ORIGINAL ARTICLE

WILEY

Introducing functional and dysfunctional self-licensing: Associations with indices of (un)successful dietary regulation

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Abstract

Objective: Giving in to food temptations is typically labeled as self-regulation failure. However, when indulgence stems from self-licensing processes, that is, relying on reasons to justify diet deviations, these instances might actually promote successful goal striving. This research aimed to theoretically define and test under what conditions self-licensing would be considered functional (e.g., when it ultimately serves the long-term goal of weight control) and dysfunctional (e.g., when it threatens successful goal striving).

Method: First, a pool of items reflecting functional and dysfunctional ways of self-licensing was tested and representative items were selected (Study 1; $N = 194$). Next, their classification was corroborated by examining the associations with indices of (un)successful dietary regulation (Study 2; $N = 147$). Finally, it was tested whether (dys)functional self-licensing predicted unhealthy snack intake, by means of participants keeping an unhealthy snack diary (Study 3; $N = 54$).

Results: The theorized distinction was confirmed, and the obtained correlational patterns supported the proposed (dys)functionality of the two types of self-licensing. Importantly, results showed that dysfunctional self-licensing predicted higher snack intake, whereas functional self-licensing predicted lower snack intake.

Conclusion: The present studies provide evidence for the existence of two types of self-licensing, and thereby contribute to theoretical development.

KEYWORDS

(dys)functional, eating behavior, self-licensing, self-regulation, snack diary

1 | INTRODUCTION

Giving in to temptations, like eating a bar of chocolate after a long day's work, is often perceived as self-regulation failure: the inability to control one's behavior in line with long-term goals such as maintaining a healthy body weight. Dominant accounts of self-regulation failure are capacity-based explanations such as ego-depletion (Baumeister, Bratslavsky, Muraven, & Tice, 1998). From this general perspective, self-control is a limited capacity that may be temporarily or chronically depleted, leaving the individual with low ability to self-regulate in control-demanding circumstances. For instance, after a long day's work, there might not be enough self-control resources left to resist that chocolate bar. More recently, however, motivational explanations have received renewed attention in models of self-control failure (e.g., Inzlicht, Schmeichel, & MaCrae, 2014; Kotabe & Hofmann, 2015). Rather than assuming that people may not always be *able* to control themselves, it is proposed that oftentimes, people may not be *willing* to control themselves anymore. A particularly prominent motivational explanation is provided by the justification-based account of self-regulation failure

(De Witt Huberts, Evers, & De Ridder, 2014a), stating that failure could also stem from deliberately deciding to (temporarily) abandon one's long-term goals by employing justifications to license this goal violation. When taking this self-licensing perspective, it could be that a long day's work is used as a compelling justification to indulge in chocolate (e.g., "I deserve it"). Importantly, compared to the prevailing capacity-based account of self-regulation failure, this perspective holds different implications for the (dys)functionality of indulgence for successful weight management in the long run. In the present research, we posit that instead of threatening the long-term goal of weight control, indulgence stemming from self-licensing may also support future goal attainment. Specifically, we theoretically define and test under what conditions self-licensing can be considered functional and dysfunctional for successful goal striving.

Whereas self-control failure has typically been theorized to be the result of impulses and reward-related processing (Hagger, Wood, Stiff, & Chatzisarantis, 2010; Hofmann, Friese, & Wiers, 2008), self-licensing is suggested to be a more deliberate process (De Witt Huberts, Evers, & de Ridder, 2014b; see also Hofmann & Van Dillen, 2012). This is an important distinction, as these deliberations to give in to food temptations could just as well be part of a self-regulatory strategy. For example, a dieter can justify having a bar of chocolate after a long day's work by considering that this might prevent cravings from turning into uncontrollable urges (that potentially make the damage even worse). Nonetheless, in the self-licensing literature giving in to food temptations is usually labeled as self-regulation failure, which at first sight seems logical as the term "temptation" implies the presence of a conflicting goal. However, it thereby (unintentionally) fosters dichotomous "black-and-white" thinking about dieting. That is, all diet violations are seen as threats to the attainment of the long-term goal of maintaining or reaching a healthy body weight, and should therefore be prevented. Consequently, there seems to be little consideration of instances in which giving in to temptation may actually promote successful goal striving. Specifically, in the long-term, allowing oneself the occasional diet violation may be a better strategy than aiming for complete control over one's eating behavior. While many popular diets already acknowledge this notion by incorporating "cheat days" into their regime, and evidence that flexible diets result in better outcomes than more rigid diets (e.g., Coelho do Vale, Pieters, & Zeelenberg, 2015; Westenhoefer, Stunkard, & Pudel, 1999), this has not led to a more nuanced definition of self-licensing.

Following this reasoning, there seems to be two sides to self-licensing. On the one hand, self-licensing could simply be people "tricking" themselves that it is okay to indulge, which could be considered dysfunctional when this occurs too easily or too often. On the other hand, self-licensing could also have functional qualities, when it supports diet adherence and results in a positive net effect in the long run in terms of dietary success. While both ways of self-licensing lead to indulgence, they nonetheless have quite different implications. Hence, an important question that arises is how we can identify under what conditions it is functional to license indulgence, in terms of ultimately serving the long-term goal to control or lose weight; and under what conditions self-licensing indeed threatens successful goal striving. Accordingly, the purpose of the present studies is to define two types of self-licensing, and to corroborate this theoretical distinction between functional and dysfunctional self-licensing by examining their associations with indices of (un)successful dietary self-regulation. With this approach, this research aims to further refine the concept of self-licensing and to address its implications for self-regulation success and failure.

2 | SELF-LICENSING STRATEGIES

Self-licensing is defined as "the act of making excuses for one's discrepant behavior before actual enactment, such that the prospective failure is made acceptable for oneself" (De Witt Huberts et al., 2014a, p. 121). For eating behavior, discrepant behavior would be (over)eating foods that one would consider unhealthy or fattening. Strictly speaking, one would not classify such discrepant behavior as a diet violation (i.e., self-regulation failure) when it is incorporated in a diet plan (e.g., allowing oneself one bar of chocolate/cheat day per week), but for the sake of clarity we will refer to it as such in the remainder of this introduction. This is also based on the assumption that even when a diet violation like having a bar of chocolate is planned and allowed, one would still be aware of the fact that this is not "standard practice."

The defining characteristic of functional self-licensing is that diet violations are allowed and incorporated into one's diet with the function to promote diet adherence and success in the long run. Hence, diet deviations are perceived as means to an end rather than failure. The defining characteristic of dysfunctional self-licensing is more or less the opposite: the tendency to perceive all diet violations as failure, therefore perceiving these diet slips as threatening rather than potentially promoting successful goal striving. Accordingly, such interpretations have been found to be detrimental to subsequent self-regulation (Zemack-Rugar, Corus, & Brinberg, 2012). This has been particularly observed in restrained eaters, generally known as individuals who aim for strict control over their food intake (Herman & Polivy, 1980). Restrained eating status has been found to reflect concerns about food manifested in eating-related guilt, rather than being indicative of actual intake restriction (De Witt Huberts, Evers, & de Ridder, 2013, see also Mann et al., 2007). Moreover, feelings of guilt have been suggested to promote the

"what-the-hell-effect," when dieters decide that it does not matter anymore what they will consume that day once they have broken their diets (Herman & Mack, 1975).

Evidence that affirms the potential functionality of self-licensing comes from research aiming to validate subscales measuring rigid and flexible control of eating behavior.[1] Westenhoefer et al. (1999) found associations between rigid control, characterized by a dichotomous, all-or-nothing approach to dieting, and a higher body mass index (BMI), higher self-reported energy intake and lower weight-loss success. Flexible control on the other hand, reflecting a more graduated approach where "forbidden foods" are allowed (although in limited qualities), was associated with lower BMI, lower energy intake and higher probability of successful weight reduction.[2] These findings suggest that some self-licensing of diet violations leads to better diet outcomes. However, it should be noted that the selection of items making up these scales was based on the correlation of each item with disinhibition, as measured by another subscale. In addition, the rigid subscale items seem to reflect failed attempts at weight control in the past, which may not necessarily represent rigid control. As a potential result of how the scales were constructed, the findings could not be replicated in a later study by Smith, Williamson, Bray, and Ryan (1999).

Other findings that suggest that some self-licensing of diet violations lead to better outcomes come from Coelho do Vale et al. (2015), who showed the benefits of incorporating moments of indulgence into one's diet, referred to as "intermittent goal striving," compared to straight and rigid goal striving. According to the authors, the key to this approach is that these moments are planned, which they manipulated by providing participants with a weekly diet in which they either were allowed to eat 1,500 kcal for seven days in the rigid goal striving condition, or 1,300 kcal for six days and 2,700 kcal on the seventh day in the intermittent goal striving condition (summing up to 10,500 kcal in both conditions). In two studies, it was found that intermittent goal striving helped participants to maintain self-regulatory resources, motivation, and positive affect, while a drop in these measures was found for participants in the straight goal striving condition. Moreover, when participants were directly asked if they would prefer intermittent or straight goal striving for a personally relevant goal, they indicated that they believed intermittent goal striving would make them more motivated and overall that it would be more helpful for goal attainment. Accordingly, it was concluded that "… it can be good in the long run to behave badly in the short-run, when this is part of the plan" (p. 26).

To successfully promote goal striving, the permission for diet violations evidently needs to be within certain boundaries. When individuals deviate from their diet too quickly or too often, the scales can easily tip in the wrong way. Thus, when it comes to self-licensing, it is important to strike a good balance between controlling one's eating behavior and permitting indulgence. Not surprisingly, self-control, defined as the ability to override or change one's inner responses, has been found to play a key role in the process of balancing between opposing goals (Hofmann, Luhmann, Fisher, Vohs, & Baumeister, 2014). Not only does high self-control support the effective management of conflicting goals, like deciding when to pursue what goal and when to switch between goals, this successful balancing of goals in turn predicted high life satisfaction. So, as for virtually all forms of behavior contributing to a successful and healthy life (De Ridder, Lensvelt-Mulders, Finkenauer, Stok, & Baumeister, 2012), a certain degree of self-control may also be necessary for self-licensing to be functional.

From the large body of literature on self-regulation, it seems evident that people are not able to always control their eating behavior (e.g., Hofmann, Rauch, & Gawronski, 2007; Johnson, Pratt, & Wardle, 2012; Stroebe, Mensink, Aarts, Schut, & Kruglanski, 2008). In fact, despite good intentions, the occasional failure to act in line with one's goals is inevitable (Baumeister & Heatherton, 1996). Hence, it is not a matter of whether people indulge, but more a question of how these indulgent moments are incorporated into one's diet. More specifically, whether self-licensing is detrimental to healthy eating behavior may be dependent on how (flexible vs. rigid), when (planned or unplanned), why (means to an end or solely hedonically motivated), and to what extent (balanced vs. unbalanced) an individual allows him or herself to indulge in unhealthy foods.

3 | THE PRESENT STUDIES

The aim of the present studies was to verify the theoretical distinction between two types of self-licensing, so-called functional and dysfunctional self-licensing, and to examine whether these are differentially associated with indices of dietary self-regulation. The first two studies were conducted through Amazon's Mechanical Turk (MTurk), an open online marketplace that can be used for web-based data-collection (Buhrmester, Kwang, & Gosling, 2011). In Study 1, an item pool was constructed containing items that were expected to be representative of functional and dysfunctional self-licensing. The items best representing the two hypothesized types of self-licensing were selected and tested again in Study 2, in which indices of dietary self-regulation (e.g., trait self-control, restrained eating, dietary success; see measures for how each index represents (un)successful dietary self-regulation) were also examined in order to corroborate the previously established classification. It was expected that functional self-licensing would be associated with successful dietary self-regulation, whereas dysfunctional self-licensing would be associated with unsuccessful regulation of eating

behavior. The aim of Study 3 was to extend the indices of (un)successful dietary regulation to actual eating behavior. By having participants keep an unhealthy snack diary, we tested the hypothesis that dysfunctional self-licensing would be predictive of higher snack consumption, whereas functional self-licensing would predict lower consumption of unhealthy snacks. In addition, Study 3 provided the opportunity to see whether the associations obtained in Study 2 could be replicated, albeit in a smaller sample.

In Study 1 and 2 that focused on obtaining representative items to measure (dys)functional self-licensing, only participants who indicated having any experience with dieting were included in the final samples, as the presented items pertained to dieting behavior. Participants were informed that "dieting" referred to "following the (healthy) eating rules that you have set for yourself." This was done in order to avoid the misinterpretation that dieting meant following a prescribed diet (e.g., Atkins), and to avoid limiting the present examination of dieting to the sole purpose of losing weight. In addition, "bad foods" were defined as "foods that you would consider unhealthy and/or fattening," to use this term to refer to foods that—strictly speaking—would indicate deviations from dieting, but not necessarily self-regulation failure.

4 | STUDY 1

4.1 | Methods

4.1.1 | Participants

Two-hundred-and-one participants completed the survey. For a principal axis factor analysis (PFA), a sample size of 200 is generally considered "fair" (Comrey & Lee, 1992 as cited in Tabachnick & Fidell, 2007). Participants who indicated not having any experience with dieting ($n = 7$) were removed from further analyses. This resulted in a final sample of 194 participants (62% male), with a mean age of 35.13 years ($SD = 11.25$; range 18–70), and a mean BMI of 24.95 ($SD = 5.40$; range 16–48).[3]

4.1.2 | Procedure

Participants were invited to fill out a survey on eating behavior. After providing informed consent, demographics (gender, age, occupation, work hours per week, household composition) were assessed. Next, participants provided information on their weight and height and they indicated on 7-point scales (1 = *not at all*; 7 = *very much*) whether they had experience with dieting, how successful they felt when it came to adhering to their diet and whether they were currently trying to lose weight or eat (more) healthily. Subsequently, participants received a list of 52 items (presented in random order) pertaining to functional and dysfunctional self-licensing, and

indicated how much each statement applied to them on scales ranging from 1 (*does not apply to me at all*) to 7 (*totally applies to me*). Upon completion, participants were thanked and received $0.50 on their account.

4.1.3 | Self-licensing items

Item construction and classification was guided by theoretical considerations. As outlined above, functional and dysfunctional self-licensing is proposed to be dependent on how (flexible vs. rigid), when (planned vs. unplanned), why (means to an end vs. solely hedonically motivated), and to what extent (balanced vs. unbalanced) an individual allows oneself to deviate from one's diet. The items were carefully constructed in order to reflect these defining differences. Accordingly, 27 items that reflected dysfunctional ways to allow oneself for eating unhealthy foods were constructed. These described giving in to food temptations in response to feelings of deservingness and entitlement (i.e., "I reward myself with bad foods too easily"), and other behaviors that have previously been suggested to be the result of aversive self-licensing processes (i.e., "I have a tendency to indulge in bad foods 'one last time' before I start eating healthy"; Urbszat, Herman, & Polivy, 2002). In addition, 25 items that reflected functional ways of incorporating unhealthy foods into a diet were developed. These represented allowing oneself the occasional treat to support dietary success in the long run (i.e., "To adhere to a healthy diet for a long period of time, it is important that I allow myself an occasional treat").

4.2 | Results

4.2.1 | Descriptives

See Table 1 for means and standard deviations of the following variables: experience with dieting, feelings of dietary success, trying to lose weight, and trying to eat healthy. On average, participants reported working for 38.36 hr a week ($SD = 15.63$), in various professions (e.g., construction, education, business; for a complete list see Supporting Information). They further reported the following household compositions: couple living with one or more children (33.5%), single person living alone (23.7%), couple living alone (16.5%), living with friends or relatives without children (11.3%), single person living with one or more children (5.7%), unrelated adults living without children (4.6%), and "other" (4.6%).

4.2.2 | Principal axis factor analysis

A PFA with Promax rotation was run on the 52 items, as this rotation allows components to be correlated. Inspection of the correlation matrix showed that one item did not have at

TABLE 1 Means and standard deviations for descriptive variables measured in Study 1, 2, and 3

	Study 1		Study 2		Study 3	
Variable	**M**	**SD**	**M**	**SD**	**M**	**SD**
Experience with dieting	5.04	1.42	5.22	1.43	–	–
Feelings of dietary success	4.63	1.52	4.67	1.42	–	–
Diet importance	–	–	5.39	1.26	–	–
Diet motivation	–	–	5.22	1.28	–	–
Trying to eat healthy	5.24	1.52	5.63	1.33	5.20	0.92
Motivation to eat healthy	–	–	5.48	1.45	5.15	1.22
Trying to lose weight	3.92	2.03	4.48	2.02	3.94	1.87
Motivation to lose weight	–	–	4.42	1.95	3.96	1.81
Concerned with eating healthily	–	–	–	–	4.93	1.27
Concerned with body weight	–	–	–	–	4.67	1.45

Note. The range of possible scores for all variables is 1–7.

least one correlation coefficient ≥0.3, and was removed. The overall Kaiser-Meyer-Olkin (KMO) measure was 0.87 with individual KMO measures >0.6. Bartlett's test of sphericity was significant ($p < 0.001$), indicating that the data was likely factorizable. PFA revealed 10 components that had eigenvalues greater than one, and the scree plot indicated three components. However, only the first two components explained a reasonable amount of the total variance, 23.48% and 14.09%, respectively. In addition, the third component (explaining 8.36% of the total variance) consisted of only three items (based on component loadings >0.40) and seemed to measure a different concept. Specifically, it seemed to measure planning and rule setting, and an overall strategic approach to dieting; but these items together did not capture the essence of functional self-licensing. Importantly, the two-component solution met the interpretability criterion. As such, two components were retained.

The selection of items was based on component loadings (>0.40), and the absence of problematic cross-loadings (all <0.20) and cross-correlations (all <0.40). For functional self-licensing this resulted in 10 items. For dysfunctional self-licensing, there were 19 eligible items. To have a balanced questionnaire with an equal number of items for each type of self-licensing (preventing an emphasis on dysfunctional self-licensing) 10 dysfunctional self-licensing items were selected based on content validity: the authors discussed which

items would best represent dysfunctional self-licensing based on our previously established conceptualization, and that together would best cover the defining characteristics of this type of licensing (for details see Supporting Information). Cronbach's alphas and component loadings of the final items are presented in Table 2.

A mean score was computed for functional and dysfunctional self-licensing. Participants scored 4.58 ($SD = 1.07$) on functional self-licensing, and 3.95 ($SD = 1.31$) on dysfunctional self-licensing. A significant but small correlation was found between both components, $r = 0.16$, $p = 0.026$.

4.2.3 | Correlations

Bivariate correlations with both components, gender, age, BMI, and feelings of dietary success were computed. Functional self-licensing was positively correlated with gender (i.e., being female; $r = 0.14$, $p = 0.047$) and feelings of dietary success ($r = 0.20$, $p < 0.01$). Dysfunctional self-licensing was negatively correlated with feelings of dietary success ($r = −0.29$, $p < 0.001$), and positively with BMI ($r = 0.17$, $p = 0.023$).

4.3 | Discussion

The results showed that two components, representing functional and dysfunctional self-licensing, could be extracted. The associations between functional self-licensing and feelings of dietary success, and between dysfunctional self-licensing and lower feelings of dietary success and higher BMI already provide some indication that these components are labeled correctly. In Study 2, this differentiation between functional and dysfunctional self-licensing will be further corroborated by examining its associations with additional indices of (un)successful dietary self-regulation.

5 | STUDY 2

In Study 2 the twenty selected items were tested again, and an item structure differentiating between functional and dysfunctional self-licensing was expected. The main goal was to find additional support for these two types of self-licensing by further assessing associations with indices of (un)successful dietary self-regulation. First, it was expected that dysfunctional self-licensing would be associated with indices of unsuccessful dietary regulation. These included restrained eating (Herman & Polivy, 1980), rigid control of eating behavior (Westenhoefer et al., 1999) and diet-balance discrepancy (i.e., a difference between ideal and actual balance between dieting and "just eating what you want"; adopted from Hofmann et al., 2014; Study 3). Second, it was expected that functional self-licensing would be associated with

TABLE 2 Loadings of the final items of the dysfunctional and functional self-licensing factors for Study 1 and 2

	Study 1	Study 2
Factor 1: dysfunctional self-licensing		
1. I reward myself with bad foods too easily	0.84	0.78
2. When I want to make up for eating bad foods, I often do not follow up on these intentions	0.79	0.75
3. I am easily persuaded to indulge in bad foods	0.77	0.84
4. When my favorite bad food is on sale, I need to have it	0.76	0.73
5. When I see other people eating bad foods, I feel entitled to do so as well	0.72	0.76
6. I have a tendency to indulge in bad foods "one last time" before I start eating healthy	0.70	0.65
7. When I feel negative, I just eat what I want	0.68	0.78
8. I allow myself to eat bad foods too easily after effortful activities	0.67	0.88
9. When I want to eat bad foods, I search for reasons that allow me to indulge	0.53	0.73
10. During dieting, I often decide spontaneously that it is time for a treat	0.52	0.53
Chronbach's α	0.90	0.93
Factor 2: functional self-licensing		
1. When I try to stick to healthy diet, a small portion of bad foods every now and then is enough to keep me motivated	0.85	0.81
2. For me, a healthy diet is only feasible when it includes some bad foods in moderation	0.74	0.69
3. During a diet, I eat bad foods every once in a while; otherwise, I wouldn't be motivated to follow my diet for a longer period of time	0.70	0.75
4. To adhere to a healthy diet for a long period of time, it is important that I allow myself an occasional treat	0.69	0.78
5. I can stick to a healthy diet because I know that I can have some of my favorite (bad) foods every now and then	0.68	0.84
6. Small amounts of bad foods are sufficient to satisfy my cravings	0.55	0.84
7. For me a balanced diet also includes some bad foods in moderation	0.54	0.70
8. I don't feel conflicted about eating bad foods when they are incorporated into my diet plans	0.49	0.66
9. I occasionally satisfy my (bad) food cravings in order to stick to a healthy diet the rest of the time	0.45	0.61
10. Even when I watch what I eat, I still enjoy a wide variety of foods	0.42	0.56
Chronbach's α	0.86	0.92

indices of successful dietary regulation. These included trait self-control (Tangney, Baumeister, & Boon, 2004), (feelings of) dietary success (Fishbach, Friedman, & Kruglanski, 2003), flexible control of eating behavior (Westenhoefer et al., 1999), and diet-balance satisfaction (i.e., satisfaction with the actual balance between dieting and "just eating what you want"; Hofmann et al., 2014). Logically, the (dys)functionality of each type of self-licensing can also become apparent in negative associations. For example, it can also be expected that dysfunctional self-licensing is negatively associated with feelings of dietary success.

5.1 | Methods

5.1.1 | Participants

One-hundred-and-fifty-two participants completed the survey. A power analysis (G*power; Faul, Erdfelder, Lang, & Buchner, 2007) revealed that in order for small to medium effects ($r = 0.25$) to be detected, with power $(1 - \beta)$ set at 0.80

and $\alpha = 0.05$, two-tailed, a minimal sample size of 120 was required. Again, participants who indicated not having any experience with dieting ($n = 5$) were removed from further analyses. This resulted in a final sample of 147 participants (48% male), with a mean age of 36.27 years ($SD = 10.34$; 22–70) and a mean BMI of 29.81 ($SD = 6.89$; range 16–48) (see Endnote 3).

5.1.2 | Procedure

Participants were invited to complete an online survey on eating behavior. After providing informed consent and demographics (similar to Study 1), the following measures and items were assessed (in random order): the functional and dysfunctional self-licensing items, trait self-control, restrained eating, dietary success, rigid and flexible control of eating behavior, several items on diet and healthy eating goals, and items on balancing between "following your diet and just eating what you want" (see Measures). After completing the survey, participants were thanked and received $1.55 on their MTurk account.

5.1.3 | Measures

All scales showed sufficient internal consistency, see Table 3 for reliability coefficients.

Descriptives

Participants indicated on 7-point scales (1 = *not at all*; 7 = *very much*) whether they had experience with dieting (*experience with dieting*), how successful they felt when it came to adhering to their diet (*feelings of dietary success*), how important they found adhering to their diet (*diet importance*), and how motivated they were to adhere to their diet (*diet motivation*). Diet goal was further differentiated based on the motivation to diet. Therefore, participants reported whether they were currently trying to lose weight (*trying to lose weight*), how motivated they were to lose weight (*motivation to lose weight*), whether they were currently trying to eat more healthily (*trying to eat healthy*), and how motivated they were to eat (more) healthily (*motivation to eat healthy*).

Functional and dysfunctional self-licensing

(Dys)Functional self-licensing was measured with the 20 items established in Study 1, presented in fixed random order.

Answers were given on scales ranging from 1 (*does not apply to me at all*) to 7 (*totally applies to me*). Mean scores were computed.

Trait self-control

Dispositional self-control, a key variable in any study of behavioral self-regulation research, predicts success in various major life domains (Tangney, Baumeister, & Boone, 2004), as well as successful dietary regulation (e.g., Crescioni et al., 2011). It was measured with the short 13-item Trait Self-Control Scale (Tangney et al., 2004). A sample item is "I am able to work effectively toward long-term goals." Answers were given on Likert scales ranging from 1 (*totally disagree*) to 5 (*totally agree*). A mean score was computed.

Dietary success

As a more direct measure of dietary success, the Perceived Self-Regulatory Success in dieting Scale (Fishbach et al., 2003) was administered. Participants indicated on 7-point scales how successful they are in watching their weight, in losing weight, and how difficult it is for them to stay in shape. A mean score was computed.[4]

TABLE 3 Correlations of functional self-licensing and dysfunctional self-licensing with eating behavior-related variables for Study 2 and 3

Variable	α		M (SD)		Functional self-licensing r		Dysfunctional self-licensing r	
General								
Gender (0 = male; 1 = female)	–	–	–	–	0.27**	–	0.09	–
Age	–	–	36.27 (10.34)	23.02 (4.35)	0.05	−0.08	−0.07	−0.12
Self-licensing								
Functional self-licensing	0.92	0.70	4.70 (1.21)	4.56 (0.80)	–	–	0.32***	0.01
Dysfunctional self-licensing	0.93	0.87	3.78 (1.45)	4.12 (1.19)	0.32***	0.01	–***	–
Indices of successful self-regulation								
Trait self-control	0.89	0.85	3.47 (0.76)	3.18 (0.67)	−0.05	0.05	−0.62***	−0.59***
Dietary success	0.74	0.61	4.03 (1.27)	3.96 (1.14)	0.07	0.35*	−0.56***	−0.51***
Flexible control	0.81	0.70	7.63 (3.24)	5.44 (2.59)	0.16†	0.13	−0.09	−0.20
Diet-balance satisfaction	–	–	4.40 (1.58)	4.28 (1.64)	0.11	0.51***	−0.49***	−0.31*
Body mass index (BMI)	–	–	29.81 (6.89)	22.14 (3.11)	0.03	−0.02	0.34***	0.08
Indices of unsuccessful self-regulation								
Snack intake	–	–	–	306 (152)	–	−0.27*	–	0.42**
Restrained eating	0.79	0.77	1.74 (0.64)	1.31 (0.53)	0.16†	−0.16	0.45***	0.24†
Concern for dieting	0.73	0.69	1.74 (0.70)	1.50 (0.57)	0.06	−0.21	0.46***	0.26†
Weight fluctuations	0.76	0.76	1.73 (0.87)	0.99 (0.80)	0.21**	−0.06	0.27**	0.10
Rigid control	0.74	0.65	8.25 (3.49)	6.39 (2.99)	0.02	−0.10	0.17*	0.11
Diet-balance discrepancy	–	–	0.71 (1.53)	1.20 (1.50)	0.07	−0.36**	0.17*	0.48***

Note. Results for Study 3 are underlined.

†$p < 0.08$. *$p \leq 0.05$. **$p < 0.01$. ***$p < 0.001$.

5.2 | Results

5.2.1 | Descriptives

See Table 1 for means and standard deviations. With respect to diet balance, participants scored 4.53 (SD =1.41) on ideal diet balance and 3.82 (SD =1.39) on current diet balance. A paired-samples t-test showed that the difference between participants' ideal and current diet balance was significant, t (146) = −5.68, p <0.001. On average, participants reported working for 36.09 hr a week (SD =14.97), in various professions (e.g., construction, education, business; for a complete list see Supporting Information). They further reported the following household compositions: couple living with one or more children (49.0%), couple living alone (19.7%), single person living alone (19.0%), living with friends or relatives without children (6.1%), single person living with one or more children (4.8%), unrelated adults living without children (0.7%), and "other" (0.7%).

5.2.2 | Principal axis factor analysis

A PFA was performed on the self-licensing items to verify the expected two-factor structure. Bartlett's test of sphericity was significant ($p < 0.001$), with an overall KMO of 0.91 and all individual KMO measures >0.8. PFA revealed two components that had eigenvalues greater than one, and the scree plot indicated two components. These components explained 39.48% and 21.28% of the total variance. The pattern matrix confirmed the two factors (all loadings >0.53). Cronbach's alphas and component loadings are presented in Table 2.

5.2.3 | Correlations

Correlations between functional and dysfunctional self-licensing and other variables are presented in Table 3. Again, a significant correlation was found between the two licensing components, $r = 0.32$, $p < 0.001$. Functional self-licensing was further associated with gender (being female; $r = 0.27$, $p < 0.01$), flexible control of eating behavior (marginally; $r = 0.16$, $p = 0.056$), restrained eating (marginally; $r = 0.16$, $p = 0.059$), and the restrained eating subscale weight fluctuations ($r = 0.21$, $p < 0.01$).

Dysfunctional self-licensing was associated with lower trait self-control ($r = −0.62$, $p < 0.001$), lower dietary success ($r = −0.56$, $p < 0.001$), lower diet balance satisfaction ($r = −0.49$, $p < 0.001$), higher BMI ($r = 0.34$, $p < 0.001$), restrained eating ($r = 0.45$, $p < 0.001$) and both subscales concern for dieting ($r = 0.46$, $p < 0.001$) and weight fluctuations ($r = 0.27$, $p < 0.01$), rigid control of eating behavior ($r = 0.17$, $p = 0.035$), and diet-balance discrepancy ($r = 0.17$ $p = 0.036$).

Restrained eating

While restrained eating is described as intentionally restricting food intake with the aim of losing or controlling one's body weight, it has been found to be associated with a higher sensitivity to attractive foods (e.g., Papies, Stroebe, & Aarts, 2007; Brunstrom, Yates, & Witcomb, 2004) and a higher susceptibility to overeat (e.g., Fedoroff, Polivy, & Herman, 2003).[5] Therefore, the Revised Restraint Scale (Herman & Polivy, 1980), which consists of two subscales: concern for dieting ("Do you eat sensibly in front of others and splurge alone?") and weight fluctuations ("In a typical week, how much does your weight fluctuate?"), was administered.

Flexible and rigid control of eating behavior

As stated in the introduction, both flexible and rigid control of eating behavior have been found to be differentially associated with successful dieting (Westenhoefer et al., 1999). The 12-item flexible control and 16-item rigid control subscales were used to measure these control dimensions of diet restraint (Westenhoefer et al., 1999). Example items are "If I eat a little bit more on one day, I make up for it the next day" (flexible control) and "I count calories as a conscious means of controlling my weight" (rigid control). For both scales, a mean score was computed.

Diet balance discrepancy

Dieters generally experience a conflict between the goals of eating enjoyment and of weight control (Stroebe et al., 2008). Ideally, there would be an optimal balance between these goals, where they are both pursued but not to the extent that one goal interferes with fulfilling the other. As functional self-licensing involves incorporating diet violations in one's diet, it was expected that this would result in a smaller discrepancy between how much participants adhere to their diet and how much they ideally would like to adhere to their diet (Hofmann et al., 2014; Study 3). Participants were asked "Think back to this past week. How much did you follow your diet versus just eating what you want?" (*current diet balance*) and "Next, think about what for you would ideally be the best balance between following your diet and just eating what you want?" (*ideal diet balance*). Answers were given on scales ranging from 1 (*always followed diet*) to 7 (*always just ate what I want*). Answers were reversed scored, so that higher scores indicated more diet adherence. A diet-balance discrepancy score was computed by subtracting participants' current balance from their ideal balance. Participants also rated how happy they felt with regard to how they balanced the conflict between following their diet and just eating what they want, on a on a scale ranging from 1 (*not at all happy*) to 7 (*very happy*).

5.3 | Discussion

The results of Study 2 confirmed the two-component structure proposed to represent functional and dysfunctional self-licensing. As expected, these components were again correlated. The further obtained correlations were mostly in line with predictions: whereas dysfunctional self-licensing found its support in significant correlations with indices of unsuccessful dietary regulation, functional self-licensing found its validation in correlations with less indices of successful dietary regulation than could have been expected. Specifically, it was only correlated with flexible control of eating behavior, and this correlation was marginally significant. Furthermore, unanticipated positive correlations were found between functional self-licensing and being female, restrained eating, and the weight fluctuations subscale of the restraint scale. As women have been found to diet more than men (Kiefer, Rathmanner, & Kunze, 2005), and weight fluctuations are most likely the result of dieting behavior, this might suggest that more experience with dieting leads to better self-regulation strategies.[6] This assumption is further supported by the mean age of the sample. Although the present findings do not fully support the existence of functional self-licensing, the ultimate test remains: to see whether (dys)functional self-licensing is differently associated with actual eating behavior. Therefore, in the next study, a more direct measure of dietary regulation was used by measuring eating behavior in the form of self-reported unhealthy snacking.

6 | STUDY 3

In this study, the (dys)functional self-licensing scales were tested again with a prospective design, to test whether the scales are predictive of self-reported unhealthy snack intake. Participants were asked to fill out a similar questionnaire as in Study 2, measuring indices of (un)successful dietary regulation, and to consequently keep an unhealthy snack diary (Verhoeven, Adriaanse, Evers, & De Ridder, 2012) for the duration of one week. The aim was to test whether higher scores on dysfunctional self-licensing would predict higher snack intake, and that higher scores on functional self-licensing would predict lower snack intake. To further corroborate the importance of the concept of (dys)functional self-licensing, it was deemed essential to demonstrate that the scales were predictive of unhealthy snack intake even when controlled for well-established predictors such as trait self-control (e.g., Crescioni et al., 2011). In addition, this study provided the opportunity to replicate the previously obtained correlations of (dys)functional self-licensing with indices of (un)successful self-regulation in a different sample.

In contrast with the previous studies that were conducted among community samples, in the present study, a sample of female students was recruited. The first reason for this is the impossibility to run an online diary study through MTurk. The second reason is that female students have been found to be susceptible to feeling guilty about snacking between meals (Steenhuis, 2009), and such feelings have been suggested to increase self-licensing (Kivetz & Zheng, 2006; Okada, 2005).

6.1 | Methods

6.1.1 | Participants

A total of 67 female students participated. A power analysis (G*power; Faul et al., 2007) was conducted for the main goal of the study (to test whether functional and dysfunctional self-licensing were predictive of snack intake) and revealed that in order a medium effect ($f^2 = 0.15$) to be detected, with power ($1 - \beta$) set at 0.80, $\alpha = 0.05$, and two predictors, a minimal sample size of 68 was required. Twelve participants did not provide sufficient data; either no snack moments were reported ($n = 7$) or more than one snack diary entry was missed ($n = 5$). Furthermore, one participant was aware of the goal of the study.[7] These participants were removed, resulting in a final sample of 54 participants.[8] These were from different nationalities, but mainly Dutch ($n = 30$) or German ($n = 11$), and had a mean age of 23.02 years ($SD = 4.35$; 18–48) and a mean BMI of 22.14 ($SD = 3.11$; range 16–32) (see Endnote 3).

6.1.2 | Procedure

Female students were invited to participate for a study on unhealthy snacking behavior. After applying and filling out an informed consent, they received a link to an online survey. The first two items addressed whether the participant was concerned about healthy eating or their body weight. If both were answered with "not at all", the survey stopped and participants were thanked and informed that they did not meet the requirements. Participants who were concerned about eating healthily and/or their body weight continued with the survey. This survey included an assessment of demographics including gender, age, BMI, and nationality, followed by descriptive measures and the measures that were also included in Study 2: (dys)functional self-licensing, trait self-control, dietary success, restrained eating, flexible and rigid control of eating behavior, and diet balance discrepancy. In addition, participants indicated when they would like to start with the seven-day snack diary. At the end of each day, participants received a link to an online snack diary. There they reported all the unhealthy snacks that they consumed that day. On the last day, this snack diary was followed by a debriefing, in which participants could provide comments and/or ideas about the goal of the study. Upon completing all the parts of the study, participants were debriefed, thanked, and reimbursed with 10 euro.

6.1.3 | Measures

See Study 2 for descriptions of the following measures: functional and dysfunctional self-licensing, trait self-control, dietary success, restrained eating, flexible, and rigid control of eating behavior and diet balance discrepancy. All scales showed sufficient internal consistency, see Table 3 for reliability coefficients. Additional measures are reported below.[9]

Descriptives

Participants were screened for having at least some concerns about eating healthily and/or their body weight. This was done through two items: "Are you concerned about eating healthily?" and "Are you concerned about your weight?" In the survey, participants consequently reported whether they were currently trying to lose weight (*trying to lose weight*), how motivated they were to lose weight (*motivation to lose weight*), whether they were currently trying to eat more healthily (*trying to eat healthy*), and how motivated they were to eat (more) healthily (*motivation to eat healthy*). All answers were given on 7-point scales (1 = *not at all*; 7 = *very much*).

Demographics

Participants reported their gender, height and weight (used to calculate BMI), and nationality.

Daily caloric snack intake

Once participants expected not to eat anymore for the rest of the day, they registered all the unhealthy snacks that they had eaten that day. "Unhealthy snack" referred to anything that is consumed between the main meals of the day (breakfast, lunch, dinner) and is perceived as unhealthy (Verhoeven et al., 2012). In an online snack diary, 13 categories of unhealthy snacks were listed (e.g., cookie, candybar, crisps), including a pre-specified quantity (e.g., small cookie, one scoop of ice cream), and for each category participants could indicate whether and how much they ate of the respective snack. Snacks that did not fit in one of the categories could be specified under the additional category "other." For this, "other" category participants were asked to be as specific as possible in describing the snack (e.g., brand name) and the consumed quantity. A *mean daily caloric intake* score was calculated by first multiplying each snack portion with its respective caloric value (obtained from Verhoeven et al., 2012 and the Netherlands Nutrition Centre), and subsequently dividing the total caloric intake by the number of diary entries.

6.2 | RESULTS

6.2.1 | Descriptives

See Table 1 for means and standard deviations. With respect to diet balance, participants scored 4.41 (*SD* = 1.56) on ideal diet balance and 3.20 (*SD* = 1.29) on current diet balance. A paired-samples *t*-test showed that the difference between participants' ideal and current diet balance was significant, $t(53) = -5.91$, $p < 0.001$.

6.2.2 | Correlations with indices of (un)successful dietary regulation

Correlations between functional and dysfunctional self-licensing and other variables are presented in Table 3. No significant correlation was found between the two licensing components, $r = 0.01$, $p = 0.963$. Functional self-licensing was associated with higher dietary success ($r = 0.35$, $p = 0.014$) and diet balance satisfaction ($r = 0.51$, $p < 0.001$), and lower diet balance discrepancy ($r = -0.36$, $p < 0.01$).

Dysfunctional self-licensing was associated with lower trait self-control ($r = -0.59$, $p < 0.001$), dietary success ($r = -0.51$, $p = 0.001$) and diet balance satisfaction ($r = -0.31$, $p = 0.023$), as well as higher restrained eating (marginally; $r = 0.24$, $p = 0.077$), the subscale concern for dieting (marginally; $r = 0.26$, $p = 0.053$) and diet balance discrepancy ($r = 0.48$, $p < 0.001$).

6.2.3 | Snack intake

A regression analysis was performed with functional and dysfunctional self-licensing added as predictors and snack intake as outcome variable. The model was significant, $R^2 = 0.25$, $F(2, 51) = 8.37$, $p < 0.001$, adjusted $R^2 = 0.22$, with both functional ($\beta = -0.27$, $p = 0.031$) and dysfunctional self-licensing ($\beta = 0.42$, $p = 0.001$) as significant predictors.

To test whether (dys)functional self-licensing predicted snack intake when also other predictors are included, first bivariate correlations between snack intake and trait self-control, flexible control, restrained eating (including its subscales concern for dieting and weight fluctuations), and rigid control were computed. Snack intake was only significantly correlated with trait self-control ($r = -0.36$, $p < 0.01$). A hierarchical regression analysis was performed with snack intake as outcome variable, and trait self-control added as predictor in Step 1, followed by (dys)functional self-licensing in Step 2. The first model significantly predicted snack intake, $R^2 = 0.13$, $F(1, 52) = 7.69$, $p < 0.01$, adjusted $R^2 = 0.11$, with trait self-control as a significant predictor ($\beta = -0.36$, $p < 0.01$), see Table 4. However, when adding (dys)functional self-licensing as predictors, the model improved significantly with a change in R^2 of 0.13, $p = 0.016$ (model $R^2 = 0.26$, $F(3, 50) = 5.89$, $p < 0.01$, adjusted $R^2 = 0.22$) showing that functional self-licensing predicted lower snack intake ($\beta = -0.26$, $p = 0.037$), whereas dysfunctional self-licensing predicted higher snack intake ($\beta = 0.33$, $p = 0.033$). Moreover, trait self-control was no longer a significant predictor in this second model ($\beta = -0.15$, $p = 0.331$).

6.3 | Discussion

The results of Study 3 are in support of the proposed distinction between functional and dysfunctional self-licensing. The results confirmed that functional self-licensing predicted less unhealthy snack intake, whereas dysfunctional self-licensing predicted more unhealthy snack intake. Moreover, this predictive quality of (dys)functional self-licensing was substantiated by the fact that the scales predicted snack intake over and above trait self-control. Also, the obtained correlational pattern with indices of (un)successful dietary regulation was largely in line with expectations and the correlations obtained in Study 2. However, some discrepancies emerged in the sense that earlier obtained correlations were not found in the present sample, and significant correlations were found that were not identified before. These inconsistencies are potentially due to the difference in samples, as this sample was considerably younger and had a substantially lower BMI, lower scores on flexible and rigid control, as well as lower scores on restrained eating, particularly the weight fluctuations subscale. For example, the samples on average healthy BMI, might explain the absence of a significant correlation between dysfunctional self-licensing and BMI as well as weight fluctuations. However, the correlations from Study 3 should be interpreted with caution, as the low sample size for conducting correlational analyses prohibits drawing strong conclusions. Nonetheless, the overall correlational pattern is again in support of the distinction between functional and dysfunctional self-licensing.

7 | GENERAL DISCUSSION

The present studies were designed to empirically verify the existence of two types of self-licensing based on its potential functionality in promoting successful dietary regulation. First, an item pool was developed based on relevant literature, from which indeed two types of self-licensing could be extracted (Study 1). Next, the labeling of each type as either functional or dysfunctional was corroborated by looking at the correlations with indices of (un)successful dietary regulation (Study 2). Finally, these indices were extended to actual eating behavior (Study 3). The strongest support was found for dysfunctional self-licensing, as it demonstrated most of the expected links with both successful and unsuccessful dietary regulation. The proposed functional type of self-licensing mainly became apparent from its associations with successful dietary self-regulation. However, both types have stood the test of predicting actual eating behavior, which was considered the most important evidence to corroborate the relevance of making a distinction between functional and dysfunctional self-licensing. Especially as these constructs were predictive of snack intake over and above trait self-control, which is one of the key variables of interest in eating behavior and self-regulation research and has been found to be predictive of successful dietary regulation (Crescioni et al., 2011; De Ridder et al., 2012; Tangney et al., 2004). Taken together, the current studies provide suggestive evidence for the importance of differentiating between two types of self-licensing.

Some discrepancies were observed between Study 2 and Study 3 with regard to the obtained associations between (dys)functional self-licensing and indices of (un)successful dietary regulation. More specifically, some correlations that were found in Study 2 were not replicated in Study 3, and vice versa. It should be noted that the low sample size (for correlational analyses) in Study 3 may have contributed to this, but nonetheless it can be questioned whether complete consistency is necessary to draw the conclusion that there are two ways of self-licensing. When the overall correlation pattern of functional self-licensing is contrasted with dysfunctional self-licensing, it is evident in both studies that one is more related to dietary success than the other. Moreover, differences in sample characteristics are likely to contribute to these discrepancies. The student sample in Study 3 portrayed less problematic dietary behavior than the community sample in Study 2 in the sense that they were not overweight and scored fairly low on restrained eating. It is actually notable that even in a sample that is doing quite well, still a distinction between

TABLE 4 Hierarchical regression analysis with snack intake as outcome variable, and trait self-control and (dys)functional self-licensing as predictors

	B	*SE*	*β*	*p*	95% CI Lower	Upper	*F*	R^2	Adj R^2
Step 1							7.69**	0.13	0.11
Trait self-control	−81.14	29.26	−0.36	0.008	−139.8	−22.43			
Step 2							5.89**	0.26	0.22
Trait self-control	−33.55	34.21	−0.15	0.33	−102.3	35.17			
Functional SL	−49.55	23.15	−0.26	0.037	−96.05	−3.05			
Dysfunctional SL	42.15	19.23	0.33	0.033	3.53	80.76			

**$p < 0.01$.

the two types of self-licensing can be observed, especially the differential outcomes in unhealthy snacking. However, because of the differences in sample characteristics, future studies measuring actual eating behavior in relation to (dys) functional self-licensing could benefit from including a community sample to substantiate the current findings and to increase generalizability.

Additional studies are also necessary to verify whether both types of licensing are generally related or not. Whereas an association between the two types was found in Study 1 and 2, this was not found in Study 3. Hence, it remains unclear whether individuals generally only engage in one type of licensing, or whether they can have both tendencies. For now, it seems more likely that there is an association between functional and dysfunctional self-licensing, as the first two studies had substantially larger sample sizes, and hence power. In addition, some variability is expected when conducting multiple studies, which might explain the inconsistent non-significant association obtained in Study 3. Overall, additional studies are necessary to provide more conclusive evidence.

While it was not the purpose of the present studies, the items obtained and tested in the present studies might provide a tool to identify (dys)functional licensing tendencies, which could have value for interventions aimed at improving healthy eating habits. Changing unhealthy eating patterns is still one of the major health challenges of today (Malik, Willett, & Hu, 2013), and tapping into self-licensing processes could be a promising intervention strategy especially in light of the results showing that dysfunctional self-licensing was associated with lower dietary success (Study 2 & 3), higher BMI (Study 2), and higher snack intake (Study 3). Importantly, while there have been studies focusing on identifying different types or categories of justifications (Taylor, Webb, & Sheeran, 2013; see also Verhoeven, Adriaanse, De Vet, Fennis, & De Ridder, 2015), very few efforts on developing items to measure self-licensing have been reported. It is therefore recommended to further test the predictive validity of the items that were identified and tested in the present studies, preferably with experimental designs, as the currently employed correlational and prospective designs limit conclusions regarding causality.

Besides the current evidence supporting the proposition that there may be two types of self-licensing based on its functionality in long-term dietary success, there is also the conventional wisdom that complete control over one's eating behavior is not desirable, let alone possible. People also have enjoyment goals (i.e., indulging in unhealthy but delicious foods) and satisfying these goals can be expected to contribute to life satisfaction. Moreover, eating fulfills an important social function, which can be compromised by never allowing any deviations from one's diet. Thus, from a broader

perspective there are reasons to believe that striving for a life free of diet violations would not conductive to an individual's general well-being.

To conclude, while in the self-regulation literature there seems to be a tendency to label diet violations as failure, the present studies reveal that this is not always warranted. On the contrary, the present studies suggest that diet violations can also portray successful diet self-regulation, as it may function as a means to long-term diet adherence. Then, "licensing" the occasional indulgence might be a better strategy than aiming for complete control over one's eating behavior. To quote Johnson et al. (2012): "A flexible approach to eating may be a factor distinguishing between those who are able to adhere to their diet aims and those who are prone to failure" (p. 668). It is therefore important to further examine the introduced concepts of functional and dysfunctional self-licensing.

ETHICS STATEMENT

Study 1 and 2 were conducted in Germany, where approval by an ethics committee is only necessary if medical or physiological information about the participants are collected or when participants are treated in a way that may harm their health. This was not the case for these online studies, and were therefore not submitted for approval by an ethical board. However, the studies were conducted according to the ethical guidelines of the Deutsche Gesellschaft für Psychologie (DGPs) and the American Psychological Association (APA). More specifically, both studies were considered minimally invasive and all data was anonymized upon collection. In this publication, no one is identifiable and only group results are presented. Hence, it is not possible to trace potentially sensitive information back to individual persons. Overall, standard ethical guidelines were adhered to (including informed consent and debriefing). Study 3 was conducted in the Netherlands and as part of a PhD research project for which ethical approval was obtained at Utrecht University (registered under FETC16-114).

ACKNOWLEDGMENTS

CONFLICT OF INTEREST

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

ENDNOTES

[1] The flexible and rigid control of eating behavior subscales are part of the cognitive restraint scale of the Three Factor Eating Questionnaire (TFEQ) developed by Stunkard and Messick (2008).

[2] These results were obtained with the short 7-item versions of the rigid and flexible control scales.

[3] Not all participants seemed to have provided reliable data on their weight and height, potentially by not following the pre-specified measurement units, resulting in extremely low (<16) or high BMIs (>50). These scores were removed from the analyses. The provided BMI data is based on $n = 179$ in Study 1, $n = 137$ in Study 2, and $n = 53$ in Study 3.

[4] The dietary success measure was not applicable for the whole sample, because some participants indicated that they were not trying nor motivated to lose weight (scores of "1" on measures "trying to lose weight" and "motivation to lose weight"). Therefore, these correlations are based on $n = 130$ in Study 2 and $n = 48$ in Study 3. It should be noted that the correlational patterns were similar for the complete sample.

[5] These associations were found when restrained eating was measured with Revised Restraint Scale (Herman & Polivy, 1975), which is also used in the current study. Other measures of restrained eating have found associations with successful caloric restriction (see Johnson, Pratt, & Wardle, 2014 for a review).

[6] A post-hoc analysis confirmed that functional self-licensing was positively associated with diet experience, $r = 0.21$, $p = 0.01$.

[7] Participants were considered as being aware of the study aim when they mentioned licensing/justifying (unhealthy) snacking, in these or different terms. When this participant remained in the sample ($n = 55$), the correlation between functional self-licensing and snack intake became marginally significant ($r = -0.26$, $p = 0.055$).

[8] Post hoc power analyses were conducted because the final sample size ($N = 54$) did not meet the sample size requirement. For the first regression analysis, including only functional and dysfunctional self-licensing as predictors, a post hoc power analysis revealed a power of 0.96 (given the obtained effect size $f^2 = 0.33$). For the second regression analysis where we looked at R^2 increase, including three predictors, a post-hoc power analysis revealed a power of 0.78 (given the obtained effect size $f^2 = 0.18$).

[9] For different research purposes, the study included additional measures: snacks were reported on an event-contingent basis, as well as eating-related affect. The results are reported in a different article (manuscript in preparation).

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of the article.