Introduction

Maintaining a healthy body weight is challenging, particularly considering the obesogenic environment in which we live (Johnson et al., 2012). Today, a large proportion of the population exercises dietary restraint in order to lose weight. However, most of the times, weight loss is achieved only in the short-term, and evidence shows that in the long-term, 50 percent of this weight is regained within 1 year (Wadden et al., 1989). Several factors are implicated in weight maintenance including behavior, physiology, psychology, and the environment (Ohsiek and Williams, 2011). In this study, we focus on a cognitive factor (dichotomous thinking) that may associate with restraint eating and weight regain and, in turn, with the ability to control weight. Dichotomous thinking is defined as the tendency to think in terms of binary oppositions such as “good or bad,” “black or white,” “healthy or unhealthy” (Oshio, 2009) and could be regarded as a form of cognitive rigidity, reflecting thus a less complex thinking style (Tiggemann, 2000).

Dichotomous thinking can manifest itself in many different ways, from extreme appraisals of food (“good” or “bad”) to extreme appraisals of the diet (“on” or “off”) and the weight status...
Palascha et al. ("acceptable" or "unacceptable") (Dove et al., 2009). It has been shown that consumers tend to employ simplistic thinking styles, as they categorize foods as good/bad or healthy/unhealthy (Dean et al., 2011; Rozin et al., 1996) and make unfounded inferences about the food attributes based on these crude categorizations (Rozin et al., 1996). Dichotomous thinking was found to associate positively with restraint eating in a non-clinical sample of males and females (Tiggemann, 2000). It is believed that an "all or nothing" response to minor dietary transgressions may lead to temporary abandonment of the diet and overeating (Lethbridge et al., 2011; Ramacciotti et al., 2008). Furthermore, a prospective study with weight regainers, maintainers, and people with healthy weight showed that dichotomous thinking was one of the best predictors of weight regain in obesity (Byrne et al., 2004). Together, evidence suggests that there is a link between dichotomous thinking, restraint eating, and weight regain, which is further investigated in this study.

Restraint eating is often initiated as a response to weight gain (Johnson et al., 2012). Evidence from epidemiological studies shows that exercising dietary restraint is a helpful strategy to successful long-term weight maintenance (McGuire et al., 1999; Vogels et al., 2005; Vogels and Westerterp-Plantenga, 2007; Wing et al., 2008), but that the decrease in dietary restraint that typically follows the achievement of weight loss is directly associated with weight regain (McGuire et al., 1999). The restraint theory proposes that dietary restraint may induce a counter-regulatory response leading to disinhibited eating (Herman and Mack, 1975).

Two forms of restraint eating can be distinguished: the “rigid” and the “flexible” restraint (Westenhoefer, 1991). The rigid form is characterized by a dichotomous, rule-based, “all-or-nothing” approach to eating, dieting, and weight. The flexible restraint represents a more graduated approach, in which fattening foods are part of the diet in smaller quantities without triggering emotions of guilt and anxiety. This difference may be a key factor in distinguishing between restraint eaters who are able to efficiently control their intake (flexible restraint) from those who are prone to overeating and weight regain (rigid restraint) (Johnson et al., 2012). The study of Sairanen et al. (2014) revealed that an increase in flexible restraint and a reduction in rigid restraint during a weight loss intervention were related to better weight loss maintenance and well-being (Sairanen et al., 2014). Dichotomous thinking, which seems to play an important role in distinguishing between the two forms of restraint eating, may impact on the ability to achieve and maintain a desirable weight.

Despite the potential relevance of dichotomous thinking in the food and eating domain, the relationship between dichotomous thinking and behavioral parameters such as dietary restraint and weight regain has been explored in very few studies so far and mainly within the areas of obesity and/or eating disorders research (Alberts et al., 2012; Byrne et al., 2003, 2004; Dove et al., 2009; Lethbridge et al., 2011; Lingswiler et al., 1989; Ramacciotti et al., 2008; Seamore et al., 2006). The relationship between cognitive and behavioral outcomes is expected to be more pronounced in people with eating disorders, who are more likely to hold dysfunctional cognitions related to food and eating (Epstein and Meier, 1989; Teasdale et al., 2001). This partly explains why most research on dichotomous thinking is targeted to obese individuals and people with eating disorders. However, there is evidence that a wider range of people think in dichotomous terms (Oakes, 2005; Oakes and Slotterback, 2005; Rozin et al., 1996; Tiggemann, 2000).

In order to examine how dichotomous thinking relates to restraint eating and weight regain in a broader sample of people, we performed a cross-sectional study in which cognitive (dichotomous thinking) and behavioral parameters (restraint eating, weight regain, dieting) were assessed. Apart from the focal objective of the study which is to investigate whether restraint eating and weight regain associate with dichotomous thinking, we also examine whether the eating-specific dichotomous thinking (dichotomous cognitions regarding food and dieting) mediates the association of dichotomous thinking, as a general personality
trait, with restraint eating and weight regain, as well as the association between restraint eating and weight regain. The research framework is reflected in Figure 1. We expect that dichotomous thinking, both as a general personality trait but also as the dichotomous cognitions regarding food and dieting, positively relates to restraint eating and weight regain. Moreover, we hypothesize that the relationship of general dichotomous thinking with restraint eating and weight regain is mediated by the eating-specific dichotomous thinking, in that people who think in dichotomous terms in general tend to exercise restraint eating to a greater extent and regain more weight after weight loss particularly because they tend to hold more dichotomous beliefs about food and dieting. Eating-specific dichotomous thinking is further expected to mediate the relationship between restrained eating and weight regain in a recursive way. People who exercise restraint eating to a greater extent are expected to regain more weight after weight loss because they tend to hold more dichotomous beliefs about food and dieting. Weight regain may then lead to higher levels of restraint eating in a compensatory way. This leads to the following hypotheses:

**H1:** Dichotomous thinking (general and eating-specific) is positively associated with restraint eating.

**H2:** Dichotomous thinking (general and eating-specific) is positively associated with weight regain.

**H3:** Eating-specific dichotomous thinking mediates the association between general dichotomous thinking and restraint eating.

**H4:** Eating-specific dichotomous thinking mediates the association between general dichotomous thinking with weight regain.

**H5:** Eating-specific dichotomous thinking mediates the association between restraint eating and weight regain.

### Methods

#### Participants

A total of 328 Dutch-speaking adults agreed to take part in this study. Of those, 241 completed the entire survey (73.4%). The sample was recruited through a mailing list of Wageningen University, which included primarily people who have given their consent to be invited in future studies. In order to reach the wider population, the survey was also posted in social media (Facebook and Twitter accounts of the authors). No specific inclusion and exclusion

---

**Figure 1.** Direct and mediation effects of dichotomous thinking on restraint eating and weight regain (research framework).
criteria were used in this study to ensure higher representativeness of the Dutch population, with the exception of the language criterion (only Dutch-speaking individuals were included) that was used to minimize cultural variations with respect to understanding and responding to questions. Participants were naive to the actual purpose of the study. They were only told that the survey is part of an MSc thesis regarding eating behavior. No measures were taken in order to prevent people filling in the survey more than once. However, given the length of the survey (approximately 20 minutes), such likelihood seems rather small.

**Study design**

Data were collected by means of an online survey. Only those respondents who gave their informed consent participated in the study. Participants were asked to respond to a set of independent self-reports. The order of dichotomous thinking and restraint eating measures was randomized and preceded the weight regain and control measures.

**Measures**

**Dichotomous Thinking in Eating Disorders Scale.** The Dichotomous Thinking in Eating Disorders Scale (DTEDS) is a validated 11-item self-report, comprising two subscales: the Eating subscale (DTEDS-Eating) and the General subscale (DTEDS-General) (Byrne et al., 2004). Questions such as “I view my attempts to diet as either successes or failures” and “I think of food as either good or bad” are included in the eating subscale, while the general subscale contains questions such as “I think of myself as either good or bad” and “I think of things in ‘black and white’ terms.” Questions are administered as 4-point Likert scales (1 = “not at all true for me” and 4 = “very true for me”). Internal consistency, as measured in this study, was very good for the total measure (α = .88), as well as for both of its subscales (Eating subscale: α = .80, General subscale: α = .84). Responses on individual questions were averaged, and final scores ranged from 1 to 4, with higher scores indicating higher levels of dichotomous thinking.

**Dichotomous Thinking Inventory.** The dichotomous Thinking Inventory (DTI) is a 15-item self-report scale which assesses dichotomous thinking in a more general context (Oshio, 2009). Questions such as “It works out best when even ambiguous things are made clear-cut” and “All questions have either a right answer or a wrong answer” are assessed and administered with a 6-point Likert scale (1 = “disagree strongly” and 6 = “agree strongly”). The questionnaire consists of three constructs, namely, “Preference for dichotomy” (α = .76), “Dichotomous beliefs” (α = .82), and “Profit-and-loss thinking” (α = .75). The last construct (Profit-and-loss thinking) was not included in this study because it was considered irrelevant in the specific context. Higher average scores, ranging from 1 to 6, indicate higher dichotomous thinking. The inclusion of two measures of dichotomous thinking in this study allows for direct comparison of those measures.

**Measures of eating behavior and weight status.** Respondents filled out the Restraint Eating subscale of the Dutch Eating Behavior Questionnaire (DEBQ) (α = .93). Based on the DEBQ cut-off points, each respondent was categorized in one of the following categories: “Very low,” “Low,” “Below average,” “Above average,” “High,” “Very high” (Van Strien et al., 1986). Moreover, respondents reported whether they had lost weight during the last 5 years (yes/no) and whether they had regained some or all of this weight afterward. Those who lost weight in the past 5 years and regained 4 kg or more were classified as “weight regainers,” while those who regained less than 4 kg were classified as “weight maintainers” (Manson et al., 1995). People who did not lose weight in the past 5 years were not included in this categorization. Voluntary and involuntary weight loss was not distinguished in this study.

**Control variables.** Finally, a set of control variables was measured. Those included age, sex, education level, self-reported weight (kg), and height (cm) in order to calculate body mass.
index (BMI) and dieting (“Are you currently on a diet?”) (yes/no).

**Statistical analysis**

Data were analyzed with SPSS 20. Correlation coefficients between all measures were calculated using Pearson’s $r$. For dichotomous variables, Phi coefficients were estimated instead of Pearson’s $r$. Linear or logistic regression analyses were further performed depending on the type of dependent variable (continuous vs dichotomous). Simple and adjusted models were produced to take into account the influence of control variables (sex, age, educational level, BMI, and dieting). To test mediation, the method of Baron and Kenny was used (Baron and Kenny, 1986). Significance of mediation was tested with Sobel’s test (Preacher and Hayes, 2004). Independent samples $t$-test was used to test the differences in mean dichotomous thinking scores between dieters and non-dieters.

**Results**

A mixed population of 49 males and 192 females was finally assessed. Participants aged 15–74 years ($32.3 \pm 15.3$), with mean BMI ($23 \pm 4.5$) falling into the normal range and mean restraint eating scores ($2.5 \pm 0.8$) lying below the average based on norms for non-obese people ($2.06–2.70$) (Van Strien et al., 1986). In addition, 64.7 percent of the sample was classified as highly educated, 28.2 percent as middle educated, and 7.1 percent as low educated. As regards dieting, 34 percent of the participants were currently on a diet and 22.8 percent reported to have regained weight after weight loss in the past 5 years.

**Correlations between cognitive and behavioral measures**

Restraint eating positively correlated with weight regain ($r = .256$, $p < .001$), dieting ($r = .495$, $p < .001$), BMI ($r = .262$, $p < .001$), and all measures of dichotomous thinking (Table 1). Weight regain similarly correlated with dieting ($r = .364$, $p < .001$) and BMI ($r = .385$, $p < .001$), but no significant association with the measures of general dichotomous thinking was observed. A positive correlation with DTEDS-Eating ($r = .315$, $p < .001$) was evident though. DTEDS-Eating positively correlated with all other variables measured in the study. In contrast, general dichotomous thinking correlated positively only with restraint eating and DTEDS-Eating.

**Dichotomous thinking and restraint eating**

All measures of dichotomous thinking significantly predicted restraint eating. These positive associations persisted in the presence of control variables (sex, age, BMI, educational level, and dieting). Specifically, for each 1-unit increase in dichotomous thinking, as measured by DTEDS-General, DTI, and DTEDS-Eating, restraint eating increased by .386, .209, and .533, respectively.

**Dichotomous thinking and weight regain**

DTEDS-Eating significantly predicted weight regain ($\beta = .885$, $p = .003$). For each 1-unit increase in DTEDS-Eating, there was a 142.4 percent increase in the odds of being weight regainer compared to being weight maintainer. DTEDS-Eating was only marginally associated with weight regain ($\beta = .586$, $p = .067$) in the presence of control variables (sex, age, BMI, educational level, and dieting). Associations between general dichotomous thinking measures and weight regain were not significant; therefore no mediation analysis was performed.

**Mediation effect of eating-specific dichotomous thinking on the association between general dichotomous thinking and restraint eating**

Eating-specific dichotomous thinking partially mediated the relationship between DTEDS-G and restraint eating, and fully mediated the relationship between DTI and restraint eating.
Specifically, both measures of general dichotomous thinking were significantly associated with restraint eating (DTEDS-General: $\beta = .337$, $p < .001$, DTI: $\beta = .202$, $p = .002$) (first assumption) (Figure 2). DTEDS-Eating was significantly associated with both DTEDS-General ($\beta = .738$, $p < .001$) and DTI ($\beta = .294$, $p < .001$) (second assumption), as well as with restraint eating in both adjusted models (DTEDS-General: $\beta = .75$, $p < .001$, DTI: $\beta = .635$, $p < .001$) (third assumption). Finally, the coefficients of both DTEDS-General and DTI were lower in the adjusted models compared to the simple models (DTEDS-General: $\beta = -.216$, $p = .01$ vs $\beta = .337$, $p < .001$, DTI: $\beta = .15$, $p = .781$ vs $\beta = .202$, $p = .002$) (fourth assumption). A full mediation effect was observed in DTI, since its association with restraint eating was not evident anymore in the adjusted model. The mediation effects, as tested with Sobel’s tests, were significant in both cases (DTEDS-General: confidence interval (CI) [0.41, 0.72]; DTI: CI [0.11, 0.28]).

**Mediation effect of eating-specific dichotomous thinking on the association between restraint eating and weight regain**

Eating-specific dichotomous thinking fully mediated the relationship between restraint eating and weight regain. Specifically, restraint eating was significantly associated with weight regain ($\beta = .671$, $p < .013$) (first assumption) (Figure 3). DTEDS-Eating was significantly associated with restraint eating ($\beta = .631$, $p < .001$) (second assumption), as well as with weight regain in the adjusted model ($\beta = .724$, $p = .041$).

---

**Table 1.** Matrix of bivariate correlation coefficients.

<table>
<thead>
<tr>
<th></th>
<th>Restraint eating</th>
<th>BMI</th>
<th>Dieting</th>
<th>Weight regain</th>
<th>DTEDS-General</th>
<th>DTI</th>
<th>DTEDS-Eating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restraint eating</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BMI</td>
<td>.262**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dieting</td>
<td>.495**</td>
<td>.416**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight regain</td>
<td>.256*</td>
<td>.385**</td>
<td>.363**</td>
<td>&lt;.001</td>
<td>.082</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>DTEDS-General</td>
<td>.263**</td>
<td>.057</td>
<td>&lt;.001</td>
<td>.082</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DTI</td>
<td>.291**</td>
<td>.066</td>
<td>-.012</td>
<td>-.027</td>
<td>.464**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>DTEDS-Eating</td>
<td>.600**</td>
<td>.260**</td>
<td>.393**</td>
<td>.315**</td>
<td>.613**</td>
<td>.312**</td>
<td>1</td>
</tr>
</tbody>
</table>

BMI: body mass index; DTEDS-General: Dichotomous Thinking in Eating Disorders Scale–General subscale; DTEDS-Eating: Dichotomous Thinking in Eating Disorders Scale–Eating subscale; DTI: Dichotomous Thinking Inventory.

Weight regain was a dichotomous variable with weight regainers defined as those who lost weight in the past 5 years and regained 4 kg or more and weight maintainers defined as those who lost weight in the past 5 years and regained less than 4 kg.

1Phi coefficient is reported instead of Pearson’s $r$ for correlation between dichotomous variables.

* $p < .05$; ** $p < .001$. 

![Figure 2. Regression coefficients for mediation analysis (eating-specific dichotomous thinking mediating the association between general dichotomous thinking and restraint eating).](image-url)
Finally, the association of restrain eating with weight regain was not evident anymore in the adjusted model compared to the simple model ($\beta = -.266, p = .013$) (fourth assumption). The mediation effect, as tested with Sobel’s test, was significant (CI [.03, .95]).

Additionally, an independent samples $t$-test showed that weight regainers ($n = 55$) compared to weight maintainers ($n = 45$) had higher scores on restraint eating ($t(98) = -2.619, p = .01$, mean difference $=-.42$, standard error of the mean (SEM) $=.16$) and DTEDS-Eating ($t(98) = -3.283, p = .001$, mean difference $=-.51$, SEM $=.16$).

**Eating-specific dichotomous thinking, BMI and dieting**

Regression analysis showed that BMI significantly predicted DTEDS-Eating ($\beta = .043, p < .001$). Specifically, for each 1-unit increase in BMI, there was an increase in DTEDS-Eating by 0.043. This association only marginally persisted in the presence of confounders (sex, age, educational level, restraint eating, and dieting) ($\beta = .019, p = .054$). Furthermore, an independent samples $t$-test showed that DTEDS-Eating was significantly higher among those who were currently dieting ($2.3 \pm .09$), compared to non-dieters ($1.7 \pm .05$) ($t(239) = -6.119, p < .001$).

**Discussion**

This study investigated how a cognitive factor (dichotomous thinking) relates to eating behavior factors such as dietary restraint and weight regain. A special focus was the role of eating-specific dichotomous thinking in mediating those relationships and explaining whether dichotomous thinking could have an impact on the ability to maintain a healthy weight.

Increasing levels of dichotomous thinking as a general personality trait was related to higher levels of dietary restraint in our sample, confirming our initial hypothesis (H1). This finding was quite robust, since both measures of general dichotomous thinking (DTEDS-General and DTI) were positively associated with restraint eating. The study of Tiggemann (2000) similarly showed that dichotomous thinking, measured by the Dysfunctional Attitudes Scale (DAS), was positively related to restraint eating. Furthermore, higher levels of eating-specific dichotomous thinking were related to higher levels of restraint eating in our study (H1). When we explored these relationships in more detail, we found that the eating-specific rather than the general dichotomous thinking was mainly responsible for the high levels of dietary restraint (H3 was confirmed).

In regard to weight regain, the positive association with eating-specific dichotomous thinking was only marginally significant in the presence of control variables (age, sex, BMI, educational level, dieting). Besides, no association with the measures of general dichotomous thinking was evident. These findings were rather unexpected (H2 and H4 not confirmed). The study of Byrne et al. (2004) revealed that dichotomous thinking (and particularly the general rather than the eating-specific trait) was one of the best prospective predictors of weight regain in obese people. However, in this cohort study, weight regain was measured at 1-year.
Palascha et al.

follow-up after the weight loss intervention. It is likely that the effect of dichotomous thinking on weight regain diminishes for longer time intervals (e.g. 4 years follow-up). Dove et al. (2009) found that dichotomous thinking was not related to short-term weight loss in a sample of 76 obese and overweight women who participated in a weight management program for 12 weeks. The authors suggest that dichotomous thinking may have a different effect among people. In some individuals, it may lead to overeating (and thus weight regain), but in others, it may translate to a focused and determined approach to dieting that is sustainable for at least a short period of time.

In our study, a strong positive association between restraint eating and weight regain was observed. This implies that an increase in restraint eating is accompanied by an increase in weight regain and vice versa. It has been previously proposed that restraint eating may have an inverse effect by leading to disinhibited eating, when restraint eaters have the feeling that they have violated their diets (Herman and Mack, 1975). According to our findings, this counter-regulation may have long-term implications and associate with weight regain. Moreover, the study of Nguyen and Polivy (2014), in which data from 17 studies were reanalyzed, revealed that individuals who consider themselves as successful dieters were more likely to be unrestrained eaters than restraint eaters (Nguyen and Polivy, 2014). However, other studies have shown that an increase in restraint eating is associated with a reduction in weight regain (McGuire et al., 1999; Vogels et al., 2005; Vogels and Westerterp-Plantenga, 2007; Wing et al., 2008), suggesting, thus, that dietary restraint is a helpful strategy to weight loss maintenance.

Further analysis of the data showed that in line with our hypothesis (H5), eating-specific dichotomous thinking mediates the association between restraint eating and weight regain. This implies that an increase in restraint eating may relate to more weight regain due to the tendency of restraint eaters to think about food and dieting in dichotomous terms. This “all or nothing” thinking style may be the reason why people fail to adhere to their diets and regain weight in the long-term.

Eating-specific dichotomous thinking was finally found to relate to BMI, with people who have higher BMI reporting higher dichotomous thinking scores, providing thus support to findings from Dove et al. (2009). Cultural discourses about moral aspects of eating should be taken into account when interpreting this finding. People make moral judgments about the eating behavior and weight status of other people but also for themselves (Delaney and McCarthy, 2014). Thus, for overweight and obese people who demonstrate “immoral” consumption practices more frequently, these moral judgments of “good” and “bad” may be more prevalent. Finally, we found that current dieters had higher scores on eating-specific dichotomous thinking compared to non-dieters. Tigemann (2000) also found that current and not past dieters have more dysfunctional cognitive attitudes (including dichotomous thinking).

The study findings imply that people who are inclined to think in black and white terms in general aspects of their lives, also tend to restrain their food intake, and the dichotomous beliefs about food and dieting play a key role in this effect. Therefore, we could argue that rigid beliefs about food and dieting (e.g. “I think of food as either good or bad” or “I view my attempts to diet as either successes or failures”) is what underpins restraint eating behavior.

Taking into account the strong positive association between restraint eating and weight regain, we could also argue that dichotomous thinking and its relevance to restraint eating may be risky not only for people with eating disorders but also for everyone who is trying to restrain in order to maintain their weight. We showed that it was the dichotomous beliefs about food and dieting that predicted weight regain, rather than the restraint eating behavior per se. This shows that a rigid form of dietary restraint that encompasses a cognitive dysfunctionality (in this case, dichotomous thinking) may impede people’s ability to control their intake and lead to weight regain. In line with
this observation, Sairanen et al. (2014) showed that adopting a more flexible restraint eating behavior (as opposed to a rigid restraint eating) could lead to a better weight loss maintenance and well-being.

The main limitation of the study was the use of a convenience sampling method, which resulted in a non-balanced sample with females being over-represented in the study population. Moreover, the cross-sectional design of the study does not allow us to prove causality of the observed associations. Intervention studies are needed to establish causality. This cross-sectional design further brings an uncertainty regarding the direction of the observed associations. For example, the longitudinal association between restraint eating and weight regain observed in this study could be explained by either restraint eating leading to weight regain or weight regain leading to restrained eating. Another limitation was the reliance on self-reports and the risk of biased responding (midpoint, extreme, or socially desirable responding), which could have an influence on the study findings. Furthermore, in this study, we did not make a distinction between voluntary and involuntary weight loss (for reasons other than dieting). These two segments of people could have different mindsets regarding dieting and eating in general, which should be taken into account in future studies. Also, the profile of people who gave up filling in the survey could not be assessed, since demographic data were asked at the end of the questionnaire. Therefore, we cannot ascertain whether the non-response was associated with other variables and what influence this could have on our results. Finally, the likelihood of duplicate responses in the data can not be ruled out.

The present study adds to the existing scientific literature related to the role of dysfunctional cognitive styles on eating behavior, and particularly to the cognitive factors that may impede or enhance people’s ability to control their eating. While outcomes of previous studies on dichotomous thinking can be generalized only to obese people or people with eating disorders, our findings have wider implications concerning a more general population.

Conclusion

In summary, our results suggest that dichotomous thinking, and particularly the dichotomous cognitions related to food and dieting, may have an adverse effect on restraint eating behavior with possible implications on weight loss maintenance in the long-term. Such simplified and dysfunctional thinking styles should be avoided, since they have the potential to induce a rigid response to dietary transitions, and therefore impede people’s ability to maintain a healthy body weight. Implications of these findings concern the general population and not only obese people, or people with eating disorders.

Acknowledgements

The authors wish to thank Dr Gerry Jager who gave feedback on the thesis report that framed this article. All authors provided feedback on drafts of this article, and read and approved the final version of this article.

Funding

No external funding was received by the authors to conduct the study. This paper was based on results from the thesis that was made in the framework of implementation of a postgraduate program (MSc), which has been co-financed through the Action “State Scholarships Foundation’s Grants Program following a procedure of individualized evaluation for the academic year 2012–2013”, from resources of the operational program “Education and Lifelong Learning” of the European Social Fund and the National Strategic Reference Framework 2007–2013.

Note

1. Tables including demographic data of the study population and statistics on the regression analyses performed in the study are available online as supplementary material.

References


