The Mediating Role of Perceived Dieting Success Between Delay Discounting and BMI

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Abstract

With the global prevalence of obesity having risen, an increasing number of people are attempting to lose weight. However, many struggle to achieve lasting success. One recent construct that has been proposed to contribute to obesity is delay discounting; the tendency to prefer smaller immediate rewards over larger delayed ones. However, findings on the relationship between delay discounting and weight have been inconsistent. The current study aims to investigate whether mediating factors, such as dieting success, may account for these inconsistencies. In the present study, a sample of 178 female university students completed the Monetary Choice Questionnaire (MCQ) and the Perceived Self-Regulatory Success (PSRS) in dieting scale, and their height and weight were measured. Participants had a mean age of 19.3 years (*SD* = 1.8) and a mean BMI of 21.9 (*SD* = 2.8). Results showed that delay discounting scores did not predict body mass index (BMI) directly or indirectly through dieting success. However, a significant negative correlation was found between dieting success and BMI. Future research should investigate whether this mediation emerges in higher-BMI samples, or whether alternative pathways that include additional mediators may better explain when and how delay discounting influences body weight.

Keywords: Delay discounting; Dieting success; Body mass index; Mediation; Obesity; Weight

The Relationship of Delay Discounting and Body Mass Index: the Potential Mediating Role of Perceived Dieting Success

Over the past decades, the global prevalence of obesity has nearly tripled, making it a major public health concern (Boutari & Mantzoros, 2022). While multiple factors contribute to obesity, eating behaviour is one of the most significant determinants (O'Neill et al., 2012). Combined with increasingly sedentary lifestyles, unhealthy eating behaviours have led to a rise in obesity-related conditions such as diabetes, cardiovascular disease, sleeping disorders, and more (Powell et al., 2021). As a result, more individuals have been trying to lose weight through dieting (Santos et al., 2017). However, among individuals trying to lose weight, dieting attempts have often been unsuccessful, with the majority of dieters regaining the weight they lost after five years (Crawford et al., 2000). This cycle is called weight cycling and has been found to be mediated by unstable dietary habits (Li et al., 2024). Research also indicates that women are more likely than men to engage in weight loss attempts, yet both do not adopt effective or sustainable strategies (Bish et al., 2005). This reliance on inadequate methods has long-lasting effects, leading to poor mental health outcomes and physical health issues, such as nutrient deficiencies and metabolic disturbances (Kärkkäinen et al., 2020; Linardon et al, 2021). Understanding the factors that contribute to body weight, such as unsuccessful dieting attempts and cognitive biases, may help researchers to develop more effective weight-related interventions.

The discrepancy between intentions to lose weight and actual behavioural outcomes may be partially understood through the concept of delay discounting. This factor refers to an individual's tendency to prefer immediate rewards over long-term benefits (Ainslie, 1975). This concept comes from behavioural economics and decision-making theory, where it describes the tendency for an individual to prefer smaller, immediate rewards over larger rewards that are delayed in time (Bickel et al., 2014a). This tendency is closely related to impulsivity and self-control, with research showing that greater delay discounting is associated with higher levels of impulsivity and often reflects lower self-control (Kirby et al., 1999; Ainslie, 1975; De Groot & Dom, 2005; Epstein, 2023). Moreover, studies have shown that impulsivity is associated with lower dietary adherence, partially explaining why many dieting attempts have been unsuccessful (Gómez-Martínez et al., 2022). Delay discounting provides a framework for understanding impulsive behaviour across various domains, including eating. Specifically, individuals with higher delay discounting are more likely to struggle to resist cravings for tasty but less nutritious foods instead of healthier options that contribute to long-term well-being and health (Price et al., 2013). This preference for short-term rewards can make it more challenging to maintain dietary goals, as the immediate gratification of indulgent foods often outweighs the distant benefits of balanced eating. Indeed, a tendency to prefer immediate rewards has been associated with obesity as it predicts excessive energy intake (Caleza et al., 2016; Epstein et al., 2010; Amlung et al., 2016). Delay discounting is typically measured through decision-making tasks that present a choice between two monetary options: a smaller, immediate reward and a larger, delayed reward. A recent trend has shown that individuals who prefer the smaller, immediate rewards, are more likely to have higher body weight (Jarmolowicz et al., 2014; Bickel et al., 2014a; Bickel et al., 2014b; Myers et al., 2020; Wainwright et al., 2018; Chabris et al., 2008).

However, despite growing evidence supporting this association, findings have not entirely been consistent regarding the relationship between delay discounting and body weight. While some studies suggest that higher delay discounting predicts higher body mass index

(BMI), others have found no significant association. This variability in findings is reflected in the meta-analysis by Bickel et al. (2021). For instance, a study by Ikeda et al. (2016) with a correlational design examined the association between delay discounting and BMI and concluded that both obesity and underweight status were associated with delay discounting. In contrast, a study by Veillard and Vincent (2020) found no significant relationship between delay discounting and BMI in their correlational study, cautioning against the assumption that discounting processes are directly associated with BMI. Two plausible explanations may account for this discrepancy in the literature: variability in how weight-related outcomes are measured and the fact that delay discounting, as a construct, does not inherently involve food consumption.

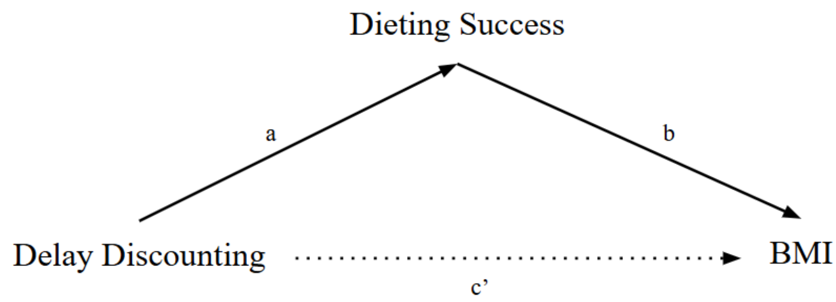
Studies have used a wide range of metrics when assessing the relationship between delay discounting and weight. Some studies have operationalised weight using continuous measures like BMI (Ikeda et al., 2016; Meyre et al., 2019; Veillard & Vincent, 2020), while others have focused on body fat percentage (Lu et al., 2014), or categorical classifications such as obesity status (VanderBroek-Stice et al., 2017; Appelhans et al., 2011). This variability introduces considerable heterogeneity in what is being assessed, suggesting that researchers may be examining different facets of weight status. Notably, many of the significant findings reported in the literature come from studies that focus exclusively on categorising individuals as obese or non-obese (Amlung et al., 2016; Bickel et al., 2021; Wainwright et al., 2018), which means that they only assess one extreme of the weight spectrum. These studies often interpret their findings as evidence that delay discounting influences weight, even though they did not examine the full range of weight status (Jarmolowicz et al., 2014; Myers et al., 2020; Verdejo-García et al., 2010). To address this limitation, the current study will use BMI as a continuous measure to have a more nuanced examination of how delay discounting relates to weight, as it captures the full spectrum of body weight. The reasoning for this approach is to test the observation that studies using continuous weight measures are less likely to report significant associations. By doing so, this study aims to contribute meaningfully to the literature by clarifying whether the relationship between delay discounting and weight is still evident when weight is not operationalised as a categorical variable.

The second explanation is that the term delay discounting refers specifically to the decline in the subjective value of a reward as the delay of its attainment increases. This definition relates to decision-making processes but does not directly account for self-regulatory outcomes such as body weight. Therefore, the association between delay discounting and BMI may be better understood through the mediation of other contributing factors (Meule et al., 2016). In other words, delay discounting may not directly influence BMI but may instead affect intermediate variables, which in turn impact BMI. This type of relationship is known as indirect-only mediation, where the indirect effect is statistically significant, but the direct effect is not. Zhao et al. (2010) suggest that this relationship occurs when the mediator represents a core mechanism through which the independent variable operates, or when the direct path is inherently weak. Applying this to the current findings, delay discounting may influence BMI indirectly by first affecting eating-related behaviours rather than exerting a direct effect on BMI itself. A potential mediating factor in the relationship between delay discounting and BMI is perceived dieting success. This refers to an individual's subjective evaluation of how successfully they regulate their eating behaviour in the context of dieting aims (Meule et al., 2012). Individuals with lower delay discounting tend to place greater value on long-term outcomes rather than smaller immediate rewards, which could contribute to more effective self-regulation and result in greater success in adhering to dietary goals.

Notably, research has already established a mediating role for dieting success in the relationship between impulsivity and BMI. Impulsivity refers to a predisposition towards rapid, unplanned actions without forethought (Moeller et al., 2021). Among individuals who are actively trying to diet, lower levels of impulsivity seem to be associated with greater dieting success (van Koningsbruggen et al., 2013). Furthermore, it has been found that the relationship between general trait impulsivity and BMI was mediated by perceived dieting success in an indirect-mediation model (Meule et al., 2016). However, while conceptually similar, impulsivity and delay discounting are different constructs. Delay discounting refers to how the perceived value of a reward decreases as the delay of its acquisition increases. Despite the growing body of research linking impulsivity to body weight through indirect mechanisms, no studies to date have examined whether delay discounting and BMI are indirectly related through the mediation of dieting success. This represents an important gap in the literature. Given the existing evidence supporting dieting success as a mediator between impulsivity and BMI, it is plausible that a similar indirect relationship may exist between delay discounting and BMI. Investigating this pathway could explain why only some studies have reported significant associations between delay discounting and weight.

Figure 1

A Statistical Diagram of the Mediator Model (Direct and Indirect effect)



To investigate this, the study will focus on older adolescent girls as they have been found to be a major at-risk population for unstable dietary habits (López-Gil et al., 2023). While dieting attitudes tend to be formed during the high school years, weight perceptions seem to shift once they move out of the house for university (Vohs et al., 2001). The transition to university is also marked by external stressors such as homesickness and academic pressure, both of which have been linked to problematic eating habits and body dissatisfaction (Howard et al., 2020). By studying this population, the study aims to provide insight into the factors that may influence body weight during a particularly vulnerable developmental period.

Taken together, the primary objective of the present study is to examine the relationship between delay discounting and BMI. Specifically, this study will explore (1) the direct association between delay discounting and BMI, and (2) the potential mediating role of perceived dieting success in this relationship. Given the use of a continuous measure for weight and previous findings on indirect-only effects, no significant direct association between delay discounting and BMI is expected. In line with prior studies suggesting that impulsivity influences body weight through intermediary factors (Meule et al., 2016; Meule & Blechert, 2017), it is hypothesised that higher delay discounting will be associated with lower perceived dieting success, which in turn will be negatively associated with BMI.

Methods

Participants

The study was conducted at the Faculty of Behavioural and Social Sciences of the University of Groningen. Participants were first year psychology students. The sample consisted of a group of 178 participants, who were all female. Their average age was 19.31 years (*SD* = 1.79). The average BMI of these participants was 21.90 (*SD* = 2.84).

Measures

The present study will use Body Mass Index (BMI) as the primary indicator of weight status. Given its widespread use in clinical and public health settings to assess weight-related risks, BMI serves as a valuable measure for examining the impact of delay discounting on eating behaviour across the full range of body weight. BMI was measured by calculating weight/height^2 resulting in BMI in units of kg/m^2.

Delay discounting was measured using the Monetary Choice Questionnaire (Kirby et al., 1999). In this 27-item questionnaire, participants were presented with hypothetical choices between receiving smaller, more immediate monetary rewards or larger, more delayed monetary rewards. An example question would be “Would you prefer $34 today, or $50 in 30 days?”. Each item in the questionnaire has a specific point at which the immediate and delayed options are considered equally valuable, and this point corresponds to the hyperbolic discount parameter, known as the k value (Gray et al., 2016). The items are classified in terms of rewards size as small, medium, and large rewards. The average *k* value across all reward sizes (small, medium, and large) was used as the main measure of delay discounting in the MCQ. Values of *k* can range from 0.00016 to 0.25, with higher values indicating that individuals tend to prefer smaller immediate rewards over larger delayed rewards. The syntax from Gray et al. (2016) was used to perform these calculations. Because the raw value of *k* is highly skewed in most delay discounting studies (Koffarnus & Bickel, 2014), the values were normalised using a log transformation. Internal consistency for the sample in this study was high when comparing the values from the small, medium, and large categories (Cronbach's α = .95).

Perceived dieting success was measured using the Perceived Self-Regulatory Success in Dieting Scale (Meule et al., 2012). This assesses an individual's subjective evaluation of their dieting success. This scale consists of three items asking participants to rate their success at controlling their weight, losing weight, and staying in shape, each ranging from 1 (*not successful*) to 7 (*very successful*). The questions are: "How successful are you in watching your weight?"; "How successful are you in losing extra weight?"; and "How difficult do you find it to stay in shape?". Scores on the PSRS were calculated by reverse coding the third item and computing the mean of the three items. Participants who are not concerned about dieting were also given the option to choose "not applicable" if the question did not apply to them. Those who chose this answer item were excluded from the analysis (n = 78). The data is reported for the remaining n = 100 participants, with a resulting lower internal consistency (Cronbach's α = .56).

Procedure

This study was approved by the Ethics Committee of Psychology of the University of Groningen (PSY-2324-S-0363). The data reported in the present cross-sectional study was part of a larger study, conducting research about delay discounting, eating disorders and emotion regulation strategies. First-year psychology students were recruited using the SONA platform, a participant recruitment tool used by academic institutions, where they could enroll themselves in the study "PSY-2324-S-0363 Emotion Regulation and Weight". This study uses data that was collected from this larger study that lasted one year, and consisted of five data collection points.

However, this study only makes use of the data of the first data collection point as it is a cross-sectional study. Participants are asked to wear standard, light weight clothing (a t-shirt and leggings) to ensure accurate weight measurements. They were then required to complete a list of five questionnaires, accessible through the Qualtrics website, and were then measured for both their height (cm) and weight (kg). All participants gave informed consent prior to participation. Participants had the choice to complete the study in either Dutch or English. The students receive study credits for their participation.

Statistical analysis

The statistical software SPSS was used for the processing of the data. To test both hypotheses, a mediation analysis was performed using the PROCESS v4.0 macro on SPSS, using bootstrapping with 5,000 resamples (Hayes, 2022), with delay discounting as the independent variable, dieting success as mediator, and BMI as the dependent variable. This method has been recommended to assess the indirect effects of mediators as it can assess statistical significance without assuming normality of the sampling distribution (Preacher & Hayes, 2008). The assumption of linearity was assessed using a scatter plot. To avoid the influence of potential outliers on the analysis, a large sample of participants was used (Pallant, 2020).

To ensure the study was adequately powered to detect significant effects, a power analysis was conducted. This was performed using Schoemann et al.'s Power Calculator for Mediation (Schoemann et al., 2017). This web application works by using Pearson's correlation coefficients (r), minimum power = .80, and CI = 95% . Since there has not yet been any studies with these specific variables, the correlation coefficients found by Meule et al. (2016) with attentional impulsivity will be used as a model. With correlations of $r = 0.30$ for both the relationship between impulsivity and dieting success, and dieting success and BMI, a minimum sample size of n = 107 was needed in order to have a strong likelihood of detecting a true effect.

Results

Exclusion Criteria and Manipulation Check

A total of n = 78 participants were excluded from the analysis based on their PSRS data as they were deemed not interested in dieting. Excluding these participants left a total of n = 100 participants in the sample, which based on the power analysis above, is not large enough to have a strong likelihood of detecting a true effect between delay discounting, perceived dieting success, and BMI. This smaller sample size resulted in a power of .77.

Assumption Checks

All variables of interest were measured on a continuous scale. Scatter plots were used to assess linearity. The plots of the log-transformed delay discounting variable with both BMI and dieting success suggested potential violations of the linearity assumption, as no clear relationship can be observed. On the other hand, the plot of dieting success with BMI appeared to show linearity (see Appendix A). When assessing multicollinearity, tolerance values for all independent variables were above .10, and Variance Inflation Factor (VIF) values were below 5, indicating that multicollinearity was not a concern (see Appendix B). Even though bootstrapping does not require normally distributed data, Q-Q plots were generated to assess the assumption of normality in the sample, which was approximately normal (see Appendix C).

Descriptive statistics

Descriptive statistics of delay discounting, BMI, and dieting success are shown below in Table 1. The final sample consisted of n = 60 Dutch speaking participants and n = 40 English speaking participants.

Table 1
Descriptive Statistics

	M	*SD*	Min.	Max.
Delay Discounting	2.48	0.59	0.87	3.80
BMI	22.37	2.86	16.04	34.09
Dieting Success	4.05	1.16	1.00	6.67

Correlations between delay discounting, dieting success, and BMI are shown below in Table 2. A significant negative correlation was found between dieting success and BMI.

Table 2
Pearson's Correlations

	Delay Discounting	Dieting Success	BMI
Delay Discounting	_	0.15	0.13
Dieting Success	–	–	− 0.35**
BMI	–	–	–

** Correlation is significant at the 0.01 level (2-tailed).

Is there a direct relationship between delay discounting and BMI?

The PROCESS Macro mediation analysis showed that the direct effect of delay discounting on BMI (*c* path) was non-significant ($b = -0.61$, $SE = 0.48$, $p = .21$).

Does dieting success mediate the relationship of delay discounting and BMI?

A mediation analysis was conducted to test whether the relationship between delay discounting and BMI was mediated by perceived dieting success. The indirect effect of delay discounting on BMI through perceived dieting success was not statistically significant, $b = -0.24$ as indicated by the bootstrap 95% confidence interval (CI) [−0.58, 0.01], which includes zero. This suggests that there was no significant mediation effect of dieting success in the relationship between delay discounting and BMI.

The effect of delay discounting on dieting success (*a* path) was not significant, $b = 0.30$, $SE = 0.20$, $p = -.13$. The effect of dieting success on BMI (*b* path) was significant, $b = -0.82$, $SE = 0.24$, $p < .001$. The indirect effect of delay discounting on BMI (*c'* path) was not significant, $b = -0.37$, $SE = 0.46$, $p < .43$.

Discussion

The present study aimed to investigate the relationship between delay discounting and BMI, and to subsequently assess the mediating role of dieting success in this relationship. It was found that (1) there was no significant direct association between delay discounting and BMI, and (2) there was no significant mediating effect of perceived dieting success in this relationship. However, a significant positive correlation was found between dieting success and BMI.

No significant association was found between delay discounting and BMI. This finding is also consistent with the literature previously mentioned, as many non significant findings were found between delay discounting and BMI (Lim & Bruce, 2015; Lu et al., 2014; Stojek et al., 2014; Veillard & Vincent, 2020) and some studies reported an indirect-only mediation (Meule & Blechert, 2017; Meule et al., 2016). This finding is in line with what was hypothesised and is indicative of several possibilities. First, there may truly be no direct relationship in this specific sample of first year university students in Groningen. Second, it is possible that the direct relationship does exist in this sample, but was not detected due to the use of a continuous variable for weight. Third, the relationship may be more robust with impulsivity than with delay discounting. Fourth, there may be an indirect-only mediation effect, where the relationship only becomes visible when accounting for the influence of dieting success as a mediator. Although the present findings do not support a direct link, they contribute to clarifying the conditions under which the relationship between delay discounting and weight may or may not emerge.

As discussed in the introduction, inconsistencies in the literature may emerge from the different methodological approaches, particularly in categorising weight and in how delay discounting is measured. Studies that categorised participants into discrete weight groups seemed to be more likely to find a significant relationship between delay discounting and weight than those using a continuous variable, such as BMI. The present study aimed to explore this discrepancy by examining whether a relationship between delay discounting and weight is detectable when BMI is treated as a continuous variable. As hypothesised, no significant relationship was found, which may help to explain the inconsistent findings in the broader literature. One possible explanation is that this relationship only becomes more pronounced when looking at higher BMI levels, making group-based analyses more sensitive to detecting this relationship. However, this remains speculative as many studies do not report sufficient detail about the distribution of participants across the BMI spectrum to assess this directly. Without explicit group comparisons, this explanation must be interpreted with caution.

Another factor that may have contributed to the non-significant findings lies in the differences between delay discounting and impulsivity, and how these constructs are measured. In the present study, delay discounting was assessed through a behavioural task (the MCQ). In contrast, studies conducted by Meule and colleagues (Meule et al., 2016; Meule et al., 2017; Meule & Blechert, 2017) have used impulsivity as the independent variable, which is often measured using a self-report questionnaire called the Barratt Impulsiveness Scale. This difference in operationalisation may explain why our findings did not replicate. For example, the study by Meule et al. (2016) found that only attentional and motor impulsivity were relevant in the indirect relationship between impulsivity and BMI via dieting success, whereas non-planning impulsivity was not related. These findings suggest that the relationship observed with certain facets of impulsivity may not generalise to delay discounting. Taken together, these considerations highlight the need to consider differences in sample weight characteristics and operationalisations, and to carefully distinguish delay discounting from impulsivity, as they seem to be related but conceptually distinct constructs.

In contrast to the second hypothesis, dieting success did not significantly mediate the relationship between delay discounting and BMI. While a significant indirect-only mediation effect was observed by Meule and colleagues for impulsivity and BMI, this finding did not replicate with delay discounting. This could be due to a number of reasons. Given that there is a significant correlation between dieting success and BMI, the relationship between delay discounting and dieting success may be mediated by more variables. This would suggest a serial mediation model, in which dieting success is only one link at the end of a longer causal chain of mediators. In support of this, it has been found that dieting success itself is influenced by a wide range of cognitive, environmental, and motivational factors (van Koningsbruggen et al., 2013; Meule et al., 2017), which may dilute its mediating power when placed within a simplified model. One possible variable which may influence it is the experience of frequent and intense food cravings, which has been found to predict lower dieting success (Meule et al., 2017). In addition to this, a study by Meule & Blechert (2017) found a serial mediation model between impulsivity, food cravings, dieting success, and BMI. These findings suggest that future research should adopt more comprehensive models that include key co-mediators, such as food cravings as an intermediary mediator in the relationship between delay discounting and BMI.

Strengths of this study include the high internal validity of delay discounting, suggesting that the items reliably assessed the same construct. Moreover, the MCQ is one of the most commonly used measures of general delay discounting and has been found to be as reliable as measures using non-hypothetical rewards, adding to the reliability of delay discounting (Reynolds, 2006). On top of this, a study also found that annual household income, age, and educational attainment did not have an influence on the relationship between delay discounting and weight (Jarmolowicz et al., 2014). Additionally, the findings of this study were interpretable within the context of existing literature, allowing for a meaningful contribution to the understanding of delay discounting and BMI. However, several limitations should be considered. This study focused on first year university students which means that the findings may not generalise to other populations such as men and younger or older individuals. Moreover, BMI has been criticised because of its inability to discriminate fat and muscle mass, which can lead to the misclassification of individuals with higher muscle composition. However, given that the sample consists of first-year psychology students, it is unlikely to include athlete-level participants for whom this limitation would be relevant. Furthermore, the internal consistency of the PSRS was relatively low, suggesting that the items in the questionnaire may not have accurately measured the same construct. This means that the observed scores may not accurately reflect participants' true scores of dieting success. Lastly, the reliance on a self-report measure may introduce bias when assessing dieting success. Specifically, individuals with eating disorders might rate their dieting success more critically than nonclinical populations (cf., Jonker et al., 2021), leading to self-report scores that may not accurately reflect their actual success as would be captured by objective measures.

The findings of this study have several theoretical implications that warrant further investigation. First, since delay discounting did not correlate with dieting success, future research should explore whether additional mediating variables, such as food cravings, may influence the relationship under study, or whether the absence of a correlation reflects a genuine lack of association. Second, future studies should assess impulsivity alongside delay discounting to clarify the potentially distinct effects of these related but conceptually separate constructs. Third, it would be interesting to examine whether the use of a self-report measure for dieting success yields comparable results as alternative methods such as ecological momentary assessment (EMA). This method minimises recall bias (Shiffman et al., 2008) and would require participants to report their daily success in adhering to their diet, offering a more ecologically valid measure. Lastly, future research should investigate whether the findings generalise to other populations, such as individuals with lower socioeconomical status. Expanding the sample beyond a predominantly higher-education group would allow future research to assess whether socioeconomic status may influence the relationship between delay discounting and BMI.

There are also several practical implications. Given that this study, along with other research, did not find a significant direct relationship between delay discounting and BMI, future research on these variables should aim for greater consistency in clarifying when this relationship is significant and when it isn't. Until this is established, it is important to interpret these findings with caution before drawing conclusions about weight loss interventions based on delay discounting. Notably, a larger portion of the studies that have reported significant findings often involve individuals with obesity, which suggests that the relationship between delay discounting and BMI may be weight-dependent. However, this remains speculative, and it is clear that the relationship does not generalise across all populations. On the other hand, the observed association between perceived dieting success and BMI suggests that interventions focusing on improving dieting success may be more promising for promoting weight loss. Nonetheless, before such interventions can be recommended, future research should determine whether a causal relationship exists between dieting success and BMI.

To conclude, the present study aimed to clarify the relationship between delay discounting and BMI. No significant associations were found between delay discounting and BMI, either directly or indirectly through dieting success as a mediator. However, a significant negative correlation between dieting success and BMI was found, suggesting that individual differences in dieting ability play a role in predicting weight. While the current findings do not support a direct or mediated relationship, they highlight the need for future research to explore additional variables, such as food cravings, that may mediate or moderate the link between delay discounting and dieting success. Moreover, to improve comparability across studies, future research should prioritise consistent operationalisations of key constructs, particularly by using continuous BMI measures and clearly distinguishing delay discounting from related constructs such as impulsivity.

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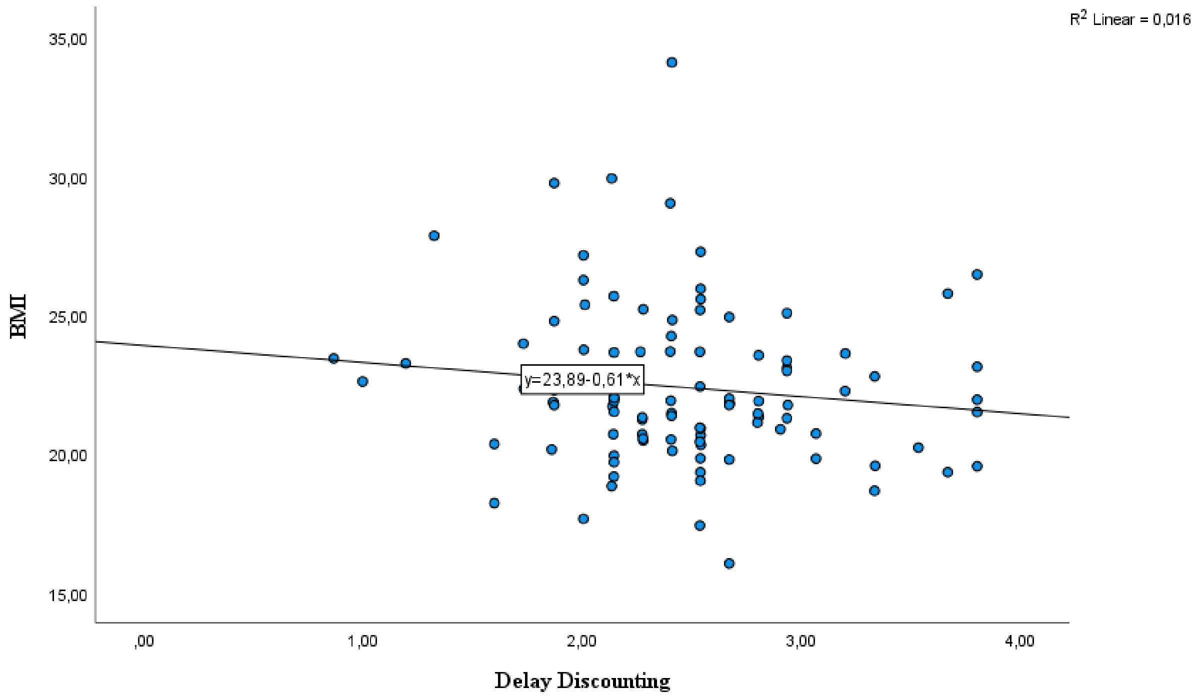
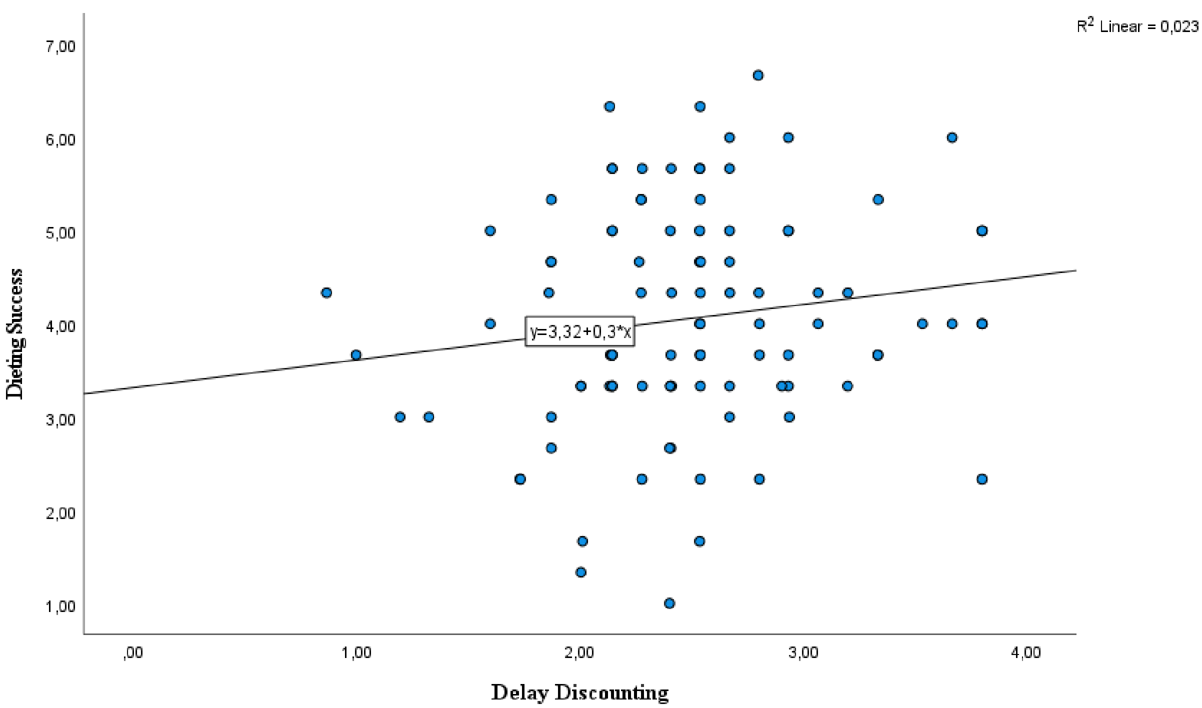
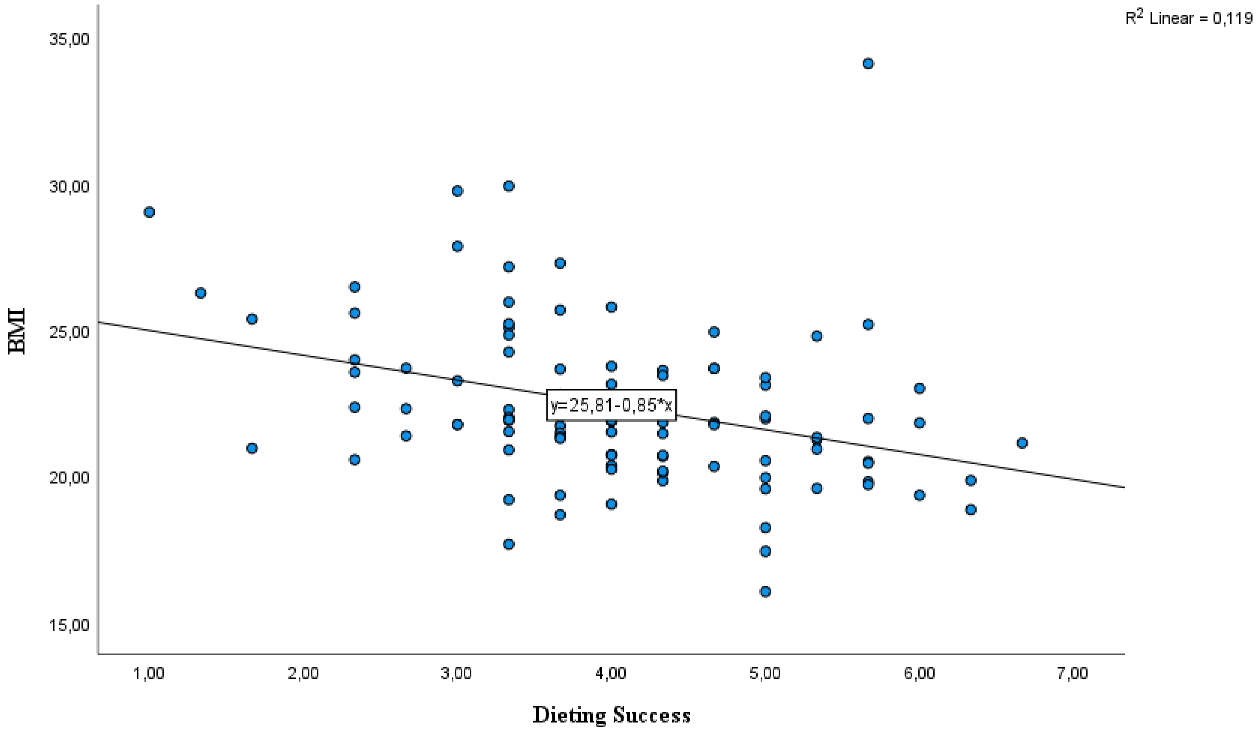
Appendix A

Scatter Plots of Delay Discounting, Dieting Success, and BMI






R2 Linear = 0,119
35,00
30,00
25,00
20,00
15,00
BMI
y=25,81-0,85*x
1,00
2,00
3,00
4,00
5,00
6,00
7,00
Dieting Success

Appendix B

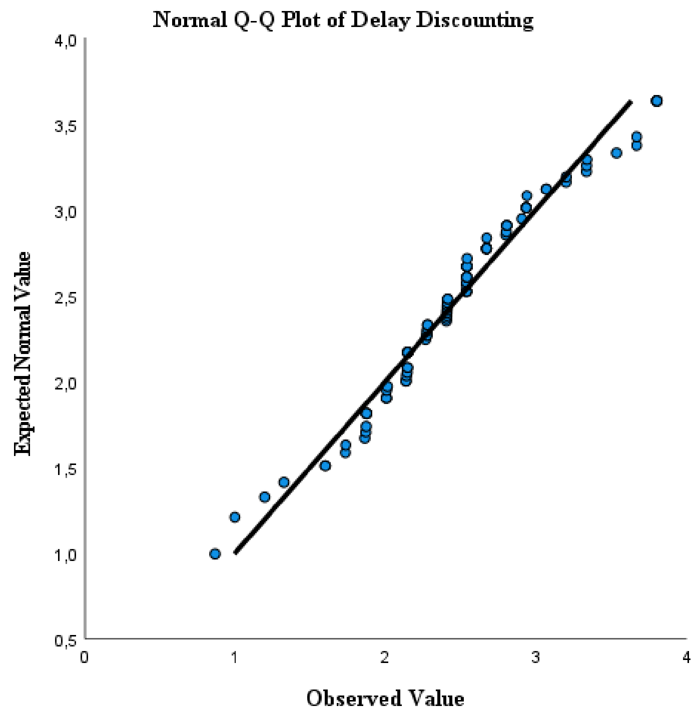
Table 2: Multicollinearity Check

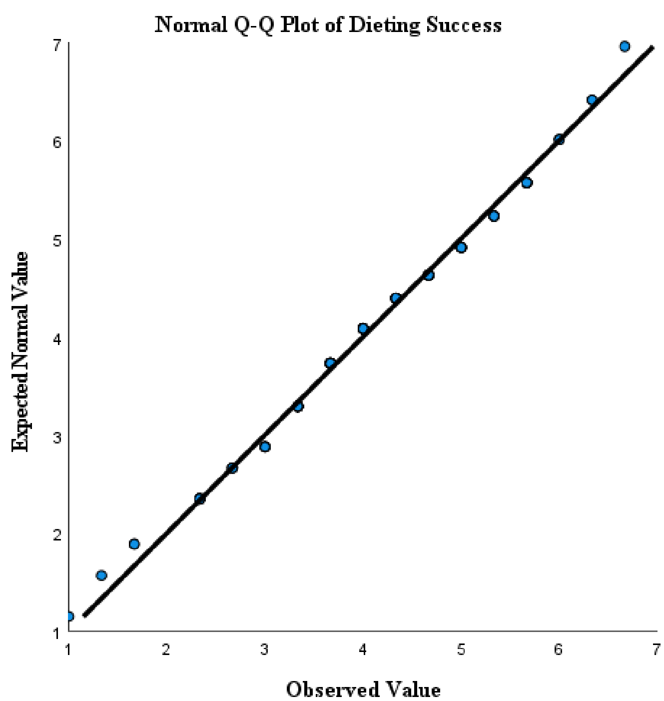
Model	*b*	*SE*	*t*	*p*	Tolerance	VIF
Constant	26.614	1.403	18.976	< .001		
Dieting Success	-0.821	0.236	-3.475	< .001	0.997	1.024
Delay Discounting	0.370	0.462	0.801	0.425	0.997	1.024

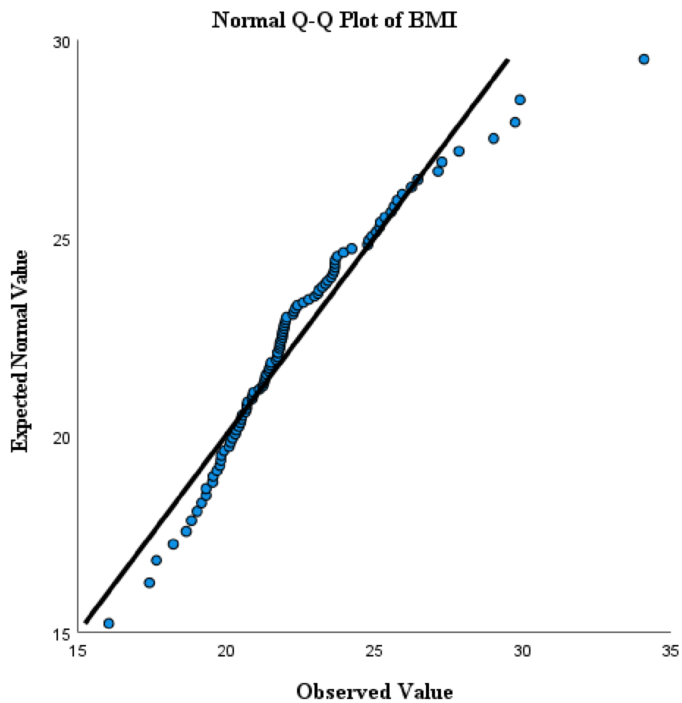
a. Dependent Variable: BMI

Appendix C

Q-Q Plots of Delay Discounting, Dieting Success, and BMI






Normal Q-Q Plot of BMI
Expected Normal Value
Observed Value
15
20
25
30
35