the self-licensing mechanism as a process of motivated reasoning (Okada, 2005; De Witt Huberts et al., 2014b). These studies argue that, although people are inherently motivated to consume hedonic products, they are less likely to behave hedonically when the environment they are in makes it harder to have valid justifications to indulge themselves. For example, in their study, De Witt Huberts et al. (2014b) told that the study is a taste-task study in which they will be presented with a chocolate of a luxurious brand that will be out in the market in near future. Participants answered questions on how tempting, attractive and delicious they found the chocolate. Afterward, participants were given a 30-item list of reasons such as effort, achievement and negative mood, and asked to indicate the reasons that applied to them. The results show significant relationships between the ratings for the chocolate and the number of reasons provided. Participants indicated more reasons if they found the product tempting, suggesting that self-licensing may emerge as a result of motivated reasoning processes. Consuming a hedonic and tempting product was perceived as something that needs more justification by the participants. Thus, evidence on self-licensing is mixed, such that self-licensing can also facilitate goal attainment (Coelho do Vale, Pieters and Zeelenberg, 2016) as well as hinder it De Witt Huberts et al. (2012).

1.3. Functional and Dysfunctional Self-licensing

Not all self-licensing acts are detrimental and self-licensing has two sides of it (Prinsen et al., 2018). Functional self-licensing and dysfunctional self-licensing differ in terms of how people perceive occasional diet deviations. In functional self-licensing, deviating from the diet is permitted and it is thought that these deviations increase adherence to the diet in the long-run. Incorporating cheat day/meal in the diet helps the individual to persist while keeping and even at times enhancing the dieting motivation. For this reason, diet deviations are perceived as more of promoting goal striving, rather than a threat to the diet. On the other hand, dysfunctional self-licensing relates to the opposite of this perception. Dysfunctional dieter tends to perceive all diet deviations as a failure and for this reason, these diet deviations are perceived as a threat to the diet rather than something that helps to adhere. Due to this threat perception, dysfunctional self-licensing is more likely to result in quitting dieting altogether.

In their study, Prinsen and her colleagues (2018) tested the functional and dysfunctional self-licensing in a diary study. Participants were asked to indicate the snacks they consumed in an online diary for a week. After converting the snacks to their respective caloric values, they

investigated the relationship between participants' score on the functional and dysfunctional self-licensing scale and their caloric intake. It is found that higher scores on dysfunctional self-licensing predict higher snack intake; higher scores on functional self-licensing predict lower snack intake. Moreover, these associations were still present after controlling for the self-control statistically. Building on previous evidence (De Witt Huberts et al., 2012), these results pointed out the role of self-licensing in predicting diet success. Especially, the effect of functional and dysfunctional on diet adherence and diet success should not be neglected in future studies. Moreover, this is the only study conducted so far on the distinct effect of functional and dysfunctional self-licensing on snack consumption. Although existing evidence revealed important findings regarding snacking behavior, we need more research to understand the dynamics underlying the unique effects of functional and dysfunctional self-licensing and how they operate across different individuals.

2. INDIVIDUAL DIFFERENCES MODERATING SELF-LICENSING

2.1. Unhealthy Snacking Habits

Another construct that should be taken into consideration when explaining healthy eating is behavior is unhealthy snacking habits (Verhoeven, Adriaanse, Evers & de Ridder, 2012). When we define habits in broad terms, habits constitute the behaviors that develop through repeated actions that are done under the same situational contexts to reach a particular goal (Aarts & Dijksterhuis, 2000; Orbell & Verplanken, 2010; Ouellette & Wood, 1998). Habits are activated by the contextual cues which are defined as features of the environment in which habitual behavior is usually enacted (Neal, Wood, Labrecque & Lally, 2012). Habits can override the individual's active intentions to commit to a long-term goal because they are thought to be automatic, environmentally triggered and precede over more thoughtful actions (Verplanken & Wood, 2006; Ji Song & Wood, 2006). It is this automatic, cue-dependent nature of habits that makes it resilient to change.

The obesogenic environment is full of triggering cues for overeating which may make it burdensome for a person who is trying to overcome his/her unhealthy eating habits. This is because constant self-monitoring and enhanced vigilance to deviations eventually deplete cognitive resources, which in turn makes individuals more vulnerable following their dieting goals (Quinn & Wood, 2006). Moreover, studies show that strong habits override the influence of goals through activation of the contextual cues (Neal et al., 2012; Verhoeven et al., 2012). For example, Neal et al. (2012) found that habitual runners who were primed with contextual cues of running recognized the words running and jogging quicker than habitual runners who were primed with goal-related cues for running. However, while goal-focused priming did not increase the speed of reaction time in participants with low or strong habits, moderate habit participants responded faster to goal priming, showing that goal cues have an influence only when the target behavior is not strongly habituated. These results indicate that contextual cues, compared to goal-focused cues, trigger mental representations of habitual behavior more automatically especially for participants with a strong habit. Nevertheless, the results suggest moderate habit participants can still benefit from having a goal in mind. In a similar fashion, Verhoeven et al. (2012) conducted a diary study with a large community sample (N = 1,103) and tested the importance of habit strength on unhealthy snack consumption. They found that unhealthy snacking habit was the most important predictor of unhealthy snacking, after

controlling for demographic variables and, more importantly, intention to eat healthily. For that reason, dysfunctional self-licensers who do not tend to tolerate deviations by definition can be more likely to stop dieting if they have a habit of unhealthy snack eating.

2.2. Weight-related Self-efficacy

Self-efficacy has been defined as the perceived ability of the individual in performing a task or reaching a goal (Bandura, 1977, 1997). Individuals who have high self-efficacy are more likely to be committed to their goal and achieve, compared to those with low self-efficacy. Self-efficacy is found to be domain-specific, meaning that having high self-efficacy in one domain does not lead to high self-efficacy in other domains. Numerous studies have investigated self-efficacy in the context of behaviors that require self-regulation, including academic achievement (Lent, Brown, & Larkin, 1984), physical activity (Linde, Rothman, Baldwin & Jeffery, 2006; Annesi & Gorjala, 2010), and of importance, weight-loss-related behaviors (Byrne, Barry & Petry, 2012; Hays, Finch, Saha, Marrero & Ackermann, 2014; Shin et al., 2011). Overall, these studies have found that having a high level of self-efficacy was a predictor of weight-loss which stresses the importance of weight-loss-related self-efficacy in the context of eating behaviors.

Individuals aiming to lose weight have to show considerable persistence and reliance in themselves in goal pursuit, even at times they are faced with a barrier or occasionally deviate from their goal. For that reason, it is important to consider weight-loss-related self-efficacy in relation to the distinction between functional and dysfunctional self-licensing. Losing weight is a relatively lengthy process and dieters should expect barriers, hard times and goal deviations in it. Functional self-licensing becomes more important at this level because functional self-licensers do not perceive occasional deviations as threatening as dysfunctional self-licensers, instead they find them motivating. Therefore, functional self-licensers with high weight-related self-efficacy may especially benefit from these qualities in reducing their snack intake.

2.3. Cognitive Flexibility

In considering the distinction between functional and dysfunctional self-licensing, in addition to weight-loss-related self-efficacy, another construct seems important as well, namely, cognitive flexibility. Cognitive flexibility refers to a person’s recognition that in any given

situation there are multiple ways of doing and alternative angles of thinking things (Martin & Rubin, 1995). Cognitively flexibility has been linked to people's easier adaptation to the situation by believing in themselves that they can, by all means, choose other options or alternatives as well. Being cognitively flexible allows a person to free himself/herself from the belief that there is only one proper or correct way of behaving. In that sense, the cognitive flexibility phenomenon is related to self-licensing behaviors, especially to functional self-licensing in a way to support individuals in their dieting endeavor. That is, even if a functional self-licenser consumes high-calorie snacks, he/she can come up with solutions to compensate it later, such as eating a salad in the evening or having half an hour more walk than usual that day. Expecting not to fall prey to a single instant of diet deviation is not very realistic and extremely resource-depleting. When individuals acknowledge that there will be instances of deviation, cognitive flexibility provides individuals alternative tools aiding their cognitions and decision-making process so that they can come up with ways of counteracting occasional deviations. In this regard, cognitive flexibility may help functional self-licensers in adhering to their diet and eventually reaching their diet goal, however, how dysfunctional self-licensing and cognitive flexibility is related is an important question that needs to be addressed empirically. Inversely, dysfunctional self-licensing might be associated with a lack of cognitive flexibility by way of focusing too much on a single instance of diet deviation rather than perceiving dieting as a long process with ups and downs.

2.4. Impulsivity

Dual-process models (Metcalfe & Mischel, 1999; Strack & Deutsh, 2004) suggest that behavior is determined by reflective and impulsive processes. Impulsivity can be defined as the proclivity to act without deliberation (Hofmann, Friese & Wiers, 2008). While reflective processes mostly lead to deliberate and thoughtfully-decided behaviors, impulsive processes result in automatic behaviors that occur outside of conscious awareness (Strack & Deutsh, 2004). The reason is tempting stimuli trigger impulsive actions that have high hedonic and motivational value (Milyavskaya & Inzlicht, 2017).

A similar line of reasoning applied to eating behavior as well. Impulsive tendencies make individuals more prone to binge eating when they encounter tempting food stimuli and previous research provided supporting evidence that impulsivity is associated with higher snack eating and eating disorders (Benard et al., 2019). For example, Guerrieri and her friends (2009) found

that when participants are cognitively induced (Study 1) or behaviorally instructed (via the Stop Signal Task; Study 2) to be impulsive, their caloric intake was significantly higher than the other group of participants who were induced to inhibit. In a further study, Nederkoorn et al. (2009) investigated when individuals are more prone to impulsivity which showed when to be especially wary about impulsivity. More specifically, impulsive participants who were put in a virtual supermarket bought food with higher calories, but only those participants who felt hungry at the time of the study which indicates the importance of having enough inhibitory resources. These studies show that impulsivity puts people in a vulnerable position, especially if they lack resources to inhibit their impulses. When a tempting stimulus, which is in conflict with the long-term goal, is encountered impulsive people have more difficulty in overriding their impulses by using self-regulatory resources, leading them to fail in their goal-pursuit. For this reason, we believe that dysfunctional self-licensers with impulsive tendencies may face an especially hard time when they encounter a high-caloric food.

2.5. Emotional Appetite

Mood and emotions accompany eating contexts more than we may be aware of. They can influence eating behavior but what we eat may change how we feel as well. Gibson (2006) suggests that food choice can be affected by physiological changes resulting from current mood and emotions and they can influence our appetite. Galef (1996) suggested that understanding food choices people make can be achieved by investigating the interaction between the individual, and the ecological and social context. On the one hand, celebrations, parties and feasts can be given as examples in which most people are in a positive mood and consume much food. On the other hand, some people may indulge themselves with palatable foods or snacks to improve their mood when they are feeling down (Adriaanse, de Ridder, & Evers, 2011). These people may desire to avoid negative emotions by means of overeating which constitutes a serious problem for the development of obesity and especially in the contexts where food is relatively cheap, plentiful and served in quite large portions which make it easier for people to gain weight (Spoor, Bekker, Van Strien, & van Heck, 2007; Mitchell, Catenacci, Wyatt, & Hill, 2011).

The role of emotions in eating behavior should be taken into account, especially in the context of self-licensing where justifications are used to alleviate the negative affect. As mentioned above, previous research suggested that justifications reduce the anticipated negative affect that

would stem from behaving at odds with the long-term goal if no justifications were to be used (Connolly & Reb, 2005; Connolly & Zeelenberg, 2002). Moreover, emotions active at the time of eating may also be used as a justification for the person to license himself/herself (e.g., "I feel sad, so this chocolate can make me feel better"). And after repeated times, individuals form an association between particular emotions and eating behavior. For example, Lowe and Levine (2005) suggested that classical conditioning develops between foods and emotions which maintains its motivational aspects even one is not in energy depletion (e.g., "It is time to eat some ice cream since I am downbeat). If emotional arousal is associated with consuming unhealthy food, then dysfunctional self-licensers can have a hard time adhering to their diet. Although there has been no evidence directly addressing the link between self-licensing and emotional state, it is important to understand how self-licensing operates in emotional eating and to characterize under which negative emotions participants consume more unhealthy snacks.

2.6. The Current Study

Self-licensing literature shows that a diverse variety of justifications is used, rather feeling less negative, to cross to the dark side of the self-regulatory dilemmas. Studies found that people are more likely to self-license themselves if they made an effort (De Witt Huberts et. al., 2012); previously restraint themselves (Mukhopadhyay & Johar, 2009); behaved altruistically (Khan & Dhar, 2006); and acted morally (Monin & Miller, 2001). In this study, we focused on the healthy and unhealthy eating behavior of young adults and aimed to examine how functional and dysfunctional self-licensing is related to individuals' caloric intake over a week. However, previous studies did not account for the effect of snack eating habits which was showed to be very important for caloric intake (Adriaanse et al., 2014). The effect of habits on our decision-making processes and behaviors, coupled with the hard-to-change nature of habits, requires this line of work to incorporate habits into their studies. So far there is no study that investigated self-licensing and snack eating habits in the literature. For that reason, it is critical to include snack eating habits, which is left out in the self-licensing literature, in investigating young adults' diet success. Specifically, participants were asked to send each snack (except meals) they have consumed on that day for seven days, with the purpose of examining the interaction between snack eating habits and functional and dysfunctional self-licensing. In addition to these, a number of previous studies that examine self-licensing have used non-behavioral dependent measures in assessing self-licensing (De Witt Huberts et al., 2014b; Prinsen et. al.,

2016). In this study, however, participants are required to provide behavioral measures by sending each snack they have consumed for a week.

It is expected that the amount (in terms of caloric value) of snack consumed would differ depending on their tendencies for functional and dysfunctional self-licensing. In addition, people with unhealthy snacking habits and high dysfunctional self-licensing scores should consume even more snacks in a week. The reverse is predicted as well, such that low unhealthy snacking habits and high functional self-licensing scores should consume fewer snacks. The correlational relationship of self-control, cognitive flexibility, weight-related self-efficacy, impulsivity and emotional appetite with functional and dysfunctional self-licensing were also investigated. With this study, we were also able to conduct a reliability analysis of the Turkish version of functional and dysfunctional self-licensing scale which is rather a new construct (Prinsen et. al., 2018). First, the scale was translated into Turkish by the first author and the second author reverse-translated it to English. After gathering the data from the participants, the reliability analysis was conducted. The second but more important aim was to investigate whether functional and dysfunctional self-licensing predict the amount of snack eaten. This main effect analysis will support (if it predicts) recent evidence that functional and dysfunctional self-licensing is a reliable and valid predictor of snack intake.

In addition to these aims, functional and dysfunctional self-licensing were investigated with other variables that are thought to be related to snack eating behavior. These variables are unhealthy snack eating habits, weight-related self-efficacy, cognitive flexibility, impulsivity and emotional appetite. In the literature, the relationship of self-licensing with these variables are never examined, so it is important to investigate these relationships to fill the theoretical gap.

The hypotheses related to functional and dysfunctional self-licensing and other variables are presented below:

1) A high dysfunctional self-licensing score should predict higher unhealthy snack intake consumed in a week, after controlling for the effect of self-control and BMI of the participants.

1a) Those participants who have high snacking habits and high dysfunctional self-licensing scores should consume even more unhealthy snacks in a week.

1b) Those participants who have high dysfunctional self-licensing and high impulsivity scores should consume even more unhealthy snacks in a week.

1c) Those participants who have high dysfunctional self-licensing and high emotional appetite score should consume even more unhealthy snacks in a week.

2) A high functional self-licensing score should predict lower unhealthy snack intake consumed in a week, after controlling for the effect of self-control and BMI of the participants.

2a) Those participants who have low snacking habits and low functional self-licensing score should consume even fewer unhealthy snacks in a week.

2b) Those participants who have high functional self-licensing and high weight-related self-efficacy score should consume even fewer unhealthy snacks in a week.

2c) Those participants who have high functional self-licensing and high cognitive flexibility score should consume even fewer unhealthy snacks in a week.

CHAPTER 2

3. METHOD

3.1. Participants

Participants consisted of undergraduate students from Kadir Has University who were recruited to the study in exchange for course credit. In order to receive credit for participating in the study, participants had to fill the self-report measures using an online survey and then enter at least 6 days of the snack diary. A total of 153 participants filled the main measures on Qualtrics. Participants who did not adhere to the participation rules and had missing entries more than a day were excluded from the data (N = 22) and their snack entries were discarded as well. One hundred and thirty-one participants with an age range of 18 to 33 (M_{age} = 21.02, *SD* = 1.61, 89% female) remained in the final data set.

Contrary to most of the eating behavior studies which collect data from women, we wanted to collect data from men as well and there were no eligibility criteria for participation.

3.2. Measures

3.2.1. Demographics, dieting intentions and motivations

After providing their informed consent (See Appendix A.1), participants answered demographic items which include age, sex, height, weight, diet frequency and current diet status (Yes/No). Items on dieting intentions and motivations were taken directly from Prinsen et al. (2018). Sample items (see Appendix A.2 for full items) include "I am motivated to lose weight", "I try to eat more healthily", which are assessed on a 7-point scale (1 = not at all, 7 =very much).

3.2.2. Revised restraint scale

Revised Restraint Scale was developed to assess individuals' tendency to limit food intake in order to lose or control body weight which is conceptualized as the intentional caloric restriction (Herman, Polivy, Pliner, Threlkeld, & Munic, 1978). The 10-item scale was used to assess participants' restraint eating practices, with a minor change in scaling of one of the items. In item 1 ("How often are you dieting?"), the original scale ranged from never (0) to always (4) but we changed the scale of the item to "I never diet", "2-3 times a month", "once a month", "I start a new diet after 1-2 weeks quitting the one before", and lastly "I always diet". We thought that the original scaling neglects specific information for the frequency of participants' dieting practices. Besides this change, all the other scaling in the items was used as in the original scale. Because there was not an adaptation of the scale to Turkish, we translated the scale to Turkish. The scale consists of two subscales which are "concern for dieting" (CD; $\alpha = .66$) and "weight fluctuation" (WF; $\alpha = .67$). Although the Cronbach's alpha of the subscales can be considered low, alpha of the WF subscale is found to be similar to the several other adaptations of the scale (i.e. WF $\alpha = .68$; Strien et. al., 2006) Example items for the CD subscale include "Do you give too much time and thought to food?", "How conscious are you what you are eating?" Moreover, "What is the maximum amount of weight (in kilos) you have ever lost within 1 month?", "How many kilos over your desired weight were you at your

maximum weight?" can be given as example items to the WF subscale. Participants rated some of the items on a 5-point scale and some on a 4-point scale, by which higher scores indicated greater endorsement for a given item. (See Appendix A.3)

3.2.3. Functional and dysfunctional self-licensing scale

Functional and dysfunctional self-licensing scale was developed and validated by Prinsen et al. (2018) which involves 10-item for functional and 10-item for dysfunctional self-licensing. Participants answered 20-item on a scale from 1 (does not apply to me at all) to 7 (totally applies to me). The main difference between functional and dysfunctional self-licensing is perceiving occasional indulgences either motivating (e.g. cheat day/meal) or threatening (e.g. what-the-hell effect), respectively. Previous research found that while functional self-licensing was associated with lower snack intake, dysfunctional self-licensing was found to be related to higher snack intake (Prinsen et al., 2018).

The items were translated to Turkish by the researcher and translated back to English by the supervisor to be sure translations do not make items ambiguous. A sample item from functional self-licensing is "When I try to stick to a healthy diet, a small portion of bad foods every now and then is enough to keep me motivated."; and from dysfunctional self-licensing is "When I want to eat bad foods, I search for reasons that allow me to indulge" (See Appendix A.4).

Reliability analysis was performed separately on functional and dysfunctional self-licensing scales. In the 10-item functional self-licensing scale, the 10th item was dropped from further analyses because it had a low inter-item correlation with the other items. (r's < .26). Overall, all coefficients suggest good internal consistency of the scales (α = .90 for functional self-licensing; α = 87 for dysfunctional self-licensing).

A principal axis factor analysis with Promax rotation was conducted on the 19 items of the functional and dysfunctional self-licensing scale. We used Promax rotation because it allows factor structures to be correlated, as they are theoretically expected to correlate. Bartlett's test of sphericity was significant ($p < 0.001$) and the KMO measure of sampling adequacy was 0.86. The results showed that three components have eigenvalues greater than 1. However, only the first two components explained a significant amount of

variance, as was indicated by the scree plot. These two components explained 52.7% of the total variance. The third component explained 6,3% of the total variance and it consisted of 2 items with component loadings greater than .40. The pattern matrix of the first two components indicated that all loadings were higher than > .46. Table 3.1 shows the component loadings of the two factors.

Table 3.1. Factor Loadings of the Functional and Dysfunctional Self-Licensing Scale

	Items	Factor Loadings
Factor 1: Dysfunctional self-licensing		
1	Kendimi sağlıksız yiyeceklerle çok kolay ödüllendiriyorum.	.89
2	Yediğim sağlıksız yiyecekleri telafi etmek istediğimde, bu niyetimi genelde gerçekleştirmiyorum.	.47
3	Sağlıksız yiyeceklerle kendimi şımartmaya çok kolay ikna olurum.	.76
4	En sevdiğim sağlıksız yiyeceğim indirime girdiğinde satın alma ihtiyacı hissederim.	.58
5	Diğer insanların sağlıksız yiyecekler yediğini gördüğümde, benim de yemeye hakkım olduğunu hissederim.	.61
6	Sağlıklı beslenmeye başlamadan evvel sağlıksız yiyecekleri “son kez” yemeye eğilimim vardır.	.48
7	Kötü hissettiğimde ne istersem onu yerim.	.49
8	Çaba gerektiren aktivitelerden sonra sağlıksız yiyecekleri tüketmeye dair kendime çok kolay izin veririm.	.57
9	Sağlıksız yiyecekler yemek istediğimde, kendimi şımartmaya izin verecek sebepler ararım.	.67
10	Diyet yaparken, sıklıkla aniden ufak bir kaçamak yapma zamanı olduğuna karar veririm.	.46
Factor 2: Functional self-licensing		
1	Sağlıklı bir diyete bağlı kalmaya çalışırken, ara sıra ufak porsiyonlarda sağlıksız yiyecekler tüketmek beni motive etmek için yeterli olur.	.67
2	Benim için, sağlıklı bir diyet ancak ölçülü derecede sağlıksız yiyecek içerdiği vakit yapılabilir.	.58
3	Diyet yaparken, ara sıra sağlıksız yiyecek yiyorum; diğer türlü, daha uzun süre boyunca diyetimi uygulamak için yeterli motivasyona sahip olmazdım.	.77
4	Sağlıklı bir diyete uzun bir süre boyunca bağlı kalmak için, bazen ufak kaçamaklar için kendime izin vermem benim için önemlidir.	.80
5	Sağlıklı bir diyete bağlı kalabiliyorum çünkü ara sıra en sevdiğim sağlıksız yiyeceklerden tüketebileceğimi biliyorum.	.86
6	Ufak porsiyonlarda sağlıksız yiyecekler can çekmelerimi tatmin etmek için yeterlidir.	.62
7	Bana göre dengeli bir diyet ölçülü derecede bazı sağlıksız yiyecekleri de içerir.	.74
8	Diyet planlarıma dahil edildiklerinde sağlıksız yiyecekleri yemek beni çatışma içerisinde hissettirmez.	.73
9	Geri kalan zamanda sağlıklı diyetime bağlı kalabilmek adına bazen sağlıksız yiyeceğe dair can çekmelerimi tatmin ederim.	.73

3.2.4. Brief self-control scale

Brief Self-control Scale (Tangney, Baumeister, & Boone, 2004) was used (α = .80) to assess participants' self-control levels. The scale was adapted to Turkish by Nebioglu, Konuk, Akbaba and Eroglu (2012). The scale consists of 13-items (i.e., "I am able to work effectively toward long-term goals", "Sometimes I can't stop myself from doing something, even if I know it is wrong.") that participants rated on a range from 1 (totally disagree) to 5 (totally agree). Internal consistency was found reliable for the scale (α = .80) (See Appendix A.5).

3.2.5. Unhealthy snacking habits scale

We assessed participants' unhealthy snacking habits with the Self-Report Habit Index (SRHI; Verplanken & Orbell, 2003). The original scale was devised to measure habitual features (behavior repetition, automaticity and expressed identity) of any behavior (e.g. "Behavior X is something I do frequently"), so we adapted to capture participants' snacking habits. The Turkish adaptation of the scale was not done, so the first author translated the items to Turkish and the supervisor back-translated and compared. Answers were given on a range from 1 (totally disagree) to 5 (totally agree). A sample item is "Eating unhealthy snacks is something I do frequently" (α = .91) (See Appendix A.6).

3.2.6. Weight-related self-efficacy scale

Wilson et al. (2016) developed brief self-efficacy scales to be used in a number of domains but here we used only the scale that taps into participants' perceived self-efficacy in losing weight to see the extent people perceive themselves as efficiently regulating their weight-loss behaviors. Example items include "How confident are you that you can lose weight even if you need a long time to develop the necessary routines", "How confident are you that you can lose weight even if you have to rethink your entire way of losing weight." Participants answered 4-items, ranging from 0% (Not at all confident) to 100% (Completely confident) (α = .95) (See Appendix A.7).

3.2.7. Cognitive flexibility scale

Cognitive Flexibility Scale (Martin and Rubin, 1995) was developed to assess one's efficacy in communicating across alternatives in a situation. The scale consists of 12 items (e.g., "I have many possible ways of behaving in any given situation", "I can communicate an idea in many different ways") that participants rated from 1 (Totally disagree) to 6 (Totally agree). We used the Turkish version (Altunkol, 2017) of the scale which has been shown to have comparable psychometric properties with the original scale ($\alpha = .85$) (See Appendix A.8).

3.2.8. Barratt's impulsivity scale

We measured participants' trait impulsivity using the short form of Barret's Impulsivity Scale (Patton and Stanford, 1995). The scale involves 15 items (e.g., "I do things without thinking"). Participants rated the items on a 1 to 4 Likert scale, in which greater scores indicated higher impulsivity. The Turkish adaptation of the scale was made by Tamam, Güleç and Karataş (2012). Internal consistency reliability of the scale was found to be high as in the original scale. ($\alpha = .81$) (See Appendix A.9).

3.2.9. Emotional appetite questionnaire

Geliebter and Aversa (2003) developed the Emotional Appetite Questionnaire (EMAQ) and showed that it is a reliable and internally consistent scale to assess emotional appetite. The Turkish version (Demirel et al., 2014) of the EMAQ was used. The scale measures changes in the amount of eating under different emotions. We did not include all of the emotions in the original scale and assessed only those emotions that were shown to be a predictor of eating in the self-licensing literature (De Witt Huberts et al., 2014). Participants reported whether they eat less, same or more under given emotions. These emotions are sadness, boredom, angry, anxious, tired, pessimist and alone. The scale ranged from 1 (eating less than normal), 5 (eating as usual) and 9 (eating more than usual) ($\alpha = .78$) (See Appendix A.10).

3.2.10. Snack diary

Each night for seven days, participants were sent a link and they filled the snack diary (See Figure 3.1). In diaries, participants reported the amount of each snack they submitted, whether as a package, handful, pieces or glasses; the type of each snack and drink they consumed that day from waking up to before going bed (they were limited to send 10 snacks and drinks per day); lastly, we collected the data of the time each snack is eaten and drank by asking participants to record the time. Additionally, they reported whether a snack substituted for a meal, did they have enough sleep last night (ranging from 1 to 10) and perceived stress of the day (ranging from 1 to 10).

Figure 3.1. Snack Diary

	Yediğiniz Adet veya Miktar	Yediğiniz Atıştırmalık	Yediğiniz Saat
Atıştırmalık 1			
Atıştırmalık 2			
Atıştırmalık 3			
Atıştırmalık 4			
Atıştırmalık 5			
Atıştırmalık 6			
Atıştırmalık 7			
Atıştırmalık 8			
Atıştırmalık 9			
Atıştırmalık 10			

3.3. Data Preparation

In total, participants sent 3353 entries of snacks and drinks. Each of these snack and drink entries was transformed to their caloric value. The caloric value of the snacks assessed by multiplying the amount of the snack eaten with the caloric value of the snack. The caloric values were obtained from different sources to be sure of the reliability of the snacks' caloric values. For the packaged snacks, the caloric information at the back of the packages was used. For those snacks and drinks that are not packaged, the caloric information was taken from the Turkish Nutrition Guideline (Türkiye Beslenme Rehberi, 2015), https://www.diyetkolik.com/kac-kalori/, https://www.diyetasistan.com/besinler-kac-kalori.html, https://www.kackalori.com.tr/KaloriCetveli/ to be sure of the caloric values.

After calculating each of the snacks and drinks' caloric value, they were transformed into several different indexes. These indexes were differentiated based on either being daily mean or mean entry of caloric intake. Daily mean indexes were healthy snack mean, healthy drink mean, unhealthy snack mean and unhealthy drink mean, healthy snack and drink mean (mean of both healthy snacks and drinks' mean) and lastly, unhealthy snack and drink mean (mean of both unhealthy snacks and drinks' mean). The mean of any of the above variables for a participant was calculated by dividing the sum of caloric intake by 7 (or 6 if a snack diary is missing). The other indexes were computed by dividing total calorie to the number of entries, such as mean caloric intake by entry (both snacks and drinks combined), mean snack entry and mean drink entry. Besides fruits, vegetables and yogurt, all the rest of the snacks were coded as unhealthy snacks. In a similar vein, tea, sugar-free coffee, milk and mineral water were coded as a healthy drink and the rest (coke, alcoholic beverages, etc.) were coded as an unhealthy drink (See Table 3.2 for descriptions).

Table 3.2. Description of the Dependent Variables

Dependent variables	Description
Healthy snack mean	Sum of calories taken by healthy snacks, divided by 7
Healthy drink mean	Sum of calories taken by healthy drinks, divided by 7
Unhealthy snack mean	Sum of calories taken by unhealthy snacks, divided by 7
Unhealthy drink mean	Sum of calories taken by unhealthy drinks, divided by 7
Healthy snack and drink mean	Sum of calories taken by healthy snacks and drinks, divided by 7
Unhealthy snack and drink mean	Sum of calories taken by unhealthy snacks and drinks, divided by 7
Highest calorie	The day of the week the most calorie is consumed
Mean caloric intake by entry	Sum of calories taken by snacks and drinks, divided by the number of entries

3.4. Procedure

Participants were informed about the study through class announcements. Participants first filled an online application form to be able to participate in the study (https://docs.google.com/forms/d/1_uEs0OotsyGLAhsmukog1e2C5Lerkn_HU7wgWhjjNlE/edit) where they give the information of name, e-mail address, phone number and which course they would like to take credit from. Afterward, they were contacted in groups of 20 on Sundays and Wednesdays (whenever there are 20 people) to fill the self-report measures of the study on Qualtrics. Moreover, they were told that the day after they will be starting to send each snack and drink they consume for 7 days which was also collected on Qualtrics. From the next day on, they noted down the snacks and drinks (except water) they had consumed, together with the information of quantity, brand and the time consumed (see Figure 1). In order to reduce the effect of recall bias, they were explicitly asked to take a note at the time of consuming snacks and drinks and were also sent a text message at 14.30 to remind them not to forget taking notes. For the next seven days, the link was sent to participants at 23.59 to fill the snack diary and they were also asked to send the screenshots of the notes they have taken. Given that some participants may go to sleep before or eat after the link was sent, they were allowed to complete the diary if they think they will not consume anything else or first thing in the morning. After completing the last diary, they were thanked and debriefed about the purpose of the study.

CHAPTER 3

4. RESULTS

We organize the data analyses in three sections. Inıtially, we provided the descriptive and bivariate correlations of both the main measures and dependent variables. Next, the main hypotheses were tested which were specified in the pre-registration (https://osf.io/a2xgd/?view_only=8b7c5181a2344de98896ef14e930b110). Finally, the results of the exploratory analyses were presented.

4.1. Descriptive and Correlation Analyses

For all of the analyses below, an independent samples t-test analyses with gender as the grouping variable was performed to see whether there are differences based on the gender of the participants. These t-test analyses results were reported only if a significant effect of gender was found. Otherwise, gender groups were collapsed to increase the power of the analyses.

Participants were asked the degree to which they are dieting in their daily lives. Of the 131 participants, 67 (51%) indicated they never diet and 35 (27%) stated once every 2-3 months. Only 8 (6%) of the participants were dieting all the time. When asked whether they are dieting or not at the time of the data collection, a chi-square test of independence indicated that males and females differed in their dieting status, $\chi^2(1, N = 131) = 5.14$, $p < .023$. 38% of the females were dieting at the time of the data collection. However, of the 14 males in the data, only 1 of them was dieting.

We asked the participants about their dieting-related cognitions and motivations. Those participants who stated that they never diet were not asked to rate the degree to which they agree to these items. As can be seen in Table 4.1, the remaining 64 participants indicated that they have frequent dieting experience, they perceive themselves somewhat successful in their diet pursuit; find important to stick to their diet; are relatively less motivated to stick to their diet and to lose weight. We also asked all of the participants to what degree they are trying and motivated to eat

healthy foods. The means suggest that participants are moderately inclined and motivated to incorporate healthy alternatives to their diet.

Table 4.1. Descriptives for the Participants' BMI, Age and Dieting Intention and Motivations

	Male (*N* =14)	Female (*N* =117)	Total (*N* =131)
	Mean (*SD*)	Mean (*SD*)	Mean (*SD*)
BMI	23.15 *(2.64)*	21.42 *(3.95)*	21.61 *(3.86)*
Age	21.64 *(1.15)*	20.95 *(1.65)*	21.02 *(1.62)*
Experience with dieting*	4.20 *(0.84)*	3.95 *(0.90)*	3.97 *(0.89)*
Feelings of dietary success*	4.40 *(0.54)*	3.07 *(1.14)*	3.17 *(1.16)*
Diet importance*	4.20 *(0.45)*	3.81 *(0.82)*	3.84 *(0.80)*
Diet motivation*	4.40 *(0.54)*	3.07 *(1.14)*	3.17 *(1.16)*
Trying to lose weight*	2.40 *(0.54)*	3.56 *(1.34)*	3.47 *(1.33)*
Motivation to lose weight*	2.60 *(0.54)*	3.25 *(1.12)*	3.20 *(1.10)*
Trying to eat healthy	2.71 *(1.14)*	3.32 *(1.09)*	3.24 *(1.10)*
Motivation to eat healthy	1.93 *(0.27)*	3.32 *(1.15)*	3.26 *(1.16)*
Currently dieting	1 (7.1%)	44 (37.6%)	45 (34.4%)

Note. *Participants who were never on a diet before were not asked these items (N_M = 5; N_F = 59; N_T =64)

The number of snack and drink entries sent by the participants is 3353 in total. Of these 3353 snacks, 581 (17.3%) were healthy snacks, 1577 (47%) were unhealthy snacks, 850 (25.4%) were healthy drinks and 345 (10.3%) were unhealthy drinks (See Methods section for healthy-unhealthy snack differentiation). See Table 4.2 for means and standard deviations of the snack and drink consumption. Moreover, participants indicated the time they have eaten or drunk these snacks and beverages of which 17% were consumed between 08.00 and 13.00. More than half (57%) of them were consumed between 13.00 and 21.00. To some degree, participants can be described as late-night snackers, as 26% of the snacks were consumed after 21.00 to the next morning. These cut-off points are arbitrary but the reasoning behind was to capture those snacks that are consumed between breakfast and lunch (08.00-13.00), lunch and dinner (13.00-21.00) and after dinner (21.00 until next morning). Previous studies (Duffey, Pereira & Popkin, 2013) that investigate late-night snacking considered those snacks that are consumed after 21.00 as late-night snacks.

Table 4.2. Means and Standard Deviations of the Snack and Drink Consumptions

	Dependent Variables	M	SD	Minimum	Maximum
1	Healthy Snack Mean	61.89	48.72	0	204.29
2	Healthy Drink Mean	24.89	30.08	0	178.29
3	Unhealthy Snack Mean	429.64	244.85	39.71	1454.71
4	Unhealthy Drink Mean	52.54	64.30	0	335.14
5	Healthy Snack and Drink Mean	86.79	59.40	0	291.71
6	Unhealthy Snack and Drink Mean	482.19	269.33	61.86	1789.86
7	Highest Calorie	1053.88	482.22	270	2906
8	Mean Calorie Intake by Entry	163.82	62.52	59.54	331.50

Note. Means are reported in caloric values.

4.2. Bivariate Correlations

Table 4.3 shows the correlations between the main measures of the study. One of the target variables, dysfunctional self-licensing was highly correlated with all of the main measures (all p's < .01, except BMI which is $p < .05$). Functional self-licensing, on the other hand, was significantly correlated with brief self-control (r = -.25, $p < .01$) and unhealthy snacking habit (r = .31, $p < .01$). Unhealthy snacking habit was also significantly associated with weight-related self-efficacy (r = -.38, $p < .01$), impulsivity (r = .28, $p < .01$) and negative emotional appetite (r = .24, $p < .01$).

Table 4.3. Bivariate Correlations Among Variables

		M(*SD*)	1	2	3	4	5	6	7	8	9	10	11	12
1	BMI	21.61 (*3.86*)	.											
2	Restraint Eating	2.31 (*0.58*)	.47**	.										
3	Functional Self-licensing	3.99 (*1.33*)	-.05	.03	.									
4	Dysfunctional Self-licensing	4.17 (*1.32*)	.21*	.23**	.36**	.								
5	Brief Self-control	3.22 (*0.59*)	-.04	-.18*	-.25**	-.57**	.							
6	Unhealthy Snacking Habit	3.14 (*0.81*)	.19*	.03	.31**	.68**	-.43**	.						
7	Weight-related Self-efficacy	61.34 (*23.40*)	.08	.07	-.08	-.40**	.28**	-.38**	.					
8	Cognitive Flexibility	53.25 (*8.27*)	.10	-.17*	.03	-.27**	.34**	-.16	.33**	.				
9	Impulsivity	1.93 (*0.40*)	-.08	.12	.12	.40**	-.67**	.28**	-.34**	-.44**	.			
10	Emotional Appetite Questionnaire	4.89 (*1.73*)	.28**	.30**	.02	.24**	-.08	.24**	-.16	-.11	.17	.		
11	Unhealthy Snack Mean	429.64 *(244.85)*	-.14	-.29**	.07	.13	.11	.21*	-.12	.06	.02	.02	.	
12	Healthy Snack Mean	61.89 *(48.72)*	-.16	-.11	-.08	-.18	.22*	-.31**	.22*	.17	-.09	-.07	.06	.

Note. *p < .05; **p < .01, two-tailed.

4.3. Results of the Main Hypotheses

In this section, the main hypotheses will be tested (see Page 14). In these analyses, only females were included because (a) we were not able to collect enough data from males (N = 14) to reliably test our hypotheses, (b) difference in the regular caloric intake of males and females constitutes an important factor and (c) the literature on eating behaviors focused more on females because previous research found that self-regulatory dilemmas are more effectual for females than males (Grogan, Bell, & Conner, 1997). For these reasons, we excluded males from the analyses which enabled us to compare our results with the literature more effectively.

4.3.1. Hypotheses 1: Dysfunctional self-licensing would predict higher unhealthy snacking mean, after controlling for the effect of self-control and BMI of the participants.

A hierarchical linear regression with BMI and self-control in the first step and dysfunctional self-licensing in the second step was run. The first model was not significant, $F(2,111) = 1.603$, $p > .05$. However, adding dysfunctional self-licensing to the second step made the second model significant, $F(3,110) = 3.005$, $p < .033$, $R^2 = .08$. The results show that both BMI ($\beta = -.216$, $p = .024$) and dysfunctional self-licensing ($\beta = 275$, $p = .019$) significantly predicted unhealthy snacking of the participants (See Table 4.4). Individuals scoring high on dysfunctional self-licensing tended to consume more unhealthy snacks in the 7-day period. Interestingly, as the BMI of the participants increased, they consumed less unhealthy snacks which call attention to examine the dieting status of the participants. This is because maybe participants with high BMI were dieting at the time of the data collection and this caused them to eat less unhealthy snacks.

Table 4.4. Regression Analysis Results of the Hypothesis 1

Model		*B*	*Std. Error*	β	*t*	*p*	R^2
1	Constant	550.94	134.38		4.10	.000	.03
	BMI	-7.86	4.41	-.17	-1.79	.077	
	Self-control	1.86	28.22	.01	.07	.948	
2	Constant	290.53	171.11		1.70	.092	.08
	BMI	-10.15	4.42	-.22	-2.30	.024	
	Self-control	49.45	34.11	.16	1.45	.150	
	Dysfunctional Self-licensing	37.75	15.85	.28	2.38	.019	

Note. DV = Unhealthy Snacking Mean

The predictor variables in the hypotheses 1a, 1b and 1c were grand mean centered in order to interpret the results of the moderation analyses easier. Hypothesis 1a predicted that *high snacking habits should moderate the effect of high dysfunctional self-licensing on the mean unhealthy snack consumption*. Using Jamovi, moderation analysis was run with dysfunctional self-licensing as the predictor variable, unhealthy snacking habit as moderator variable and unhealthy snacking mean as the dependent variable. Only the effect of the moderator variable was significant, B = 45.56, SE = 20.5, p = .026 but neither the predictor variable nor the interaction term was significant (p > .05). So, hypothesis 1a was not supported. Next, we run the same analysis with changing impulsivity as the moderator variable to test Hypothesis 1b which suggests *high impulsivity score should moderate the effect of high dysfunctional self-licensing on the mean unhealthy snack consumption.* The results showed that none of the main effect or the interaction term was significant (p > .05). Hypothesis 1b was not supported. Finally, hypothesis 1c which posited *participants who have high dysfunctional self-licensing and high emotional appetite score should consume even more snacks in a week* was tested with the same predictor and dependent variables but emotional appetite as the moderator variable. Likewise, there was no significant effect of the predictor variables and the interaction term (p > .05). Hypothesis 1c was not supported.

4.3.2. Hypothesis 2: High functional self-licensing score should predict lower unhealthy snack intake consumed in a week, after controlling for the effect of self-control and BMI of the participants.

A hierarchical linear regression with BMI and self-control in the first step and functional self-licensing in the second step was run. The first model with BMI and self-control was not significant, $F(2,110) = 1.631$, $p > .05$, $R^2 = .03$. The results showed that the second model was also not significant, $F(3,109) = 1.443$, $p > .05$, $R^2 = .04$. BMI ($\beta = -.160$, $p > .05$), self-control ($\beta = .034$, $p > .05$) and functional self-licensing ($\beta = .101$, $p > .05$) did not predict unhealthy snacking mean. Thus, hypothesis 2 was not supported.

To test Hypothesis 2a, a moderation analysis was run with functional self-licensing as the predictor variable, unhealthy snacking habits as the moderator variable and unhealthy snacking mean as the dependent variable. The results did not support

Hypothesis 2a as none of the main effects or the interaction term were not significant ($p > .05$). Next, weight-related self-efficacy was added as a moderator variable to test Hypothesis 2b. Similarly, none of the predictor variables were significant as well ($p > .05$). Finally, the last moderation analysis was run with cognitive flexibility as the moderator variable to test Hypothesis 2c. The results suggested that this hypothesis was also not supported ($p > .05$), as both main effects and the interaction term were not significant.

4.4. Results of the Exploratory Analyses

After analyzing the proposed hypotheses in the preregistration, we run several exploratory analyses to thoroughly examine the relationships between our main measures and the dependent variables that were based on the snack entries of the participants. These exploratory analyses to some extent based on the previous findings but since there is limited evidence in self-licensing and how the construct is linked to eating behavior, we included individual difference variables (e.g., impulsivity) to see their relative effect on snacking behavior.

We, first of all, run the analyses of hypotheses 1 and 2 with those participants who were dieting at the time of data collection. Although Prinsen et al. (2018) did not restrict the sample of their study with dieting individuals, the feelings of conflict when indulging oneself with a treat are essential to the self-licensing mechanism. Therefore, we reasoned that the effect of functional and dysfunctional self-licensing on unhealthy snack consumption might be more potent for dieting individuals. In line, identical regression analyses of the main hypotheses were run but with only those participants who were dieting. The results pertaining to the functional self-licensing suggested that functional self-licensing was not associated with unhealthy snacking consumption for non-dieting participants, $F(3, 69) = .18$, $p > .05$. Interestingly, for dieting participants, functional self-licensing ($\beta = .341$, $p = .028$) and self-control ($\beta = .321$, $p = .037$) were significant predictors of unhealthy snack consumption, $F(3, 42) = 3.01$, $p = .042$, $R^2 = .19$. As the beta values show, functional self-licensing and self-control are positively associated with unhealthy snack consumption. Next, we run the same regression analysis with the change of functional self-licensing with dysfunctional self-licensing and the results indicated

no association between the predictor and dependent variable for both dieting, $F(3, 43) = 1.78$, $p > .05$ and non-dieting individuals $F(3, 69) = 1.28$, $p > .05$.

Almost in all regression models tested, BMI and self-control were controlled in the regression analyses. Some of the dependent variables in the exploratory analyses are different from the ones in the main hypotheses. For example, we calculated the day a participant consumed the most calorie within the 7 days because dysfunctional self-licensing is proposed to be related to letting go of caloric restriction once a deviation from the diet occurs. The description of each of these dependent variables are described before the analyses and can also be found in Table 3.2. One of these dependent variables was calculated by dividing the total caloric intake a participant consumed within a week to the number of entries of that participant which we call mean caloric intake by entry. This variable indicates the average caloric value a participant consumes for an entry. We calculated this variable because functional self-licensing is proposed to be indulging oneself with small diet deviations that would be satisfying enough to carry on with the long-term diet goal. However, the regression analysis with functional self-licensing as the independent variable and mean caloric intake by entry as dependent variable indicated that functional self-licensing did not predict mean caloric intake by entry, $F(1,110) = 2.74$, $p > .05$. However, we run a hierarchical multiple regression with BMI and self-control in the first step; unhealthy snacking habits and impulsivity in the second step and regressed on mean caloric intake by entry. The results suggested that the first model did not reach significant ($p > .05$) but the second model was significant in predicting mean caloric intake by entry, $F(4, 108) = 5{,}607$, $p < .001$, $R^2 = .16$. As can be seen in Table 4.5, unhealthy snacking habit ($\beta = .272$, $p = .007$) and impulsivity ($\beta = .334$, $p = .007$) were significantly associated with mean caloric intake by entry. These results indicate that habitual unhealthy snacking and impulsivity predict increased caloric intake from individual snacks.

Table 4.5. Regression Analysis Results of Unhealthy Snacking Habits, Impulsiveness and Mean Caloric Intake by Entry

Model		*B*	*Std. Error*	β	*t*	*p*	R^2
1	Constant	180.20	38.37		4.69	.000	.04
	BMI	1.07	1.23	.08	.86	.391	
	Self-control	-15.86	8.14	-.18	-1.95	.054	
2	Constant	-52.61	73.56		-.72	.476	.16
	BMI	.91	1.21	.07	.75	.454	
	Self-control	13.81	11.17	.16	1.23	.219	
	Unhealthy Snacking Habits	17.87	6.52	.28	2.74	.007	
	Impulsiveness	44.05	16.10	.33	2.73	.007	

Note. DV = Mean Caloric Intake by Entry

For the next analysis, we examined whether dysfunctional self-licensing predicts the highest calorie a participant consumed within the 7 days, after controlling for the effect of BMI and self-control. The first model with BMI and self-control was not significant, ($p > .05$). However, the second step whereby dysfunctional self-licensing was included in the model, was significant, $F(3, 110) = 3.511$, $p = .018$, $R^2 = .09$, showing that high dysfunctional self-licensing predicted higher calories consumed in a day. BMI ($\beta = -.219$, $p = .021$) and dysfunctional self-licensing ($\beta =$ 285, $p = .014$) were significantly associated with highest calorie. The day the participants consumed the highest calorie was related to dysfunctional self-licensing and BMI. Being high on dysfunctional self-licensing and lower in BMI was positively associated with the day the highest calorie was consumed.

In the next analysis, we examined whether unhealthy snacking habits were negatively linked to the mean calorie taken from healthy foods. In line, we conducted hierarchical regression analyses to examine the factors predicting the amount of calories from healthy foods. BMI and self-control were entered in the first step and unhealthy snacking habit was entered in the second step of the analysis. The results showed that both models were significant in predicting healthy food mean. The first step with BMI and self-control explained 8% of the total variance, $F(2, 113) = 4.593$, $p = .012$, but only self-control came out to be a significant predictor ($\beta = .218$, $p = .018$). However, after adding unhealthy snacking habit to the model, self-control became non-significant while unhealthy snacking habit ($\beta = -.228$, $p = .024$) was found significant. This second model explained 12% of the variance, $F(3, 112) = 4.921$, $p = .003$. These results indicated that the unhealthy snacking habits reduced the caloric intake from healthy foods.

Finally, we computed the average of calories a participant got from healthy foods and healthy drinks and regressed it on unhealthy snacking habits, after controlling for the effect of weight-related self-efficacy. The first step with weight-related self-efficacy was significant, $F(1, 111) = 7.397$, $p = .008$, $R^2 = .06$. Weight-related self-efficacy ($\beta = .250$, $p = .008$) was a significant predictor of mean calories taken from healthy snacks and drinks. The second step with unhealthy snacking habit was also significant $F(2, 110) = 8.302$, $p < .001$, $R^2 = .13$. In this step, however, unhealthy snacking habits ($\beta = -.286$, $p = .004$) was a significant predictor but weight-related self-efficacy was not.

CHAPTER 4

5. GENERAL DISCUSSION

Previous research conceptualized self-control as linked with either success or failure of the long-term goals by which the individual may successfully restraint oneself or not (for a criticism toward this conceptualization, see Kroese, 2019) and showed that failure of restraining oneself increases the negative affect due to not behaving in line of one's long-term goals (Dahl, Honea & Manchanda, 2003; Xu & Schwarz, 2009). However, self-licensing creates an area for a compromise in self-control dilemmas which, on the contrary, are construed as rather black-or-white. Self-licensing phenomenon refers to "the act of using justifications to indulge oneself in order to make the indulging behavior acceptable for oneself" (De Witt Huberts et al., 2014a; De Witt Huberts et al., 2014b). The evidence so far provided consistent results that self-licensing is associated with increased consumption of unhealthy snacks (De Witt Huberts, Evers, & De Ridder, 2012; Prinsen et al., 2018) and, more importantly, decreases in the negative affect that would be experienced due to the failure in pursuing the goal of eating restraint (Xu & Schwarz, 2009; Patrick, Chun & MacInnis, 2009). In doing so, individuals may use a number of justifications (Taylor, Webb, & Sheeran, 2014) for self-licensing by which they achieve their hedonic goals but at the same time do not feel negative affect for breaking their restraints.

On the other hand, although self-licensing helps to attenuate the negative affect in such self-control dilemmas, it is not altogether beneficial, especially for the enactment of long-term goals. In line with this, Prinsen et al. (2018) proposed two types of self-licensing which differ in terms of their functionality. Specifically, if individuals frequently use self-licensing to indulge themselves, it turns out to be dysfunctional for dietary success. However, when they use self-licensing occasionally to reward them or as a special treat, then it becomes functional and these occasional treats further help individuals to adhere to their diet. More importantly, the main difference between functional and dysfunctional self-licensing is how individuals perceive these occasional treats they indulge with and outcomes each form of self-licensing leads to. While in functional self-licensing these diet deviations are allowed and seen as means to reach a higher goal,

dysfunctional self-licensing is characterized as the opposite of this where diet deviations are perceived as a total failure in pursuing diet goals. In line, Prinsen et al. (2018) showed that while functional self-licensing was associated with lower snack consumption over a week, dysfunctional self-licensing was related to higher snack consumption. However, self-licensing is a recent phenomenon and research is limited regarding the underlying mechanisms that it operates. Accordingly, in the current study, we (a) investigated the effect of functional and dysfunctional self-licensing on unhealthy snack consumption and (b) tested possible moderators of functional and dysfunctional self-licensing. We expected that while functional self-licensing would lead to lower unhealthy snack consumption, dysfunctional self-licensing would increase unhealthy snack consumption. Moreover, we hypothesized that these reverse effects would be moderated by variables such as unhealthy snacking habits, impulsivity, weight-related self-efficacy, cognitive flexibility and negative emotional appetite. We tested many moderator effects so as to characterize the underlying mechanisms of functional and dysfunctional self-licensing and to understand individual differences. By conducting this study, we aimed to replicate the findings in the original study and contribute to the self-licensing literature by testing possible moderator relationships.

Before jumping into the discussion of the main findings, it is essential to draw attention on a couple of methodology-related points. First of all, the coding of the snacks into four different categories is open to objections. In their study, Prinsen et al. (2018) gave the participants the definition of unhealthy snacks and asked them to report those snacks that they fit to the definition. The definition they gave for an unhealthy snack was "those snacks that are consumed between the main meals and perceived as unhealthy" (Verhoeven et al., 2012). However, we thought that this approach might be problematic because there might be some snacks that would not be reported by the participants because the perception of unhealthy vs. healthy snacks might differ between individuals. For that reason, we wanted participants to report all the snacks they consumed and we would do the categorization of the snacks. Although we believe this approach handles the problem better, there are still inconclusive types of snacks that are hard to code. The second point is that functional and dysfunctional self-licensing had either a very high correlation with some of the variables we measured or had correlations that are inconsistent with their theoretical nature. Specifically, dysfunctional self-licensing had a very high

degree of correlation with both self-control and unhealthy snacking habit which suggests the results should be approached with caution due to the multicollinearity between the variables, although there was not a violation of assumption in the regression analyses. Functional self-licensing, on the other hand, had a significant positive relationship with unhealthy snacking habits and negative relationship with self-control. Theoretically, functional self-licensing is associated with successful dietary regulation but the correlations we found and show here suggest either functional self-licensing scale is not measuring what it supposed to measure or the proposition that functional self-licensing is beneficial is dubious. It is crucial to consider the findings of this study with these points in mind.

5.1. Discussion of the Main Findings

We found support for Hypothesis 1, suggesting that dysfunctional self-licensing would predict higher unhealthy snacking consumption, after controlling for the effect of self-control and body mass index (BMI). Indeed, we found that higher dysfunctional self-licensing was associated with higher unhealthy snack consumption and, in contrast to Prinsen et al. (2018), lower BMI predicted higher unhealthy snack consumption. This finding does not oppose the previous research which also showed a negative relationship between BMI and unhealthy snacking behavior (Alkhamis, 2011; Al-Rethaiaa, Fahmy & Al-Shwaiyat, 2010), however, there are also findings in the literature showing a positive relationship between BMI and snack consumption (Barrington & Beresford, 2019), making it harder to interpret the current results with confidence. All in all, BMI should be taken into account when examining unhealthy snacking.

Although we found a significant effect of dysfunctional self-licensing on unhealthy snack consumption, we failed to find support for our hypotheses suggesting that the relationship between dysfunctional self-licensing and unhealthy snack consumption would be moderated by unhealthy snacking habits, impulsivity and negative emotional appetite. One reason for this may be due to the characteristics of our sample where participants have considerably low BMI and impulsiveness and almost half of them have never dieted in their life. Participants may not have sensed unhealthy snacking as much as a discrepant behavior which would explain the lack

of association between dysfunctional self-licensing and the moderator variables that are related to problematic dietary behavior.

We also expected functional self-licensing to result in lower unhealthy snack consumption, after controlling for self-control and BMI of the participants, however, we failed to find supporting evidence. The interesting finding in our study is that there was a positive but non-significant correlation between functional self-licensing and unhealthy snack consumption. This finding is in contrast to the findings in Prinsen et al. (2018) in which they found functional self-licensing to be negatively associated with unhealthy snack consumption. We failed to support our hypothesis because of both positive and not-significant relationships between these variables. Likewise, hypotheses 2a, 2b and 2c were not supported where we predicted that the relationship between functional self-licensing and unhealthy snack consumption would be moderated by unhealthy snacking habits, weight-related self-efficacy and cognitive flexibility. These moderation analyses were expected to be found non-significant given that there was not a significant relationship between functional self-licensing and unhealthy snack consumption at the beginning but we tested these relationships nevertheless because they were our preregistered hypotheses. The reason for these moderator variables are hypothesized to be related to functional self-licensing was because Prinsen et al. (2018) showed that functional self-licensing was associated with beneficial diet behaviors and cognitions, such as higher dietary success, higher diet balance satisfaction and lower diet balance discrepancy. However, as stated above, we found a positive directional relationship between functional self-licensing and unhealthy snack consumption, as well as, significant relationship with unhealthy snacking habits which is theoretically in contrast with the conceptualization of functional self-licensing. Moreover, functional self-licensing was not related to weight-related self-efficacy which also indicates functional self-licensing is in need of establishing its theoretical basis with more studies. Nevertheless, these findings may be due to participants who never diet or feel a need for restricting their caloric intake. Overall, future studies can give a special focus on participants who have dieting experience and are dieting at the time of the data collection in order to show functional self-licensing is a reliable construct.

We also found functional self-licensing and dysfunctional self-licensing to be positively correlated. This relationship between functional self-licensing and

dysfunctional self-licensing was moderately correlated which is in line with the findings of Prinsen et al.'s (2018) Study 2 but not Study 3 in which no association was found between functional self-licensing and dysfunctional self-licensing. Prinsen et al. (2018) suggest the inconsistent associations between these two constructs which they found in their studies are due to differences in the sample characteristics but it can be suggested that more studies should be done to establish the nature of the relationship between these two types of self-licensing. On a theoretical basis, lack of association is unlikely given that both types of self-licensing admit a certain amount of deviation from the long-term goal but differ in their "stopping rule".

To sum up the findings of the main hypotheses, we only found supportive evidence for the positive relationship between dysfunctional self-licensing and unhealthy snack consumption but were not able to identify any moderator variable that could deepen our understanding of the self-licensing mechanism.

5.2. Discussion of the Exploratory Findings

Because our hypotheses pertaining to the main effects of functional and dysfunctional self-licensing on unhealthy snack consumption were partially supported, we started our exploratory analyses with the same hierarchical linear regressions but only with dieting participants. This was done because, as De Witt Huberts et al. (2014a) suggest, justification processes are activated only when there is an involvement of a self-regulation dilemma. In other words, the self-licensing mechanism especially works when an individual feels the necessity of the use of justifications after deciding to indulge with a discrepant behavior. If one does not feel there is nothing to justify, there is little to license oneself as well (self-licensing can still occur because one would still be aware that this is not the "standard practice). With this reasoning, we conducted the same analyses with those participants who were dieting during the data collection and found that while dysfunctional self-licensing was not a predictor of unhealthy snack consumption for dieting participants, functional self-licensing was positively associated with unhealthy snack consumption. It must be acknowledged that the number of participants who were dieting (N = 43) was relatively small to capture the main effects. The results related to dysfunctional self-licensing may be due to

the small sample size which suggests that future studies with a focus on dieting vs. not-dieting participants can make good use of large sample sizes to establish the relationship between dysfunctional self-licensing and unhealthy snack consumption. The finding of a positive relationship between functional self-licensing and unhealthy snack consumption points out that dieting participants with high functional self-licensing did not consume less, as they should be according to the theoretical definition of functional self-licensing, but consumed more and got higher calories from them. These results suggest that, at least for our sample, people with high functional self-licensing do not know where to stop, that they may end up to the dysfunctional side of self-licensing when they indulge themselves with occasional treats.

The data we collected enabled us to analyze a wide range of relationships. Specifically, we did not collect the data of only unhealthy snacks consumed but also healthy snacks, healthy drinks and unhealthy drinks. Participants reported everything they consumed except meals and water for a week-long which enabled us to run exploratory analyses with dependent variables different from unhealthy snack consumption. The findings of these exploratory analyses were mostly in line with the previous evidence in the eating literature. First of all, functional self-licensing did not predict mean caloric intake by entry. The regression analysis with functional self-licensing as the independent variable and mean caloric intake by entry as the dependent variable indicated that functional self-licensing did not predict mean caloric intake by entry. This result, contrary to our expectation, indicates that functional self-licensing is not related to smaller portions of snacks. It may be that participants with high functional self-licensing consume snacks with high calorie but know when to stop. However, when we regressed mean caloric intake by entry on impulsivity and unhealthy snacking habit, we found that these variables were significant predictors of the caloric intake of individual snacks, even after controlling for BMI and self-control. This finding suggests that impulsive people with high unhealthy snacking habit consumes snacks with more caloric value each time they turn for one to eat. Daily diary studies enable to reveal such findings because they comprise the measurement of the target variable (in this case, snacking behavior) throughout a week and get a better sense of the eating pattern of a participant. Dieting is a long-term endeavor with ups and down that are affected by a range of conditions, such as positive (Devonport, Nicholls & Fullerton, 2017)

and negative affect (Adriaanse et al., 2011) and deviations in motivation to adhere to a diet (Milyavskaya, Inzlicht, Hope & Koestner, 2015). Even when individuals restrict themselves for a while, they may fail at times and extensive tracking of individuals enables them to comprise these slips or restraints. This is something hard to capture in a single instant of eating when conducting a study in a lab with an ostensibly "taste-task" in which a participant may have either the resources to restrain oneself or not, affecting the results accordingly.

We also used the day a participant consumed the highest calorie as the dependent variable and regressed it on dysfunctional self-licensing, after controlling for the effect of BMI and self-control. We run this analysis because dysfunctional self-licensing is suggested to be letting go of the long-term goal once a deviation from it occurs which should show itself on the day the highest calorie is consumed. As suggested, dysfunctional self-licensing did predict the highest calorie day of a participant, after controlling for BMI and self-control. This finding is crucial because it supports the theoretical nature of the dysfunctional self-licensing and shows the importance of finding ways to revert back to adhering to the long-term goal again. This may explain why people high in dysfunctional self-licensing should be extra careful when getting a bite of that chocolate cake which they may end up eating a lot more than they originally considered (Prinsen et. al., 2016). Moreover, we found a significant positive relationship between dysfunctional self-licensing and restrained eating which is important because restrained eating is described as the intentional caloric restriction that has been found to increase the attractiveness of foods (Papies, Stroebe, & Aarts, 2007) and vulnerability to overeating (Fedoroff, Polivy, & Herman, 2003). De Witt Huberts and her friends (2013) found that restraint eaters do not eat less, although it is their aim to do, but feel enhanced levels of guilt when they eat. Dysfunctional self-licensing is characterized as perceiving diet deviations as threatening to successful diet goals, thus, the positive correlation between dysfunctional self-licensing and restrained eating seems plausible, given that both may result in overeating, though both aim not to. The common result of dysfunctional self-licensing and restraint eating seems to be "what-the-hell-effect" which is described as letting go of diet goals once an individual consumes a food that is forbidden (Herman & Mack, 1975).

Previous research has consistently shown that having a habit of unhealthy snack eating increases snack consumption and fat intake (Verhoeven et al., 2012; De

Bruijn, Kroeze, Oenema, & Brug, 2008). Although we measured participants' unhealthy snack habits, our data also enabled us to examine the relationship between unhealthy snacking habits and healthy and unhealthy snack consumption. It can be considered rather an unorthodox way to investigate healthy snack consumption from unhealthy snack habits but our findings suggest that habitual unhealthy snackers consume fewer healthy snacks as well. Earlier research has shown that fruit consumption habits override intention to eat fruit, that is, as the habit of fruit consumption developed the strength of intention to eat fruits decreased (De Bruijn, 2010). This automatic and thought-preceding nature of healthy habits has been also found to decrease the temptations felt when encountered with an unhealthy snack (Lin, Wood & Monterosso, 2016). In addition to previously what has been found in the literature, here we show that habitual unhealthy snackers may not even consider healthy snack alternatives. This is important because it suggests that having a habit of unhealthy snacking leaves less room for healthy alternatives to be integrated into one's diet due to habits' automatic, environmentally-triggered nature. Perhaps one way to tackle this issue would be to first incorporate healthier alternatives which may be achieved by creating implementation intentions (Gollwitzer, 1999) to deliberately remind oneself to turn towards healthy snacks when an urge to eat snacks arises. Implementation intentions have been shown by previous research to be an effective way to overcome weight-management problems by actively creating if-then plans which can be helpful in these contexts as well (Adriaanse, De Ridder & De Wit, 2009; Adriaanse, Gollwitzer, De Ridder, De Wit, & Kroese, 2011). Adriaanse et al. (2009) showed in two studies that implementation intention targeting motivational cues of unhealthy snacking decreased the consumption of unhealthy snacks and successfully promoted healthy snacking. Adriaanse et al. (2011), on the other hand, showed that associations related to unhealthy snacking habits can be effectively broken with implementation intentions by eliminating the accessibility of habitual responses. Thus, constructing if-then plans to increase healthy snacking showed to be highly effective for those individuals with unhealthy snacking.

Lastly, our final exploratory analysis in which we found unhealthy snacking habits to decrease the caloric intake from both healthy snacks and drinks combined, after controlling for weight-related self-efficacy, is in line with the previous literature. This finding again shows the power of habits over the perceived ability to adhere

to a healthy diet and how unhealthy snacking habits prevent healthy alternatives to be incorporated into one's diet.

5.3. Strengths and Limitations

First and foremost, daily diary studies are powerful in capturing events and experiences in their natural context over a span of time. Unlike studies conducted in a lab, diary studies offer a more thorough understanding of the psychological phenomenon (Iida, Shrout, Laurenceau & Bolger, 2012). As suggested by Kroese (2019), studies should not restrict themselves with a single instance of self-regulatory success because a single instance does not tell much regarding the overall pattern of an individual. Just like functional self-licensing which we investigated in this study, there is supportive evidence for the beneficial effect of planned deviations when adhering to a diet by way of increasing motivation to persist in the diet (Coelho do Vale, Pieters and Zeelenberg, 2016). Taking into account only a single instant of self-regulation outcome, then, may not be an efficient way to understand the general pattern of an individual. By asking participants to report each and every snack they consumed for a week, we can have a better understanding of the relationships between our main variables of interest and outcome measures. Moreover, we did not refrain ourselves with only the data of unhealthy snacks but also healthy snacks as well, which constituted the other strength of this study. Previous studies generally focused either on unhealthy or healthy snacks, but our main variables (especially functional self-licensing but also dysfunctional self-licensing) tap on the consumption of both kinds of snacks. It was a piece of information we needed to attain because, for example, functional self-licensing may have been related to unhealthy snacks as much as healthy snacks. Theoretically, unhealthy snacks may accompany healthy snacks for people with high functional self-licensing. Although we examined whether there is such a relationship, we found that they are not related. Lastly, we also asked participants to report the time they had eaten the snacks they reported. This was because we wanted to get a better grasp of the snack eating pattern of the participants.

As for the limitations of our study, first, causal inferences cannot be drawn from the correlational analyses. Although diary studies have their ups as stated above, they have also downs of not being able to reach a decisive conclusion pertaining

the which variable caused which one to change. Moreover, snack reports of the participants are subject to several biases. One of them is, some snacks that are consumed within the day may be forgotten and not reported at the time of sending the snack diary. In order to prevent this, participants were sent a reminder at 14.30 for not forgetting to keep snack diaries and also were asked to send snack diaries at the end of the day to tackle this forgetting bias. Another bias could be that participants may have got extra vigilant of their snack consumption due to extensive tracking which may have had an effect on their reported snacks (e.g. realizing that one consumes unhealthy snacks a lot may shift attention toward healthier alternatives). The second limitation was the lack of collected data from males to compare the hypothesized relationships for both sexes and see if there is a difference. We were unable to gather enough data from males because they had constituted a relatively limited percentage of our subject pool. Future studies may aim to get a deeper understanding of how functional self-licensing and dysfunctional self-licensing differ in both sexes. Moreover, the number of participants who were dieting at the time of data collection were accounted for only one-third of the sample which constitutes another limitation because the self-licensing mechanism functions more potently if there is a feeling of a discrepancy between what one wants to do and what one ought to do. During the data collection, participants may not have felt a reason to license themselves each time they indulge with unhealthy snacks, thus, affecting our results. Lastly, we were unable to find validated and established manual for differentiating healthy snacks from unhealthy snacks. Some snacks (e.g. low-carb, low-fat but sugary snacks) proved to be especially hard in determining as healthy or unhealthy. For this reason, we grouped fruits, vegetables and yogurt as healthy, just to be safe. However, a go-to manual of what is healthy and what is not healthy would strengthen researchers' hands in future studies.

5.4. Conclusions

In this graduate thesis, two types of self-licensing that were differentiated based on their functionality and their possible moderator variables were investigated. The literature review conducted showed that self-control dilemmas are resolved not only by success or failure but also by way of using justifications to license oneself. In

the previous research, self-licensing has been mostly shown to be related to higher snack consumption but, for some people, it may also facilitate diet adherence by increasing motivation to persist. This difference between functional self-licensing and dysfunctional self-licensing depended on the perception of occasional diet deviations and how rigid the diet was followed. However, we were not able to find support for all of our hypotheses. Specifically, the results suggested that functional self-licensing was not associated with decreased unhealthy snack consumption and also, not surprisingly, no moderator variable was identified for functional self-licensing. The results pertaining to the hypothesis that dysfunctional self-licensing would increase unhealthy snack consumption was supported, although we were not able to identify any moderator variable for this relationship as well. The findings regarding the main and exploratory analyses are discussed with potential limitations in mind.

This study mainly contributed to the self-licensing literature by showing that dysfunctional self-licensing is a reliable predictor of unhealthy snack consumption, even after we controlled for the effect of BMI and self-control. Moreover, our factor analysis on the functional and dysfunctional self-licensing was supportive of the proposed two-factor solution in the original article (Prinsen et al., 2018), except for the one item in the functional self-licensing factor. Future studies investigating functional and dysfunctional self-licensing in Turkey may use our translation, although convergent and discriminant validity of the adapted version is needed. As far as we know, this is the first study to replicate functional and dysfunctional self-licensing and investigate possible moderators of them. Future studies may benefit from examining whether functional self-licensing is a reliable predictor of unhealthy snack consumption. Prospective studies can also focus on interventions that aim at impulsive and habitual snackers to limit their caloric intake by decreasing proportions, as we found that these variables are related to the higher caloric intake of individual snack reports. Lastly, our exploratory findings revealed that unhealthy snacking habits were related to a decreased amount of healthy snack consumption after controlling for variables such as self-control or weight-related self-efficacy. Previous findings showed consistently the positive relationship between unhealthy snack habits and consumption but with this finding, we can also state that unhealthy snacking habits not only increase unhealthy snack consumption but also decreases healthy snack consumption.

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APPENDIX A

A.1 Informed Consent

Bu araştırma çalışması Kadir Has Üniversitesi Psikoloji Bölümü Lisansüstü Öğrencisi Berke Sezer tarafından Dr. Öğretim Üyesi Sezin Öner danışmanlığında yürütülmektedir. Bu formun amacı ise katılımcıyı araştırma koşulları bakımından bilgilendirmek ve çalışmaya tamamen gönüllü olarak katılması hususunda onayını almaktır.

Çalışmanın Amacı: Bu çalışmada genç yetişkinlerin atıştırmalık davranışlarının kendine izin verme ve alışkanlıklarla olan ilişkisi incelenmek amaçlanmaktadır.

Çalışmada Nasıl Yardımcı Olacaksınız: Eğer araştırmaya katılımı kabul ederseniz sizden

· Atıştırmalık davranışınızla alakalı olduğunu düşündüğümüz birkaç değişkeni ölçmek amacıyla ölçekler doldurmanızı,

· 7 gün boyunca, her gün sonu olmak üzere, o gün yediğiniz atıştırmalıkları size atılan bir link üzerinden ulaşacağınız siteden bize yazılı olarak yollamanızı isteyeceğiz.

Çalışmaya Veri Sağlayan Katılımcı Olarak Bilmeniz Gerekenler: Bu çalışma tamamen internet üzerinden yürütülecektir. Size gönderilecek bir linkten ulaşacağınız çalışmanın bulunduğu siteye, size özel olan katılımcı numaranız ile giriş yapacaksınız. Öncelikle, sizden birkaç psikolojik değişkenle alakalı ölçeklerimizi doldurmanızı rica edeceğiz. Ertesi gün başlamak üzere, 7 gün boyunca akşamları sizinle belirleyeceğimiz bir saatte gönderilecek linke tıklayarak o gün yediğiniz atıştırmalıkları yazmanızı isteyeceğiz.

Bu araştırmaya katılımda gönüllük esastır. Katılmak istemiyorsanız belirtmeniz yeterlidir. Bize vereceğiniz tüm cevapların gizli kalacağını, isim gibi kişisel bilgilerinizin başka kişi ve kurumlarla paylaşılmayacağını özellikle belirtmek istiyoruz.

Bu formun bir kopyası araştırmacıda kalırken bir kopyası da size bırakılacaktır. İmzalı onam formunuz ve araştırma verileriniz birbirinden ayrı yerlerde tutulacaktır.

Riskler: Çalışmaya katılımınız hiçbir risk içermemektedir.

Araştırma hakkında daha fazla bilgi almak isterseniz başvuracağınız araştırmacı adresi, e- posta adresi ve telefon numarası:

Araştırmacı: Berke Sezer

E-mail: sezerberke@hotmail.com

Bize ayırdığınız zaman için şimdiden çok teşekkür ederiz.

A.2 Demographics, Dieting Intentions and Motivations

- Yaş:_____ Boy:_____ Kilo:_____
- Cinsiyetiniz: a) Erkek b) Kadın c) Diğer/Belirtmek İstemiyorum
- Şu anda kilo vermeye ya da kilonuzu sabit tutmak adına günlük kalori alımınıza dikkat ediyor musunuz?
    - A) Evet B) Hayır

	1(Benim için hiç geçerli değil)	2(Benim için çok geçerli değil)	3(Benim için ne geçerli ne geçerli değil)	4(Benim için oldukça geçerli)	5(Benim için tamamen geçerli)
Diyet yapmakla ilgili tecrübem var.					
Yaptığım diyete bağlı kalmakta kendimi başarılı görürüm.					
Diyetime bağlı kalmayı önemli bulurum.					
Diyetime bağlı kalmaya motiveyim.					
Şu sıralar kilo vermeye çalışıyorum.					
Kilo vermeye motiveyim.					
Şu sıralar daha sağlıklı beslenmeye çabalıyorum.					
Daha sağlıklı beslenmeye motiveyim.					

A.3 Revised Restraint Scale

- Kaç haftada bir diyet yaparsınız?
  - A) Hiç diyet yapmam.
  - B) 2-3 ayda bir diyet yaparım.
  - C) Ayda bir yeni bir diyete başlarım.
  - D) Diyetimi bozduktan 1-2 hafta içerisinde yeni bir diyete başlarım.
  - E) Sürekli diyet yaparım
- Bir ay içerisinde kaybettiğiniz en fazla kilo kaçtır?
  - A) 0-2.4 B) 2.5-4.9 C) 5-7.9 D) 7.5-9.9 E) 10+
- Bir hafta içerisinde aldığınız en fazla kilo kaçtır?
  - A) 0-0.4 B) 0.5-0.9 C) 1-1.4 D) 1.5-2.4 E) 2.5+
- Sıradan bir haftada kilonuz ne kadar inip çıkar?
  - A) 0-0.4 B) 0.5-0.9 C) 1-1.4 D) 1.5-2.4 E) 2.5+
- En fazla olduğunuz kilo arzu ettiğiniz kilodan ne kadar fazlaydı?
  - A) 0-0.4 B) 0.5-2.9 C) 3-4.9 D) 5-10 E) 10+
- 2.5 kiloluk bir kilo oynaması hayatınızı yaşama biçiminizi etkiler mi?
  - A) Hiç etkilemez B) Biraz etkiler
  - C) Kısmen etkiler D) Oldukça etkiler
- Ne yediğiniz hakkında ne kadar bilinç sahibisiniz?
  - A) Hiç sahip değilim B) Biraz bilinç sahibiyim
  - C) Bilinç sahibiyim D) Oldukça bilinç sahibiyim
- Başkalarının yanında dikkatli, yalnızken abartılı yemek yiyor musunuz?
  - A) Asla B) Nadiren
  - C) Sıklıkla D) Her Zaman
- Yemek hakkında çok fazla zaman ve düşünce harcıyor musunuz?
  - A) Asla B) Nadiren
  - C) Sıklıkla D) Her Zaman
- Aşırı yemek yedikten sonra suçluluk duygusu hissediyor musunuz?
  - A) Asla B) Nadiren
  - C) Sıklıkla D) Her Zaman

A.4 Functional and Dysfunctional Self Licensing Scale

	1 (Hiç Doğru Değil)	2	3	4 (Ne doğru ne yanlış)	5	6	7 (Tamamen Doğru)
Kendimi sağlıksız yiyeceklerle çok kolay ödüllendiriyorum.							
Yediğim sağlıksız yiyecekleri telafi etmek istediğimde, bu niyetimi genelde gerçekleştirmiyorum.							
Sağlıksız yiyeceklerle kendimi şımartmaya çok kolay ikna olurum.							
En sevdiğim sağlıksız yiyeceğim indirime girdiğinde satın alma ihtiyacı hissederim.							
Diğer insanların sağlıksız yiyecekler yediğini gördüğümde, benim de yemeye hakkım olduğunu hissederim.							
Sağlıklı beslenmeye başlamadan evvel sağlıksız yiyecekleri "son kez" yemeye eğilimim vardır.							
Kötü hissettiğimde ne istersem onu yerim.							
Çaba gerektiren aktivitelerden sonra sağlıksız yiyecekleri tüketmeye dair kendime çok kolay izin veririm.							
Sağlıksız yiyecekler yemek istediğimde, kendimi şımartmaya izin verecek sebepler ararım.							
Diyet yaparken, sıklıkla aniden ufak bir kaçamak yapma zamanı olduğuna karar veririm.							
Sağlıklı bir diyete bağlı kalmaya çalışırken, ara sıra ufak porsiyonlarda sağlıksız							

yiyecekler tüketmek beni motive etmek için yeterli olur.							
Benim için, sağlıklı bir diyet ancak ölçülü derecede sağlıksız yiyecek içerdiği vakit yapılabilir.							
Diyet yaparken, ara sıra sağlıksız yiyecek yiyorum; diğer türlü, daha uzun süre boyunca diyetimi uygulamak için yeterli motivasyona sahip olmazdım.							
Sağlıklı bir diyete uzun bir süre boyunca bağlı kalmak için, bazen ufak kaçamaklar için kendime izin vermem benim için önemlidir.							
Sağlıklı bir diyete bağlı kalabiliyorum çünkü ara sıra en sevdiğim sağlıksız yiyeceklerden tüketebileceğimi biliyorum.							
Ufak porsiyonlarda sağlıksız yiyecekler can çekmelerimi tatmin etmek için yeterlidir.							
Bana göre dengeli bir diyet ölçülü derecede bazı sağlıksız yiyecekleri de içerir.							
Diyet planlarıma dahil edildiklerinde sağlıksız yiyecekleri yemek beni çatışma içerisinde hissettirmez.							
Geri kalan zamanda sağlıklı diyetime bağlı kalabilmek adına bazen sağlıksız yiyeceğe dair can çekmelerimi tatmin ederim.							
Ne yediğime dikkat etsem de, geniş çeşitlilikte yemekler tüketmekten keyif alıyorum.							

A.5 Brief Self-control Scale

	1 (Benim için hiç geçerli değil)	2	3	4	5 (Benim için tamamen geçerli)
İnsanların beni kötülüğe yönlendirmesine karşı koymada başarılıyımdır.					
Kötü alışkanlıklarımı terk etmekte zorlanırım.					
Tembel biriyim.					
Uygun olmayan şeyler söylerim.					
Eğlenceli olmaları durumunda benim için kötü olan bazı şeyleri yaparım.					
Benim için kötü olan şeyleri reddederim.					
Daha fazla öz-disipline sahip olmayı isterdim.					
İnsanlar güçlü bir öz-disipline sahip olduğumu ifade ederler.					
Zevkli ve eğlenceli şeyler yapacağım işten beni alıkoyar.					
Konsantrasyon sorunum var.					
Uzun vadeli amaçlarıma ulaşmak için verimli biçimde çalışabilirim.					
Bazen yanlış olduğunu bilsem de bazı şeyleri yapmaktan kendimi alamam.					
Sıklıkla bütün seçenekler üzerinde düşünmeden hareket ederim.					

A.6 Unhealthy Snacking Habits Scale

Sağlıksız atıştırmalık yemek...	1	2	3	4	5
Sıklıkla yaptığım bir şeydir.					
Kendiliğinden, otomatik olarak yaptığım bir şeydir.					
Bilinçli bir şekilde hatırlamak zorunda kalmadan yaptığım bir şeydir.					
Eğer yemezsem beni garip hissettirtecek bir şeydir.					
Düşünmeden yaptığım bir şeydir.					
Yememenin çaba gerektirdiği bir şeydir.					
Rutinime (günlük, haftalık, aylık) dahil olan bir şeydir.					
Yediğimin farkına varmadan başladığım bir şeydir.					
Yememenin zor olacağı bir şeydir.					
Üzerinde düşünmemin gerek olmadığı bir şeydir.					
Tam benlik bir şeydir.					
Uzun süredir yaptığım bir şeydir.					

A.7 Weight-related Self-efficacy Scale

Lütfen aşağıdaki ifadeleri bu ölçeğe göre cevaplandırınız. %0 %10 %20 %30 %40 %50 %60 %70 %80 %90 %100 Hiç Güvenmem Tamemen Güvenirim

Aşağıdaki ifadeler çerçevesinde, kilo vermeniz konusunda kendinize ne kadar güvenirsiniz?	
Gerekli rutinlerin yerleşmesinin uzun bir zaman gerektireceğini bilsem de.	
Verene kadar birkaç kere denemem gerekse bile.	
Kilo vermeye dair bildiğim her şeyi yeniden düşünmem gerekse de.	
Detaylı bir plan hazırlamak zorunda kalsam da.	

A.8 Cognitive Flexibility Scale

	1	2	3	4	5	6
Bir fikri birkaç farklı yolla ifade edebilirim.						
Yeni ve alışık olmadığım durumlardan kaçınırım						
Hiç karar alamıyor gibi hissederim.						
Görünürde çözülemez problemleri çözen çözümleri bulabilirim.						
Nasıl davranacağıma karar verirken yalnızca bazen seçeneklerim vardır.						
Problemlere yaratıcı çözümler bulmaya hevesliyimdir.						
Herhangi bir durumda, o duruma uygun davranabilirim.						
Davranışlarım verdiğim bilinçli kararlar neticesinde belli olur.						
Herhangi bir durumda davranabileceğim birçok olası yol vardır.						
Herhangi bir konuda bildiklerimi gerçek hayatta kullanmakta zorluk çekiyorum.						
Bir problemin çözümünde alternatif çözüm yollarını dinlemek ve değerlendirmek isterim.						
Farklı şekillerde davranmayı denemek için gereken kendine güvene sahibimdir.						

A.9 Barratt's Impulsivity Scale

	Nadiren/Hiçbir Zaman	Bazen	Sıklıkla	Her Zaman
İşlerimi dikkatle planlarım				
Düşünmeden iş yaparım				
Dikkat etmem				
Uçuşan düşüncelerim var				
Dikkatli düşünen birisiyim				
İş güvenliğine dikkat ederim				
Düşünmeden bir şeyler söylerim				
Düşünmeden hareket ederim				
Zor problemler çözmem gerektiğinde kolayca sıkılırım				
Aklıma estiği gibi hareket ederim				
Düşünerek hareket ederim				
Düşünmeden alışveriş yaparım				
Hobilerimi değiştiririm				
Kazandığımdan daha fazla harcarım				
Geleceğini düşünen birisiyim				

A.10 Emotional Appetite Questionnaire

Lütfen yemek yeme davranışınızın belirli duygulardan nasıl etkilendiğini aşağıdaki tablodan bir numarayı işaretleyerek belirtiniz. Tablo 1 ile 9 arasında değişmektedir,

1: Normalden çok daha az yemek yediğinizi

5: Yemek yemenizde bir değişiklik olmadığını

9: Normalden çok daha fazla yemek yediğinizi belirtmektedir.

CB : Cevabı bilmiyorsanız işaretleyiniz.

	1	2	3	4	5	6	7	8	9	CB
Üzgün olduğunuzda										
Sıkılmış olduğunuzda										
Kızgın olduğunuzda										
Kaygılı olduğunuzda										
Mutlu olduğunuzda										
Yorgun olduğunuzda										
Karamsar olduğunuzda										
Neşeli olduğunuzda										
Yalnız olduğunuzda										