

McKee, H. and Ntoumanis, N. 2014. Multiple-goal management: An examination of simultaneous pursuit of a weight-loss goal with another goal. *Journal of Health Psychology*. 19 (9): pp. 1163-1173.

Multiple-goal management: An examination of simultaneous pursuit of a weight-loss goal
with another goal

Abstract

The current study investigated the characteristics contributing to successful goal attainment of a weight-loss and a non weight-loss goal simultaneously. Weight-loss and non weight-loss goals, self-efficacy, persistence, temptations, intergoal interference and facilitation were measured via an online questionnaire ($N = 103$, $M_{age} = 25.36 \pm 6.9$, 80% women). Weight-loss self-efficacy, persistence, temptations and intergoal facilitation significantly predicted weight-loss goal attainment. Those who were more successful in attaining both their goals simultaneously had higher self-efficacy, persistence, and experienced less temptation towards both goals. The study provides an insight into the characteristics necessary for successful simultaneous management of a weight-loss goal with another goal.

Multiple-Goal Management: An Examination of Simultaneous Pursuit of a Weight-loss Goal with Another Goal

Worldwide the prevalence of overweight and obesity has reached epidemic levels. It is estimated that there are currently 1.1 billion adults that are overweight, with 300 million being obese. Of these at least 2.8 million people die each year as a consequence of being overweight or obese (Mathers, Fat, & Boerma, 2008). In direct response to such figures, the World Health Organization (WHO) has declared improving diet and physical activity a public health priority (Anderson et al., 2009). There is a large body of evidence that supports dietary and exercise-related interventions as a means to produce small to modest reductions in weight-loss (around 5-10%). These losses have been consistently linked to enhanced physiological and psychological wellbeing (Wing & Hill, 2001). However, the majority of these individuals fail in their goal pursuit (Green, Larkin, & Sullivan, 2009). It is well-known that successful goal attainment is a function of how individuals think about their goals and the strategies they use to pursue them (Bagozzi & Edwards, 1998). Thus, investigation into the goal-related processes surrounding weight-loss goal management is required in order to find out the key factors related to weight-loss success (and failure).

People regularly juggle multiple goals on a daily basis, consequently, much of people's daily activities involve deciding how much effort to invest in their goals, when to invest it, and which goals to invest it in (Gollwitzer & Heckhausen, 1990). To date, goals have mainly been studied in isolation from each other in order to understand a specific behaviour and how it relates to goal attainment (Latham & Locke, 1991). However, examining single goal-related behaviour without acknowledging the simultaneous influence of other goals fails to take into account the self-regulation skills needed to pursue multiple goals in everyday life (Louro, Pieters, & Zeelenberg, 2007).

A small number of studies have specifically looked at managing multiple goals in a health related context (Gebhart & Maes, 1998; Riediger & Freund, 2004; Karoly et al., 2005; Li & Chan, 2008; Jung & Brawley, 2010). The majority of these studies focus on the interference or conflict that occurs as a result of managing exercise alongside other goals, and the implications of those processes for multiple-goal pursuit and attainment. For example, Gebhart and Maes (1998) found that sedentary participants had greater interference from a list of non-exercise personal goals than more active participants. Li and Chan's (2008) research also examined the conflict between exercise and self-selected non exercise goals. They found that when conflict among the two goals was high, intention-behaviour relations were weaker with regard to exercising compared to individuals who experienced low goal conflict. In contrast, the ways in which goals complement or facilitate one another can enhance goal pursuit and subsequent attainment (Gebhart et al., 2007). For example, exercise and career goals may complement one another as exercising may relieve stress and subsequently boost performance at work. Studies looking at facilitation in terms of managing exercise goals alongside other personal goals, have found that the more active participants experienced greater facilitation between exercise and non exercise goals (Gebhart et al., 2007; Jung & Brawley, 2010). This pattern has also been replicated with other types of goals with mutual goal facilitation found to repeatedly predict high involvement in longer-term goal pursuit (Riediger, 2007, Riediger & Freund, 2004; Riediger & Freund, 2007). However, the majority of multiple-goal research has simply examined the impact of goal conflict (and ignored the possibility of intergoal facilitation), or has measured interference and facilitation as a single item measure (e.g. Gebhart et al., 2007; Jung & Brawley, 2010). This approach has been criticized in the past as it has been suggested that interference and facilitation are independent factors and not opposite sides of the same continuum. Riedger and Freund (2004) created the Intergoal Relations Questionnaire (IRQ) to overcome these issues. Their

body of work found interference and facilitation to be two independent characteristics each having a differential effect on subsequent goal pursuit. Although the IRQ has been employed to examine exercise in a multiple-goal context its utility with regard to weight-loss goals is unknown.

Goal interference and facilitation are not the only characteristics that may influence multiple-goal pursuit. Karoly et al. (2005) examined whether regular exercisers and irregular exercisers differ in their self-regulation of exercise versus a goal that strongly interferes with exercise. They found that irregular exercisers favoured their non exercise goal (rather than their exercise goal) in terms of valuing it greater, monitoring it more consistently, and planning and rewarding themselves when they progressed towards attaining this goal. In contrast, those who were regular exercisers did not appear to make such preferences and were found to be more proficient in managing both goals simultaneously. A study by Jung and Brawley (2010) also explored the self-regulatory characteristics influencing exercise frequency whilst pursuing another goal. Their sample consisted of 336 university students who were required to specify their most valued non-exercise goal and complete a questionnaire measuring physical activity levels, self-efficacy, persistence and interference/facilitation of concurrent goals. Jung and Brawley then dichotomized participants into frequent and less frequent exercisers. Similarly to Karoly et al. (2005), Jung and Brawley found that, frequent exercisers had higher levels of self-efficacy, persistence and experienced greater facilitation towards attaining both exercise and non-exercise goals. Further research by Jung and Brawley, (2011) into the predictors of exercise adherence in working mothers found that persistence was highly influenced by self-efficacy in that when numerous barriers to attaining exercise goals were perceived those with higher self-efficacy on both goals had greater persistence on both goals and experienced greater facilitation of both goals.

The self-regulation needed to successfully pursue long-term goals is influenced by self-efficacy, that is one's belief in his or her ability to succeed in a particular situation (Bandura, 1997). Having high levels of self-efficacy has been repeatedly linked to weight-loss success (Kitsantas, 2000; Byrne, 2002; Elfhag & Rössner, 2005). In terms of multiple-goal management for exercise, self-efficacy has been outlined as a key factor relating to goal attainment (Jung & Brawley, 2010, 2011; Karoly et al., 2005). However, its effectiveness in terms of managing weight-loss alongside other goals is relatively unknown.

To our knowledge, there are only two studies that have examined weight-loss goal management in the context of other goals. Fishbach and Dhar, (2005; Study 1) looked at perceptions of progress in weight-loss goal pursuit by examining how these perceptions affected goal-based choices. The researchers manipulated dieters' perceived levels of progress with their weight-loss goal in order to examine how it affected their choice of healthy vs. unhealthy snacks. They found that when people perceived that they had progressed with their weight-loss goal it often led to the choice of an unhealthy rather than healthy snack. However this particular study did not get participants to specify another goal outside of weight-loss, and thus, was more focused on goal congruent actions than on multiple-goal pursuit. Furthermore, the authors acknowledged that they failed to measure participants' commitment to their goal. They did, however, measure commitment in subsequent studies in the same paper. Results demonstrated that when goal-related actions signified commitment, they are unlikely to be followed by behaviours that are inconsistent with that goal. Louro et al. (2007; Study 1) looked at weight-loss and non-weight-loss goal pursuit. Participants kept a 21-day diary which examined perceptions of goal progress, effort, expectancies of success, emotions, proximity and attainment of both goals. Louro et al. found that when distant from attaining their goal, participants' positive emotions from the previous day led to increased effort on the goal the next day. In contrast, when attainment was close,

positive goal-related emotions resulted in decreased effort the following day and a shift in effort to the other goal. This study illustrates the balance individuals strike on a day-to-day basis in terms of multiple-goal management based on current and previous efforts, emotions, progress and proximity to goals.

The goals-based literature highlights the role of not only long-term objectives but also salient short-term temptations in goal pursuit (Trope & Fishbach, 2000). Avoiding obstacles that may hinder attainment of one's goal has been linked with successful goal attainment. Distractions such as temptations can hinder successful goal pursuit (Freitas, Liberman, & Higgins, 2002). In the context of weight-loss, managing temptations can have a significant impact on subsequent success. A 'lack of willpower' or inability to resist temptation has been ranked by British dieticians as more important to the development of obesity than genetic factors (Duckworth, 2011). Thus, another characteristic that may have a substantial impact on managing weight-loss and non weight-loss goals simultaneously is the frequency with which individuals deal with temptation.

Considering so many individuals fail in their weight-loss goal attempts (Perri, 1998; Byrne, 2002), a greater knowledge of the processes related to weight-loss striving in the context of multiple-goal pursuit is vital for the development of well-informed weight-loss interventions. The primary purpose of the current study was to build on and extend the minimal research to date exploring the simultaneous management of a weight-loss goal alongside another goal. We firstly aimed to investigate how a group of variables relating to weight-loss self-regulation (self-efficacy and goal persistence) and a group of variables relating to the influence of other goals (temptation, interference and facilitation), predict weight-loss attainment. Secondly, we aimed to examine variables that relate to successful attainment of both goals simultaneously. Drawing primarily from Jung and Brawley (2010; 2011), our hypotheses were that those with higher goal persistence, self-efficacy, intergoal

facilitation and lower intergoal interference and temptations affecting their goals would have greater levels of weight-loss goal attainment. Additionally, we hypothesized that those with the higher levels of persistence, self-efficacy, and intergoal facilitation for both goals would be most likely to attain both goals simultaneously, whilst those with the highest levels of intergoal interference and temptation would be least likely to attain both goals simultaneously.

Method

Participants and Procedure

Participants were deemed eligible for the present study if they were currently pursuing a weight-loss goal. One hundred and three participants with weight-loss goals were recruited to complete a web-based questionnaire ($M_{age} = 25.36 \pm 6.9$ years, age range: 18.87-67.99 years, mean BMI = 26.31 ± 5.1 , BMI range: 20.32-53.93, 80% women). Participants were White ($n = 84$), South Asian (Indian, Pakistani and Bangladeshi) ($n = 10$), Black ($n = 2$) and other racial categories ($n = 2$). They were primarily students ($n = 70$) and young professionals (with an income of less than £20K per year). Student participants were recruited via email and web advertisements. They were offered compensation in the form of research credits or £5 on completion of the questionnaire. The young professionals were recruited via an internet-based research participation pool. They received compensation of £5 on completion of the questionnaire. The questionnaire consisted of three sections: The first section examined multiple characteristics influencing the pursuit of weight-loss goals, the second section was identical to the first however, participants were required to respond to questions in terms of their non weight-loss goal, and the final section examined interference and facilitation involved in managing both goals simultaneously.

Measures

Goals. Participants were required to specify one weight-loss goal and one non weight-loss goal that they were currently pursuing. In terms of weight-loss goals participants were told: “Think about a specific weight-loss goal that you are currently striving for (via exercise and/or diet)”. Participants were instructed the following regarding their non weight-loss goal: “Think of a goal that you are currently striving for that is completely unrelated to weight-loss, exercise, nutrition or health. It must be a goal that is personally meaningful and important to you.” Participants were excluded from the analyses if their non weight-loss goal was exercise, sport, nutrition or health related ($N = 25$). Of the non weight-loss goals defined in the final sample, 52% of goals were academic goals, 23.9% were career goals, 2.5% were family goals, 2.5% were financial goals, 2.0% were social goals, and 11.9% were various other types of goals. Analyses using questions adopted from Jung and Brawley’s (2010) study, measuring value on a scale from 1 (*do not value this goal at all*) to 9 (*value this goal very much*), showed that participants valued both their weight-loss and non weight-loss goals equally ($M = 7.10$ $SD = 1.50$; $M = 7.40$ $SD = 1.57$, respectively).

Goal characteristics

Self-efficacy. The self-efficacy items were developed based on the self-efficacy literature (Bandura, 1997). Participants were asked “To what degree do you feel you possess the ability to realize your goal?”, and “To what extent do you feel you have the capabilities necessary to attain your goal?” each measured on a 1 (*not at all able/capable*) to 9 (*very much able/capable*) point scale. The mean of the two items for each goal was used in succeeding analyses. (Cronbach α for weight-loss goal and non-weight-loss goal were .82 and .79 respectively).

Goal persistence. Participants were required to rate their persistence in the pursuit of both their weight-loss and non weight-loss goals. Specifically, they indicated how much time, persistence, effort and attention they had invested in the previous month in the pursuit of both

their weight-loss and non weight-loss goal. The items were adapted from Jung and Brawley (2010). Responses were scored on a 1 (*little to none*) to 9 (*as much as it takes*) point scale. Participants' average score of the four subscales was calculated for the subsequent analyses (Cronbach α for weight-loss goal and non-weight-loss goal were .82 and .88 respectively).

Temptation. A measure of the frequency with which participants experienced temptations impacting both goals was created for the current study based on the goals literature (Freitas et al., 2002). Participants were asked "Rate on the scale below how often you were exposed to temptations that you didn't plan to engage in, that lured you away from your goal and that may have impacted upon your goal", and "Rate on the scale below how frequently over the last month you have felt that you've given in to temptations that have affected your goal". These questions were rated on a 1 (*never*) to 9 (*always*) point scale. The average Cronbach α for the weight-loss and non weight-loss goal was .72 and .74 respectively.

Intergoal relations questionnaire (IRQ). Intergoal facilitation and interference were measured using the Intergoal Relations Questionnaire (IRQ; Riediger & Freund, 2004). The facilitation scale was used to examine both goals in two ways: Instrumental relations among both goals ("The pursuit of goal A sets the stage for the realization of your weight-loss goal"), and overlapping goal attainment strategies ("How often can it happen that you do something in pursuit of goal A that is simultaneously beneficial for your weight-loss goal?"). These items were measured from 1 (*not at all true/never*) to 5 (*very true/often*). Averaging these items yielded the facilitation composite (Cronbach's $\alpha = .84$). Intergoal interference was measured in terms of time, energy and financial investment (e.g., "How often can it happen that, because of the pursuit of Goal A, you do not invest as much time/energy/money into your weight-loss goal as you would like to?"), and in relation to incompatible goal attainment strategies ("How often can it happen that you do something in the pursuit of Goal

A that is incompatible with your weight-loss goal?”). These items were measured from 1 (*never/very rarely*) to 5 (*very often*). Averaging these items yielded the interference composite (Cronbach's $\alpha = .73$).

Goal attainment. Participants were asked to indicate how much they felt they had attained each of their goals over the past month. They were required to indicate “To what extent do you feel you have attained your goal?” and “To what degree do you feel your goal has been met?” These questions were rated from 1 (*not at all attained/met*) to 9 (*completely met/attained*). The items were adapted from Louro et al.'s (2007) multiple-goals research. The mean of the two attainment scores was summed for both goals (average Cronbach's $\alpha = .97$.)

Control measures

These measures were distributed at the start of the first questionnaire and were completed in the following order:

Social desirability. It has been found that those that respond in a highly socially desirable manner overestimate their ability to succeed at weight-loss (Carels, Cacciapaglia, Rydin, Douglass, & Harper, 2006). Social desirability was measured using a 13-item version (version C) of the Reynolds Short-Form of the Marlowe-Crowne Social Desirability Scale (MCSD) (Reynolds, 1982). Participants answered true or false in response to 13 questions (e.g., “No matter who I'm talking to, I'm always a good listener”). Items were keyed in a socially desirable direction, with a high score indicative of a strong socially desirable response tendency ($M = 6.64$, $SD = 2.50$, $\alpha = .66$).

Self-control. High trait self-control is a known predictor of weight-loss success (Crescioni et al., 2011). In order to assess levels of self-control, participants completed the Brief Self-Control Scale (BSCS; Tangney, Baumeister, & Boone, 2004), in which they responded to 13 items on a 5-point scale (e.g., I am able to work effectively toward long-term

goals) with items ranging from 1 (*not at all*) to 5 (*very much*). Higher scores are indicative of greater self-control ($M = 37.5$, $SD = 5.8$, $\alpha = .70$).

Optimism and pessimism. Levels of optimism have been positively associated with problem-focused coping and the employment of positive health habits (Scheier & Carver, 1992). Thus, we controlled for levels of optimism and pessimism using the revised Life Orientation Test (LOT-R; Scheier, Carver, & Bridges, 1994). This consisted of 10 items requiring participants to respond on a 5-point scale with items ranging from 0 (*strongly disagree*) to 4 (*strongly agree*). Items tap both optimism (e.g., “I’m always optimistic about the future”) and pessimism (e.g., “If something can go wrong for me, it will”). A single score was derived by reversing the negatively worded items and summing the six items. Higher scores are indicative of greater optimism ($M = 12.72$, $SD = 4.94$, $\alpha = .70$).

Results

Descriptive statistics for the weight-loss and the multiple-goal variables are presented in Table 1.

[INSERT TABLE 1 HERE]

Weight-Loss Goal Characteristics and Weight-Loss Attainment

The first aim of the current study concerned the examination of how individual weight-loss characteristics predicted weight-loss attainment. Two multiple regression analyses were employed to investigate the contribution of each weight-loss characteristic in predicting weight-loss attainment. All weight-loss goal characteristics were assessed whilst controlling for the following three variables: social desirability, trait self-control, and optimism/pessimism. The first regression ($n = 98$) investigated the self-regulatory goal characteristics of self-efficacy and goal persistence and their relationship to weight-loss goal attainment. After controlling for social desirability ($\beta = .10$, $p = .171$), trait self-control ($\beta = .22$, $p = .003$), and optimism/pessimism ($\beta = -.04$, $p = .960$), the first regression found that

both variables positively predicted weight-loss attainment: self-efficacy ($\beta = .37, p < .001$) and goal persistence ($\beta = .39, p < .001$) [$F(5, 93) = 22.08; p < .001, R^2 = .54$].

The second multiple regression ($n = 79$) explored the influence of other goals (i.e. intergoal interference, intergoal facilitation, and temptation) on weight-loss goal attainment. After controlling for social desirability ($\beta = .17, p = .532$), trait self-control ($\beta = -.05, p = .058$), and optimism/pessimism ($\beta = .24, p = .007$), temptation negatively predicted weight-loss attainment ($\beta = -.57, p < .001$), whilst intergoal facilitation positively predicted attainment ($\beta = .22, p = .033$); intergoal interference was not a significant predictor ($\beta = -.10, p = .324$) [$F(5, 73) = 11.01; p < .001, R^2 = .47$]. As some research (e.g., Riediger & Freund, 2007) has found that older adults spend more time engaged in goal pursuit and report more facilitation amongst multiple goals, we repeated the analyses by excluding older participants (55+), however the results remained the same.

Multiple-Goal Characteristics and Multiple-Goal Attainment

The second aim of the current study concerned the examination of how goal characteristics (i.e. self-efficacy and goal persistence) and the influence of other goals (i.e. temptation and facilitation) predict concurrent attainment of both weight-loss and non-weight-loss goals. Intergoal interference was not included in the analyses as it failed to predict weight-loss attainment in the regressions above. A one way chi-square test was conducted in order to detect significant differences in the frequency of individuals successfully attaining both goals simultaneously rather than one of the goals or neither of the goals. The variables were created by conducting a median split on the goal characteristics categorizing them into high and low categories. A median split was also run on the attainment variables, creating four categories: attainment of both goals, attainment of neither goals, attainment of the weight-loss goal only and attainment of the non weight-loss goal only. Among those with high self-efficacy for both goals, there was a significantly greater number

of individuals who were successful in attaining both goals simultaneously, than one of the goals only or none of the goals ($\chi^2=21.05, p<.001$; Figure 1). This was also the case for higher persistence for both goals ($\chi^2=18.67, p<.001$; Figure 2). Additionally, those who experienced the highest temptation were the least likely to achieve success in attaining both goals ($\chi^2=13.52, p=.004$; Figure 3). The number of individuals with high intergoal facilitation was not predictive of goal attainment classification ($\chi^2=.81, p=.84$).

[INSERT FIGURES 1-3 HERE]

Discussion

Goals do not occur in isolation. Rather individuals typically pursue multiple goals at once in an ongoing process of resource allocation, prioritization and self-regulation. To date, there has been limited research examining how individuals manage weight-loss in a multiple-goal context. Considering so many individuals fail to attain their weight-loss goals (Byrne, 2002; Green, Larkin, & Sullivan, 2009; Perri, 1998;), it is necessary to investigate the self-regulatory characteristics that relate to successful weight-loss goal attainment, whilst managing other goals, in order to determine pathways for future intervention. The current study extends the past literature, through identifying the characteristics that relate to successful attainment of both a weight-loss and a non weight-loss goal simultaneously. Our results demonstrate that successful attainment of the weight-loss goal was positively related to the following variables: High self-efficacy and goal persistence, intergoal facilitation and low temptation. We also found that those with higher self-efficacy and persistence for both goals were more successful in attaining both goals simultaneously, whereas those with higher temptations for both goals were less successful in attaining both goals simultaneously.

Goal persistence was found to be positively related to weight-loss goal attainment. The greater amount of time, energy, persistence and attention an individual gave to their goal,

the greater their likelihood of weight-loss success. Interestingly, a high level of persistence on both goals was found to be related to attainment of both the weight-loss and the non weight-loss goal simultaneously. Although it is understandable that a large amount of persistence towards an individual's weight-loss goals would result in weight-loss success, one would imagine that exerting a large amount of effort towards two goals would be negatively related to goal attainment due to competing demands for limited resources. However, this was not the case in our study. Our finding is consistent with past research on exercise adherence by Jung and Brawley (2010; 2011) who found that persistence with exercise goals was positively related to multiple-goal attainment. The authors used self-efficacy theory (Bandura, 1997) to explain this finding. They argued that past accomplishments at simultaneous goal management increases self-efficacy and persistence towards concurrently managing multiple goals. Additionally, recent research into weight-loss goal attainment has found that those who set themselves high weight-loss goals (greater than a 10% loss of initial body weight) had greater effort and persistence towards their weight-loss; both of these variables were subsequently related to weight-loss goal attainment (De Vet, Nelissen, Zeelenberg, & De Ridder, 2012). It may be that in the current study those with greater persistence were those with goals of greater than 10% loss of their body weight, however further goal-specific research would be needed in order to verify this link. In our study we also found that self-efficacy positively predicted both weight-loss and dual goal attainment. Our finding is consistent with the weight-loss goals literature which highlights the importance of self-efficacy in weight-loss attainment (Kitsantas, 2000; Byrne, 2002; Elfhag & Rössner, 2005). Additionally, individuals who had the highest self-efficacy for both goals were most likely to attain both goals simultaneously. It may be that increases in confidence from attaining one goal may subsequently enhance an individual's confidence in succeeding at multiple goals.

Temptation was found to negatively predict goal attainment; the higher the frequency of temptations experienced the lower the likelihood of success in weight-loss. In terms of multiple-goal pursuit, those who had the highest temptations for both goals had the lowest levels of success with both goals. It has previously been posited that the allure of temptation can have a negative impact on one's goal attainment (Trope & Fishbach, 2000; Freitas et al., 2002), including weight-loss success (Carels et al., 2001; Kroese, Evers, & De Ridder, 2009). A recent study by Hofmann, Baumeister, Förster, and Vohs (2011) found that those most successful at resisting temptations were the ones who experienced the least temptation. Similarly, in the current study it may be that rather than having to rely on their ability to resist one urge after another, those who experienced the lowest frequency of temptations had managed to engineer their lives to minimize temptations and as a result were able to attain both goals successfully.

Finally, the present study examined the interference and facilitation of both goals and their relationship to concurrent multiple-goal attainment. To our knowledge, the current study is one of the first to test the utility of the IRQ in a weight-loss context. Results found that interference and facilitation differentially contributed to goal attainment. Similarly to past research on exercise that employed the IRQ, the current study found that interference was not related to goal attainment (Riediger & Freund, 2004). Facilitation, as in past research (Riediger, 2007; Riediger & Freund, 2004; Riediger & Freund, 2007) was related to successful goal attainment. The behaviours involved in pursuit of the weight-loss goal were simultaneously beneficial in the attainment of the non weight-loss goal (e.g. eating healthily can positively impact both weight-loss but also academic performance, thus enhancing the attainment of both goals). It may be that the more facilitative one's goals are the less depleted the finite resources needed to successfully pursue multiple goals become. In a similar way to temptation above, those that are successful in multiple-goal attainment may have engineered

their lives to maximize the efficiency of the distribution of their resources, thus facilitating multiple-goal attainment. Identifying the pathways by which we can enhance the mutual facilitation of one's goals whilst managing weight-loss is an important consideration for future weight-loss interventions. Additionally, the findings of the differential contribution of interference and facilitation to goal pursuit in the current study lend support to the importance of examining interference and facilitation as individual goal dimensions.

In summary, the current study offers an important insight into the self-regulatory characteristics necessary for success when managing a weight-loss and a non weight-loss goal simultaneously. The results indicate that in order to be more successful at weight-loss, one needs to have high self-efficacy to achieve their goal, be highly persistent, experience intergoal facilitation and little temptations. To successfully attain both goals simultaneously, individuals must possess high levels of goal persistence and self-efficacy and avoid high levels of temptation. On a positive note, the current study demonstrates that one can successfully pursue and attain a weight-loss goal alongside another goal. The current findings are among the first to emphasize the significance of considering the influence of other goals and their impact on weight-loss goals, and highlight the importance of the identification of possible temptations on one's goals in order to engineer one's life to avoid these threats. However, a two-goal comparison may oversimplify the numerous competing demands placed on an individual's daily resources, therefore, future studies may benefit from examining the concurrent management of several goals.

References

- Anderson, J., Parker, W., Steyn, N. P., Grimsrud, A., Kolbe-Alexander, T., Mciza, & Lambert, E. V. (2009). *Interventions on diet and physical activity: What works. Implementation of the global strategy on diet, physical activity and health. Summary Report*. Geneva.
- Bagozzi, R. P., & Edwards, J. R. (1998). A general approach for representing constructs in organizational research. *Organizational Research Methods, 1*, 45–87. doi:10.1177/109442819800100104
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Byrne, S. (2002). Psychological aspects of weight maintenance and relapse in obesity. *Journal of Psychosomatic Research, 53*, 1029–1036. doi:10.1016/S0022-3999(02)00487-7
- Carels, R. a., Cacciapaglia, H. M., Rydin, S., Douglass, O. M., & Harper, J. (2006). Can social desirability interfere with success in a behavioral weight-loss program? *Psychology & Health, 21*, 65–78. doi:10.1080/14768320500102277
- Carels, R., Hoffman, J., Collins, A., Raber, A., Cacciapaglia, H., & O'Brien, W. (2001). Ecological momentary assessment of temptation and lapse in dieting. *Eating Behaviors, 2*, 307–321. doi:10.1016/S1471-0153(01)00037-X
- Crescioni, W., Ehrlinger, J., Alquist, J. L., Conlon, K. E., Baumeister, R. F., Schatschneider, C., & Dutton, G. R. (2011). High trait self-control predicts positive health behaviors and success in weight-loss. *Journal of Health Psychology, 16*, 750–9. doi:10.1177/1359105310390247
- De Vet, E., Nelissen, R. M. a, Zeelenberg, M., & De Ridder, D. (2012). Ain't no mountain high enough? Setting high weight-loss goals predict effort and short-term weight-loss. *Journal of Health Psychology, 0*, 1–10. doi:10.1177/1359105312454038
- Duckworth, A. L. (2011). The significance of self-control. *Proceedings of the National Academy of Sciences of the United States of America, 108*, 2639–40. doi:10.1073/pnas.1019725108
- Elfhag, K., & Rössner, S. (2005). Who succeeds in maintaining weight-loss? A conceptual review of factors associated with weight-loss maintenance and weight regain. *Obesity Reviews, 6*, 67–85. doi:10.1111/j.1467-789X.2005.00170.x
- Fishbach, A., & Dhar, R. (2005). Goals as excuses or guides: The liberating effect of perceived goal progress on choice. *Journal of Consumer Research, 32*. doi:doi:10.1086/497548
- Freitas, A. L., Liberman, N., & Higgins, E. T. (2002). Regulatory fit and resisting temptation during goal pursuit. *Journal of Experimental Social Psychology, 38*, 291–298. doi:10.1006/jesp.2001.1504

- Gebhart, W., & Maes, S. (1998). Competing personal goals and exercise behaviour. *Perceptual and Motor Skills, 86*, 755–759. doi:10.2466/pms.1998.86.3.755
- Gebhart, W., Ter Doest, L., Dijkstra, A., Maes, S., Garnefski, N., Jan De Wilde, E., & Kraaj, V. (2007). The facilitation of important personal goals through exercise. *Perceptual and Motor Skills, 105*, 546–548. doi:10.2466/pms.105.2.546-548
- Gollwitzer, P., & Heckhausen, H. (1990). Deliberative and implemental mind-sets: Cognitive tuning toward congruous thoughts and information. *Journal of Personality and Social Psychology, 59*, 1119–1127. doi:10.1037//0022-3514.59.6.1119
- Green, A. R., Larkin, M., & Sullivan, V. (2009). “Oh stuff it!” The experience and explanation of diet failure: An exploration using interpretative phenomenological analysis. *Journal of Health Psychology, 14*, 997–1008. doi:10.1177/1359105309342293
- Hofmann, W., Baumeister, R. F., Förster, G., & Vohs, K. D. (2011). Everyday temptations: An experience sampling study of desire, conflict, and self-control. *Journal of Personality and Social Psychology, 1–18*. doi:10.1037/a0026545
- Jung, M. E., & Brawley, L. R. (2010). Concurrent management of exercise with other valued life goals: Comparison of frequent and less frequent exercisers. *Psychology of Sport and Exercise, 11*, 372–377. doi:10.1016/j.psychsport.2010.04.006
- Jung, M. E., & Brawley, L. R. (2011). Exercise persistence in the face of varying exercise challenges: a test of self-efficacy theory in working mothers. *Journal of Health Psychology, 16*, 728–38. doi:10.1177/1359105310388322
- Karoly, P., Ruehlman, L. S., Okun, M. a., Lutz, R. S., Newton, C., & Fairholme, C. (2005). Perceived self-regulation of exercise goals and interfering goals among regular and irregular exercisers: a life space analysis. *Psychology of Sport and Exercise, 6*, 427–442. doi:10.1016/j.psychsport.2004.03.004
- Kitsantas, A. (2000). The role of self-regulation strategies and self-efficacy perceptions in successful weight-loss maintenance. *Psychology & Health, 15*, 811–820. doi:10.1080/08870440008405583
- Kroese, F. M., Evers, C., & De Ridder, D. T. D. (2009). How chocolate keeps you slim. The effect of food temptations on weight watching goal importance, intentions, and eating behavior. *Appetite, 53*, 430–3. doi:10.1016/j.appet.2009.08.002
- Latham, G., & Locke, E. a. (1991). Self-regulation through goal setting. *Organizational Behavior and Human Decision Processes, 50*(2), 212–247. doi:10.1016/0749-5978(91)90021-K
- Li, K.-K., & Chan, D. K. S. (2008). Goal conflict and the moderating effects of intention stability in intention-behavior relations: physical activity among Hong Kong chinese. *Journal of Sport & Exercise Psychology, 30*, 39–55.

- Louro, M. J., Pieters, R., & Zeelenberg, M. (2007). Dynamics of multiple-goal pursuit. *Journal of Personality and Social Psychology, 93*, 174–93. doi:10.1037/0022-3514.93.2.174
- Mathers, C. D., Fat, D. J., & Boerma, J. T. (2008). *The Global Burden of Disease: 2004 Update*. World Health Organisation. Switzerland.
- Perri, M. G. (1998). The maintenance of treatment effects in the long-term management of obesity. *Clinical Psychology: Science and Practice, 5*, 526–543. doi:10.1111/j.1468-2850.1998.tb00172.x
- Reynolds, W. M. (1982). Development of reliable and valid short forms of the marlowe-crowne social desirability scale. *Journal of Clinical Psychology, 38*, 119–125.
- Riediger, M. (2007). Interference and facilitation among personal goals: age differences and associations with well-being and behavior. In B. Little, J. Samela-Aro, E. Nurmi, & S. Philipps (Eds.), *Personal project pursuit: Goals, action, and human flourishing*. (pp. 119–143). Mahwah: Erlbaum.
- Riediger, M., & Freund, A. (2004). Interference and facilitation among personal goals: Differential associations with subjective well-being and persistent goal pursuit. *Personality and Social Psychology Bulletin, 30*, 1511–1523. doi:10.1177/0146167204271184
- Riediger, M., & Freund, A. M. (2007). Intergoal relations in the context of starting to exercise: A case of positive development from younger to older adulthood. *International Society for the Study of Behavioural Development, 52*, 8–11.
- Scheier, M., & Carver, C. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update. *Cognitive Therapy and Research, 16*, 201–228. doi:10.1007/BF01173489
- Scheier, M. F., Carver, C. S., & Bridges, M. W. (1994). Distinguishing optimism from neuroticism (and trait anxiety, self-mastery, and self-esteem): A reevaluation of the Life Orientation Test. *Journal of Personality and Social Psychology, 67*, 1063–1078. doi:10.1037/0022-3514.67.6.1063
- Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality, 72*, 271–324. doi:10.1111/j.0022-3506.2004.00263.x
- Trope, Y., & Fishbach, A. (2000). Counteractive self-control in overcoming temptation. *Journal of Personality and Social Psychology, 79*, 493–506. doi:10.1037//0022-3514.79.4.493
- Wing, R. R., & Hill, J. O. (2001). Successful weight-loss maintenance. *Annual Review of Nutrition, 21*, 323–41. doi:10.1146/annurev.nutr.21.1.323

Table 1: *Means and Standard Deviations of Weight-loss (WL) and Non Weight-loss (NWL) Goal Characteristics*

Characteristic (range)	WL	NWL
	<i>M (SD)</i>	<i>M (SD)</i>
Weight-loss attainment (1-9)	4.35 (2.47)	5.32 (2.29)
Self-efficacy (0-9)	6.08 (2.01)	6.53 (1.84)
Goal persistence (1-9)	5.05 (2.09)	5.98 (2.21)
Temptation (1-9)	6.08 (1.54)	5.31 (1.87)
Intergoal Interference ^a (1-5)	1.88 (0.62)	
Intergoal Facilitation ^a (1-5)	2.81 (1.15)	

Note: ^aIntergoal interference and facilitation represent the combined contribution of both the weight-loss and the non weight-loss goal collectively.

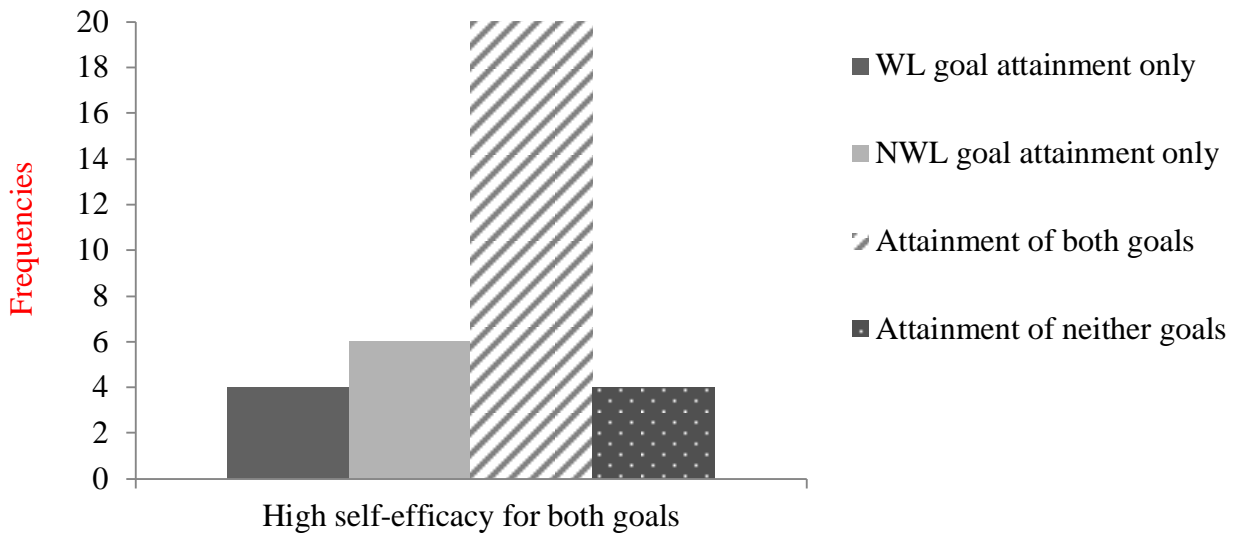


Figure 1. Individuals with high self-efficacy for both goals and the frequency of their goal attainment for their weight-loss goal (WL), non weight-loss goal (NWL), both goals and neither goals.

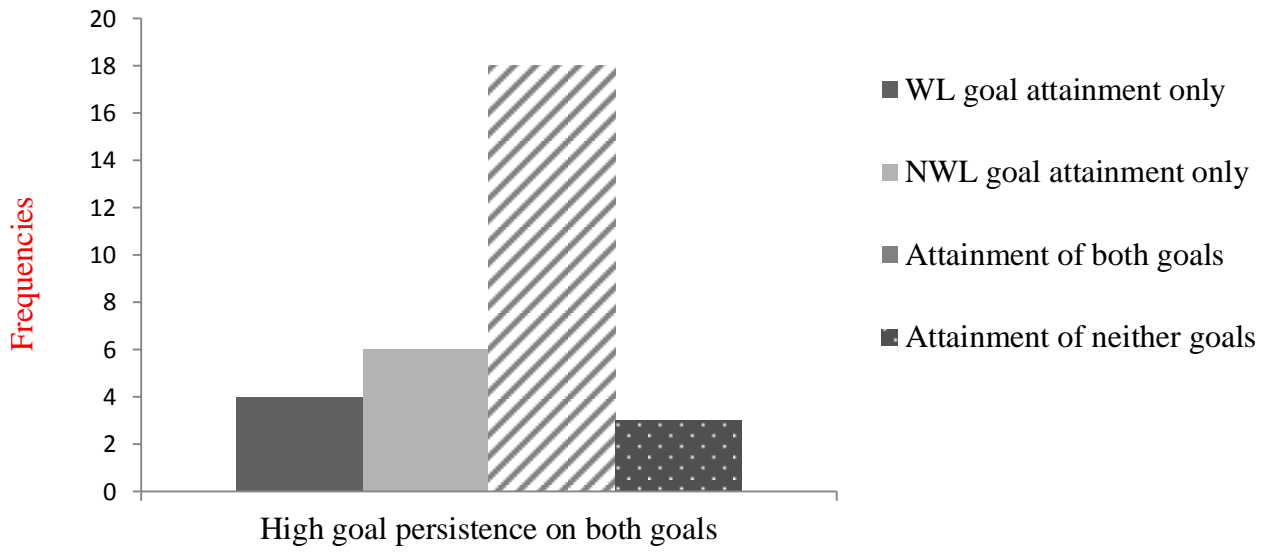


Figure 2. Individuals with high goal persistence for both goals and the frequency of their goal attainment for their weight-loss (WL), non weight-loss goal (NWL), both goals and neither goals.

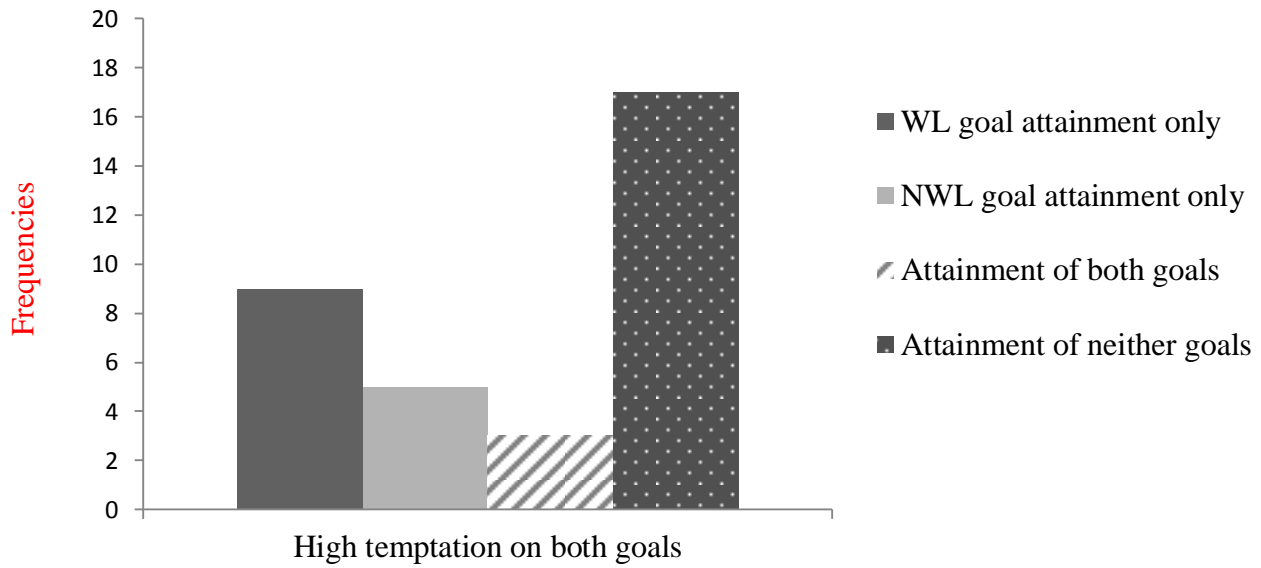


Figure 3. Individuals with high temptation for both goals and the frequency of their goal attainment for their weight-loss (WL), non weight-loss goal (NWL), both goals and neither goals.