5-2024

# The Role of Self in Self-control Dilemmas: Self-concept, Conflict, and Self-conscious Emotions

Jasmina (Mina) Milosevic
*Florida Institute ofTechnology*, jmilosevic2015@fit.edu

# The Role of Self in Self-control Dilemmas: Self-concept, Conflict, and Self-conscious Emotions

by

Jasmina (Mina) Milosevic

A dissertation submitted to the School of Psychology of
Florida Institute of Technology
in partial fulfillment of the requirements
for the degree of

Doctor of Philosophy
in
Industrial/Organizational Psychology

Melbourne, Florida
May, 2024

We the undersigned committee hereby approve the attached dissertation,

"The Role of Self in Self-control Dilemmas: Self-concept, Conflict, and Self-conscious Emotions."
by
Jasmina (Mina) Milosevic

_____
Patrick D. Converse, Ph.D.
Professor
School of Psychology
Major Advisor

_____
Lisa A. Steelman, Ph.D.
Professor
School of Psychology

_____
Jessica L. Wildman, Ph.D.
Professor
School of Psychology

_____
Heidi Hatfield Edwards, Ph.D.
Professor
School of Arts and Communication

_____
Robert A.Taylor, Ph.D.
Professor and Dean
College of Psychology and Liberal Arts

# Abstract

Title: The Role of Self in Self-control Dilemmas: Self-concept, Conflict, and Self-conscious Emotions

Author: Jasmina (Mina) Milosevic

Major Advisor: Patrick D. Converse, Ph.D.

Self-control dilemmas, typically defined as an internal conflict between short-term allurements and long-term goals, are a common feature of everyday life. How such dilemmas are handled is often viewed as a measure of one's self-control, thus carrying significant implications for an individual. Despite a large body of research that has been amassed on this topic, a complete picture of how self-control dilemmas are processed and resolved still eludes us. In the present research, we bring attention to a largely unexplored aspect of self-control, the role of self-concept in shaping self-control efforts. We combined surveys, hypothetical scenarios, and experience sampling data across four studies (one pilot study and three focal studies) to investigate the role self-concept plays in the unfolding of self-control dilemmas, focusing on how self-concept shapes the experience of conflict and triggers the self-conscious emotions associated with that conflict. We found that self-concept influences goal importance and temptation strength when both are in the same self-concept domain, and, through goals and temptations, indirectly shapes the experience of conflict in self-control dilemmas. We further found that the influence of self-concept extends to self-conscious emotions, which often accompany self-control successes and failures. When goals and temptations were associated with different self-concept domains,

results were mixed, suggesting that this area could benefit from further research. Overall, the finding that self-concept is implicated in self-control dilemmas suggests that further research in this area could be beneficial in informing our understanding of self-control processes in general.

*Key words*: self-control, self-control dilemmas, self-concept, self-conscious emotions

# Table of Contents

# List of Figures

# List of Tables

# Acknowledgment

I am incredibly grateful to my advisor, Dr. Patrick Converse, who generously shared his vast knowledge and many, many precious hours of his time to teach me, guide me, and encourage me. Pat, in all my academic pursuits (and there have been quite a few), there is no one I learned more from than you. For that, and for your patience and kindness, I will be forever thankful.

I would also like to thank Dr. Lisa Steelman, Dr. Jessica Wildman, and Dr. Heidi Edwards, who were kind enough to be on my committee, and whose insights, feedback, and support were tremendously helpful.

Special thanks to Dr. Richard Griffith, who is the reason I came back to this particular IO Program in the first place. Rich, you have been such an inspiring professor that, after taking just two classes with you in the late ‘90s, I knew this is the program where I wanted to be. It took 15 years to find my way back, but it was well worth the wait. Your support and encouragement have made an incalculable impact on my life, far beyond school.

To many wonderful I/O faculty, colleagues, and fellow students - I owe you a great deal of gratitude for making this program the best place I ever worked at, and for making this long journey a little easier to bear.

Finally, I am deeply grateful to my family… to my mom and dad, my sister, and my nieces, who found a million ways, small and big, to cheer me on.

But most of all, a wholehearted thank you to my husband, Igor, and my son, Alek, who despite sacrificing the most, not once complained or waivered in their support. You each deserve one letter of this PhD because, without you, this would not have been possible.

# Dedication

To my dad, with whom I shared a love of learning, curiosity about the world, and an appreciation of science. Wish you were here.

# Chapter 1
# Introduction

For most people, self-control, the capacity to make decisions and act consistently with one's enduring goals and values (Fujita, 2011), is synonymous with maturity, reason, and being in control. As such, self-control is considered by many to be one of the more desirable human characteristics. The importance we intuitively attribute to self-control is also backed up by empirical evidence. Self-control has been studied extensively across disciplines and research has generally established that self-control is a significant and consistent predictor of success in school, work, relationships, and life (Duckworth et al., 2014; Gillebaart, 2018). Furthermore, the benefits of self-control are evident across one's lifespan, from childhood well into adulthood (Park et al., 2017). For example, self-control in children and adolescents is related to students' greater academic achievements (Duckworth & Carlson, 2013), higher high-school graduation rates, and higher likelihood of college enrollment (Galla et al., 2014). Among adults, self-control is strongly associated with healthier habits (Elfhag & Morey, 2008), better interpersonal relationships (Vohs et al., 2011), higher income (Converse et al., 2018), and greater satisfaction with life (Cheung et al., 2014; Hofmann et al., 2014).

In daily life, however, our ability to be in control of our decisions and actions is often challenged by competing behavioral tendencies. On any given day, we face a wide range of choices, some of which might be very appealing to us in the moment, even if not necessarily beneficial in the long run. When these momentary allurements, colloquially

known as temptations, interfere with our long-term goals and values, we experience what is known as a self-control dilemma.

A self-control dilemma, thus, refers to an internal conflict between two alternative courses of action, one of which is more appealing in the moment but less beneficial in the long run (e.g., Fishbach et al., 2003; Fujita, 2011; Metcalfe & Mischel, 1999). Self-control is often defined by how we handle such dilemmas, or more specifically how we resolve the conflict between our valued goals and momentary temptations. In early conceptualizations, self-control was equated with the ability to resolve conflict by inhibiting or overriding impulses and resisting temptations (Baumeister, 2014; Inzlicht et al., 2021). More recently, however, the definition of self-control has expanded to include other means of resolving conflict beyond inhibition, such as initiation of behaviors, development of habits, or use of proactive strategies (Gillebaart, 2018; Inzlicht et al., 2020).

Self-control dilemmas represent a valuable context for investigating self-control successes and failures and this line of research has uncovered several important findings related to self-control. For example, there is now considerable evidence that personally important goals, higher-order goals (broader, enduring goals that represent personal agendas, such as "maintain good health"), and global goals (akin to values, such as "be a moral person") facilitate self-control (Fujita & Han, 2009; Fujita et al., 2006). On the other hand, the goal-temptation relationship appears to be more complex than what was initially assumed; recent research shows that although temptations interfere with goal pursuit, they can also facilitate goal activation and bolster self-control efforts (Fishbach et al., 2003). Additionally, there is compelling evidence that trait levels of self-control vary among

individuals and that those with higher levels are overall more effective in their self-control efforts (de Ridder et al., 2018). This stream of research has also shed some light on how self-control operates. In line with the broader conceptualization of self-control, findings from a recent meta-analysis suggest that those with higher dispositional levels are more effective in self-control not because they are better at resisting temptations but because they are faster in identifying a self-control dilemma and responding to it with a variety of strategies (de Ridder et al., 2012).

And yet, despite all the advancements, a complete picture of how the self-control process unfolds still eludes us. Both anecdotal and empirical evidence suggest that (a) even those with high overall trait self-control sometimes succumb to temptations and (b) those who boast impressive discipline and self-control in one area of life, often struggle to demonstrate the same capacity in other areas (Milyavskaya et al., 2019). Such findings suggest that the current literature is still not able to fully explain what distinguishes those occasions when one thinks "I should get out of the house to exercise" and reaches for tennis shoes from occasions when the same person thinks "I should not be sitting on my couch watching TV" but still reaches for the remote.

There are several potential limitations of the extant research that might be hindering our understanding of the dynamic process of self-control. First, our current approach to self-control research has taken somewhat of a piecemeal approach, by focusing either on goals or on temptations as the focal variable. In most studies, when the pursuit of a goal is the main focus, temptations are only considered in relationship to the goal and are often determined by the researcher (e.g., Ferguson, 2007; Fishback & Zhang, 2008).

Similarly, when the focus is on temptations, the research questions seem to be centered on the strength of desires and the extent to which they interfere with the goal rather than on the characteristics of the goal itself (e.g., Hofmann et al.,2012; Kroese et al., 2011; Stillman et al., 2017). As a result, the findings, although valuable, tell only part of the story.

A second, related characteristic of prior self-control research is a fairly static view of goals and temptations. In most cases, the two focal variables are treated either as a goal or as a temptation throughout the study, with little opportunity to consider the dynamic nature of these constructs in daily life. In reality, any goal can potentially interfere with another, more valuable goal, thus, at times, constituting a temptation. For example, working out is generally considered to be an important health-related goal; however, if it disrupts the completion of an important work project, it could be perceived as an interfering temptation. Additionally, some important personal goals (e.g., finishing a work project and spending time with family) can shift back and forth between a goal and a temptation, depending on the context. Finally, the presence of self-control dilemmas typically serves as a starting point for most empirical investigations, narrowing the focus on what happens during and immediately following a dilemma. While this approach has produced valuable insights so far, the time may be ripe for broadening our field of view to consider what drives an individual to construe certain situations as self-control dilemmas in the first place.

With these limitations in mind, we propose that research on self-control can be further advanced by considering the interdependent and context-dependent nature of goals

and temptations when investigating their joint influence on the experience of conflict in self-control dilemmas. This, in our opinion, requires putting self-control dilemmas in the broader context of 'self". Given that self-control dilemmas inherently arise from an individual's interpretation of the situation, it is important to consider 'self' as one of the drivers of self-control processes. More specifically, we argue that self-concepts, the perceptions and beliefs we have about ourselves, play a role in whether we construe certain situations as self-control dilemmas, the intensity of the conflict and the emotions we experience in the face of such dilemmas, and how we subsequently act in response. In other words, self-concepts may hold clues to the personal context in which self-control dilemmas arise, clues that can help us understand why a person might value certain goals more, be more tempted by certain stimuli, and exert self-control in some areas of their lives better than in others.

The purpose of the present research is thus to broaden our approach to studying self-control by investigating the role self-concept plays in self-control dilemmas. We do so by exploring the relationships between domain-specific self-concepts, goals, temptations, conflict, and self-conscious emotions, both in hypothetical and real-life self-control dilemmas. Additionally, we attempt to overcome the limitations of prior research in at least three ways. First, we address the interdependent nature of goal-temptation relationships by investigating goals and temptations not only as separate variables but also as goal-temptation pairs. Second, we leverage self-concept domains to capture the context-dependent nature of self-control dilemmas. Third, we bring attention to a largely unexplored aspect of self-control, the role of self-representations in shaping self-control

efforts. In doing so, we attempt to integrate two disparate streams of research, one on 'self' and the other on self-control, toward a more comprehensive yet nuanced understanding of how self-control dilemmas unfold in daily life.

We begin by providing background information on three interrelated phenomena: self-regulation, self-control, and self-control dilemmas. Next, we introduce and discuss research on self-concept before exploring the link between self-concept and self-control dilemmas. Finally, we turn our attention to the role of affect in self-control dilemmas and discuss how self-concept mobilizes self-conscious emotions to guide self-control efforts.

# Chapter 2
# Literature Review

A prototypical example of a self-control dilemma is a situation where one faces a choice between doing what feels good right now versus doing what one knows would be better in the long run. Self-control dilemmas are nested within the broader construct of self-control, which is nested within an even broader phenomenon of self-regulation. Because there is considerable conceptual overlap between self-control and self-regulation and the two terms have often been used interchangeably, it is beneficial to begin by discussing the two concepts in more detail. Therefore, we begin this section by discussing contemporary conceptualizations of self-regulation and presenting two theoretical frameworks that are foundations for the past and current views of self-regulation. Then, we review traditional and current conceptualizations of self-control and theoretical models that are particularly relevant for self-control and self-control dilemmas.

## Self-regulation

Self-regulation refers to a broad set of "processes involved in attaining and maintaining goals, where goals are internally represented desired states" (Vancouver & Day, 2005, p. 158). It is generally assumed that the purpose of self-regulation is to move the individual toward some desired end state, which often involves resolving discrepancies between the current and desired state (Carver & Scheier, 1982). Current and desired states can be defined as specific behaviors (e.g., studying), emotional states (e.g., feeling calm), or outcomes (e.g., getting a promotion), suggesting that self-regulatory processes involve

more than regulation of behaviors - they also involve regulating thoughts and emotions (Gross, 2015; Inzlicht et al, 2021). Additionally, self-regulatory processes can include a number of actions relevant to goal pursuit such as setting goals, planning how to pursue goals and implementing these plans, shielding goals from competing concerns, and altering one's responses when necessary to move closer to reaching the goal (Fujita, 2011; Lord et al., 2010; Karoly, 1993; Shah et al., 2002).

According to contemporary conceptualizations, self-regulation entails several notable features. First, self-regulatory processes can occur at different levels of abstraction, at different levels of consciousness, and at different time cycles (Lord et al., 2010). For example, at a lower level of abstraction, controlling muscle movements occurs mostly automatically and can take only a few milliseconds. At a higher level of abstraction, one's goal of becoming an "ideal self" may require deliberate and reflective thought and may span months or years. Second, the organization of goals and associated self-regulatory processes at different levels is proposed to be hierarchical, with concrete, short-term goals lower in the hierarchy and abstract, long-term goals higher in the hierarchy (Carver & Scheier, 1982). Third, although it is generally assumed that higher levels exert control over lower levels, the role of lower-level processes goes beyond just providing support to higher levels; lower-level self-regulatory processes can also impose constraints on higher levels in terms of means available for goal pursuit (Shah & Kruglanski, 2003). Thus, current conceptualizations of self-regulation see it as a complex, dynamic interaction of multiple systems originating in different neural locations, operating on different timelines, and

consisting of different mechanisms that nevertheless jointly influence and guide behavior (Lord et al., 2010).

## Models of self-regulation

Control theory offers probably the most influential model of self-regulation. Drawing from cybernetics, it conceptualizes self-regulation as a feedback loop system consisting of four elements: 1) a goal or a standard, 2) an input function representing the sensing of a present condition, 3) a comparator that identifies discrepancies between the current state and a standard, and 4) an output function referring to behaviors performed to reduce the discrepancy (Carver & Scheier, 1998). An important characteristic of the system is that all four elements are connected via a feedback loop so that change in one part of the system results in changes in other parts. Thus, self-regulation not only refers to intentional changes in behaviors but also includes setting the standard, as well as detecting, responding to, and continually monitoring the discrepancy. This feedback loop system is also known as a Test-Operate-Test-Exit model (TOTE; Miller et al., 1960). In the test phase, the current state is compared against some relevant standard. The operate phase refers to an action that is performed to close the gap between the current state and the standard, followed by another test phase when the new state is again compared to the standard. Finally, if a desired end state is reached, the cycle is exited. Because this iterative process applies to just about any self-regulating system, it has been widely applied across diverse disciplines, from engineering to medicine (e.g., Carver & Scheier, 1998).

Another broad theoretical framework with implications for self-regulation is goal systems theory. In this theory, goals are conceptualized as cognitive representations of

desired end states and a goal system refers to a hierarchically interconnected network of goals and means by which goals can be achieved (Kruganski et al., 2018). This model is focused on the structural organization of goals and the strength and accessibility of associated pathways (i.e., goal-means associations). According to this view, self-regulation is a result of the joint action of two properties of goal systems: cognitive (i.e., structure and allocation) and motivational (e.g., goal striving, goal commitment; Kruganski et al., 2018). The common thread underlying both control theory and goal systems theory is that self-regulation is viewed as an umbrella term that encompasses a wide range of behaviors relevant to goal pursuit, one of which is self-control.

## Self-control

If self-regulation is defined as the whole system of standards, thoughts, processes, and actions that guide people's behavior toward desired end states (Carver and Scheier, 2001), then self-control can be viewed as one form of self-regulation or, more specifically, a way by which people modify their thoughts, feelings, and actions to achieve their goals (Fujita, 2011). One important implication of this view is that not all forms of self-regulation necessitate self-control; thus, self-control is a narrower construct embedded in self-regulation. For example, setting a goal and planning how to pursue it would be considered an act of self-regulation but not necessarily of self-control. In an attempt to operationally define self-control, Gillbaart (2018) proposed that self-control maps directly to one of the components of the self-regulation system - the Operate function in the TOTE model – whose main function is to control one's actions in a desired direction. This is a relatively recent conceptualization of self-control intended to more precisely define the

construct and distinguish it from self-regulation. Historically, however, definitions of self-regulation and self-control have often converged around the notion of modifying one's behavior as needed to refrain from undesired tendencies.

## Overview of conceptualizations of self-control

For centuries, the view of self-control has revolved around efforts to resist temptation. From Plato and Aristotle to Freud and Mischel, self-control was depicted as an internal struggle to overcome the intense, momentary impulse toward appealing but less desirable behavior (Metcalfe & Mischel, 1999; Mischel, Shoda, & Peake, 1988). In this view, self-control was equated with inhibitory control and referred to as "willpower." Consequently, self-control was seen as effortful and difficult, straining and depleting our energy resources in the process of resisting temptation (Duckworth et al., 2016).

Resisting temptation is central to another influential conceptualization of self-control - one that defines it as an ability to delay gratification. In Mischel's seminal marshmallow experiments conducted in the 1970s, children were asked to forgo immediately consuming one marshmallow for the promise that they could have two if they waited 15 minutes (e.g., Mischel, 1974; Mischel et al., 1988). The ability to delay immediate gratification involving a smaller reward for a larger one at a later time was thought to be evidence of possessing self-control. Consistent with the "willpower" definition, effort and inhibition are still needed to delay gratification but they are now tied to a specific context: a conflict between two possible courses of action (Gillebaart, 2018). Although self-control is generally considered to be a vital cognitive skill for goal-directed behavior in humans, it is worth noting that when conceptualized as a delay of gratification,

self-control has been demonstrated among diverse species, from chimpanzees to cuttlefish (Beran, 2002; Schnell et al., 2021).

More recently, some researchers have begun to argue that inhibition is not enough to ensure successful self-control as one cannot reach their goals simply by resisting temptations. For example, losing weight is not achieved only by forgoing desserts but may also require carefully selecting healthy foods, monitoring caloric intake, being physically active, etc. In line with this perspective, De Ridder et al. (2011) empirically tested the proposition that self-control has two components, an inhibitory and an initiatory component. The inhibitory component refers to being able to refrain from behaviors that give in to one's impulses, whereas the initiatory component refers to facilitating and engaging in desired behaviors (de Ridder et al., 2011). In their study, the distinction between these two components was empirically supported and, moreover, predictive validity evidence showed that inhibitory self-control predicts undesired behavior whereas initiatory self-control predicts desired behavior. This broadening of the self-control definition also has implications for self-control dilemmas in the sense that effortful inhibition is seen as just one of many different ways people can resolve conflict between a short-term and a long-term motive (e.g., Fujita, 2011; De Ridder et al., 2011). In fact, most recent conceptualizations of self-control emphasize this point by adding effortless means of resolving conflict to the definition (Gillebaart & de Ridder, 2015; Hennecke et al., 2019; Fujita, 2011). Effortless processes include a wide range of goal-oriented behaviors such as habits, proactive strategies, and even patterns of cognitive association occurring outside of

awareness (Galla & Duckworth, 2015; Fischbach et al., 2003; 2006; van der Weiden et al., 2020).

Finally, although most conceptualizations of self-control do not explicitly distinguish between trait and state self-control, empirical research treats them differently (Milyavskaya et al., 2019). Specifically, trait self-control is studied from a between-person perspective, whereas state self-control is examined from a within-person perspective (Inzlicht et al., 2020). Besides obvious measurement and methodological ramifications, this also has implications for the types of research questions that are posed and inferences that are drawn. When self-control is assessed as a trait, the research focus has been on how trait self-control, as an individual difference, contributes to the consistent handling of self-control dilemmas in a way that promotes a long-term goal. The findings from this line of research have associated trait self-control with a number of positive life outcomes related to health, academic and work performance, financial stability, and happiness, to name just a few (e.g., Moffit et al., 201; Tangney et al., 2004). In contrast, when assessing self-control as a state, the research focus has been on momentary levels of self-control and how transient within-person fluctuations contribute to self-control failures (de Ridder et al., 2018). This line of research has centered on understanding the underlying mechanisms of self-control, ranging from effortful inhibition to resource depletion.

Despite different foci, the implicit assumption in self-control research is that trait and state self-control are related, in that those who are higher in trait self-control should also display greater state self-control when facing a dilemma (Milyavskaya et al., 2019). The number of studies explicitly testing this notion is limited and the results are mixed,

with some studies reporting evidence of positive associations (e.g., DeWall et al., 2007) and others finding the opposite to be true (e.g., Imhoff et al., 2014). Additionally, two recent meta-analyses examined the convergent validity of various measures of self-control and found little or no correlation between self-reports assessing trait self-control and two measures of executive functioning assessing state self-control (Stroop test and Flanker paradigm; Saunders et al., 2018), and only a small correlation ($r$ = .15) between self-reports and delay of gratification, another measure proposed to asses state self-control (Duckworth & Kern, 2011).

Regardless of the fact that the nature of the relationship between trait and state self-control is still poorly understood, the field has moved closer to a more comprehensive view of self-control, one that increasingly conceptualizes self-control as a wide range of means of resolving conflict between competing goals and motives, means that range from effortful to effortless, deliberate to automatic, and initiatory to inhibitory (Gillebart, 2018; Inzlicht et al., 2020).

## Theories & models of self-control

In addition to control theory, there are several other theoretical frameworks with implications for self-control. The resource model of self-control is probably the most well-known perspective on self-control, although it is important to note that this is one of the theoretical frameworks that treats self-control and self-regulation as the same and uses the two terms interchangeably (e.g. Baumeister & Vohs, 2016). According to this approach, self-control is defined as “the ability to alter one’s responses based on rules, goals, ideals, norms, plans, and other standards" (Baumeister & Vohs, 2016, p. 68). This view of self-

control proposes the existence of a central resource that controls a wide range of behaviors, and, as is the case with most resources, it is limited and can be depleted with repeated use. The detection of the ego-depletion effect (i.e., reduction in self-control at Time 2 after one performs a taxing task at Time 1) initially provided empirical support for the notion of self-control as a limited resource (Baumeister et al., 1998). However, subsequent research was not always able to replicate the ego-depletion effect and a recent meta-analysis found effects to be very small or non-existent (Carter, Kofler, Forster, & McCullough, 2015; Hagger et al., 2016). The model was additionally criticized for not fully explaining the mechanisms driving ego-depletion (Inzlicht et al., 2020), although some attempts have been recently made to tie it to metabolic changes (i.e., glucose levels; Baumeister & Vohs, 2016). Other scholars have suggested that the ego-depletion effect can be better explained by shifts in motivation that occur when people switch from goals they want to pursue to those they feel they have to work on (Inzlicht et al., 2020; Milyavskaya et al., 2015). In general, resource models have been associated with traditional conceptualizations of self-control centered on effortful inhibition.

Perhaps the most influential framework directly relevant to self-control is a dual-systems framework. The main premise of dual-systems models is that human beings possess two systems for processing information and guiding their behavior (Heatherton & Wagner, 2011; Hofmann et al., 2009; Kahneman, 2011; Metcalfe & Mischel, 1999; Thaler & Shefrin, 1981). Often referred to as System 1 and System 2 (Kahneman, 2011), or 'hot' and 'cold' systems (Metcalfe & Mischel, 1999), the two systems differ in mechanisms affecting the speed, attention allocation, and outcomes of information processing. The 'hot'

system operates automatically and with little effort and, as a result, is fast, associative, and typically guides impulsive or habitual behaviors. The 'cold' system is deliberate, requires effort and attention, and, as a result, is slower, reflective, and more likely to guide rational behavior (Metcalfe & Mischel, 1999; Kahneman, 2011). Findings from neuroimaging research suggest that the two systems are associated with activity in different regions of the brain: the 'hot' system is associated with activity in subcortical regions involved in reward and emotion, whereas the 'cold' system is associated with regions of the lateral prefrontal cortex (PFC; Heatherton & Wagner, 2011) involved in executive behavioral control (Tanji & Hoshi, 2008). Although the two systems can and do work together, they can also be at odds with each other and when they are, the need for self-control arises. According to this perspective, self-control can be defined as the mechanism that allows the 'cold' system to inhibit or override impulses coming from the 'hot' system, effectively establishing behavioral control (Gillebaart & De Ridder, 2015; Lopez, 2017). Cognitive neuroscience research provides support for the view that PFC regulates subcortical responses to emotions and impulses and that self-control failure occurs either when PFC functioning is impaired or subcortical impulses are overwhelming (Wagner & Heatherton, 2010). Dual system models have been very influential in conceptualizing self-control as arising when there is a "battle" between the two systems and have led to a proliferation of self-control research centered on conflict.

In contrast to conflict models which cast self-control as a battle between two systems, choice models see self-control as value-based choices between differing options. According to this view, self-control is a behavioral action that results from assessing

options, calculating the subjective value of each option, and selecting an option to act upon (e.g., Berkman et al., 2017a). The subjective value of an option reflects perceived benefits minus the costs associated with the option. Option benefits can include intrinsic values such as the extent to which the option is self-determined and how much it reflects a person's core values, as well as extrinsic incentives such as monetary or social rewards. Option costs can include assessments of time, effort, and availability of resources (Berkman et al., 2017). Although some models have emphasized the view of self-control strictly as a value-based proposition, others have tried to integrate it with dual-system models by adding a dimension of choice to the existing two-system framework and proposing that the decision to exert self-control could be based on the evaluation of what that would cost the individual (Shenhav et al, 2013).

The process model of self-control reflects the more recent shift toward the notion that self-control does not always require effort (Duckworth et al., 2016). According to this model, there are a number of strategies one can employ to regulate thoughts, feelings, and actions at different points in time (Duckworth et al., 2014). Leveraging the notion of an impulse generation cycle, the process model proposes that different strategies can be effective at different stages of the cycle. Some strategies can be employed early to avoid conflict and the temptation altogether (i.e., situation-selection strategies), whereas other strategies entail purposely changing circumstances to our advantage (i.e., situation-modification) or changing how we approach tempting stimuli (e.g., attentional-deployment, cognitive-change, and response modulation). Strategies that are employed earlier in the cycle require less effort than those employed later, suggesting that the amount of effort

required for self-control corresponds to the intensity of the generated impulse (Duckworth et al, 2016). In a classical example of trying to resist eating a tempting donut, Duckworth et al. (2016) demonstrated how an intervention is possible at different stages, starting from avoiding the kitchen altogether, then proceeding by hiding donuts out of view, looking away from donuts and toward a healthier snack, thinking about all the calories packed in the donuts, and finally, resisting the donut. In general, the process model of self-control aligns with a broadened definition of self-control that includes relatively effortless strategies people can use to facilitate the accomplishment of long-term goals.

In summary, the common thread underlying these diverse theoretical perspectives and associated conceptualizations of self-control is the presence of conflict. Although the nature of the conflict differs from model to model (e.g., immediate urges versus enduring goals, proximal versus distal motives, impulsive versus control system), the point of convergence seems to be the notion that a need for self-control arises when competing options present a dilemma for a person and when resolving that dilemma requires initiating or inhibiting some behaviors over others.

## Self-control dilemmas

A self-control dilemma is typically defined as an internal conflict between two alternative courses of action, one of which is more appealing and immediately rewarding but with limited or no long-term benefit, and the other that is less appealing in the moment but expected to lead to an accomplishment of a long-term goal (e.g., Fishbach et al., 2003; Fujita, 2011; Metcalfe & Mischel, 1999). Three key features of a self-control dilemma – a

long-term goal, an alluring temptation that jeopardizes the long-term goal, and a conflict between the two – are discussed in more detail in the following sections.

## Goals

Goals are defined as an "internal representation of desired states, where states are broadly construed as outcomes, events, and processes" (Austin & Vancouver, 1996, p. 338). When people use the term goal, they often think about a consciously chosen standard that a person is deliberately pursuing; however, in theory and research, the goal construct is conceived more broadly than that. Research strongly suggests that goals can be represented in different forms and shapes (e.g., Kung & Scholer, 2021), originate in different neural locations, exist at varying levels of awareness, and differ in terms of temporal aspects (i.e., short-term versus long-term; Schmidt & DeShon, 2007; for review see Lord et al., 2010). Integrating diverse perspectives and empirical findings on goals is a daunting task, but there are a few broad points of convergence worth noting.

First, many theories of motivation endorse the view that most, if not all, human behavior is goal-directed, thus casting goals as central to any type of human activity (e.g., Diefendorff & Chandler, 2011). Not surprisingly, goals are one of the most researched and discussed constructs in the literature on work motivation (e.g., Austin & Vancouver, 1996; Elliot & Fryer, 2008). Second, goals are proposed to be arranged hierarchically, with lower-level goals linked to mid-level and higher-level goals (Carver & Scheier, 1998; Lord et al., 2010; Lord & Levy, 1994; Shah & Kruglanski, 2008). Mid-level goals are believed to mostly operate in the realm of consciousness, whereas people are less aware of higher-level and lower-level goals unless they are cued (Vallacher & Wegner, 1987). Third, goals

are generally viewed as an essential component of a self-regulatory system, a system that enables individuals to detect and act on any discrepancies between their current state and their goals. Presumably, discrepancies can occur at any level of the hierarchy, and because of connections between goals at different levels, discrepancies at a higher level can generate or modify goals at a lower level (Lord et al., 2010). Finally, research has firmly established that goals can differ considerably in their content, importance, and length of time over which they are pursued (Schmidt et al., 2009). Given that a person can have a number of goals at any given time, it is acknowledged that some of the goals can exist at the same level of the hierarchy, and, as a result, can be in conflict with each other (Austin & Vancouver, 1996).

Research on goals has focused both on the properties of goals and on goal processes, some of which are particularly relevant for self-control. For example, one of the properties of goals with direct implications for self-control is that goals can exist at different levels of abstraction. This notion is associated with the main premise of the construal level theory (CLT) which posits that any event can be construed by an individual at high or low construal levels (e.g., Trope & Liberman, 2003; Trope et al., 2007). High-level construals are relatively abstract mental representations of events, focused on the event's core, vital features without irrelevant details. In contrast, low-level construals are more concrete mental representations of events, focused on specific contextual features that often include peripheral details (Trope & Liberman, 2010). In terms of goals, a higher construal level is associated with 'why' aspects of goals whereas a lower construal level is associated with 'how' aspects or means of achieving goals (Liberman & Trope, 1998).

Research has demonstrated that differences in construal levels impact perception, evaluation, decision-making, and a wide range of behaviors. When applied to self-control, CLT suggests that higher-level construals, as opposed to lower-level construals, enhance focus on broader, superordinate goals (Fujita & Han, 2009; Fujita et al., 2006). As a result, in self-control dilemmas, a high-level construal leads people to consider the implications of their choices in the context of broader goals and values, which promotes self-control. Conversely, a low-level construal leads people to pay attention to more salient, momentary features of their choices, which can lead to failures of self-control (e.g., Fujita, 2008; Fujita & Carnevale, 2012; Torelli & Kaikati, 2009).

Temporal properties of goals have also been linked to self-control. Specifically, theories of multiple goal pursuit have examined how goals are prioritized and pursued when they have different deadlines (Baillard et al., 2018; Schmidt & DeShon, 2007). Generally, findings demonstrate that people tend to prioritize goals with shorter deadlines, partially because of the time pressure and partially due to the temporal discounting. Temporal discounting (Steel & Konig, 2006) refers to the tendency for people to reduce the utility of the goal when the goal is relatively far, thus treating it as less important. In the context of self-control dilemmas, short-term goals are those associated with salient momentary temptations therefore suggesting that there may be an inherent tendency for individuals to give such proximal goals more weight compared to more distal, long-term goals. Temporal discounting has also been found to apply to the evaluation of potential rewards insofar as the attractiveness of a reward decreases the longer it takes to obtain it (Steel & Konig, 2006). The implication for self-control is that in pursuing long-term goals,

self-control is necessary in order to overcome the tendency for a short-term goal (which is usually linked to temptation) to be prioritized, as well as to counter the strong attractiveness of the immediately available rewards.

In terms of goal processes implicated in self-control, goal pursuit has garnered a great deal of attention. Goal pursuit is supported by a combination of cognitive (e.g., expectations about the likelihood of goal achievement) and affective (e.g., positive affect due to satisfaction with progress) processes (Schmidt & DeShon, 2007). Although psychological processes involved in goal pursuit are universal, there are considerable individual differences in selecting which goals to pursue, when and how to pursue them, and the importance that is attached to achieving those goals. Understanding why some goals are selected over other goals and pursued more or less successfully in the face of temptations offers valuable insight into how self-control decisions unfold in real-time and in real situations. For instance, the importance of goals has long been recognized as a contributing factor to the ability to persevere in their pursuit, even in the face of obstacles. Thus, it is proposed that pursuing goals that are deemed important should facilitate self-control. Indeed, research has found that participants scoring high on goal importance react faster to words related to their goal than participants for whom the goal was less important (Kroese et al., 2011). In this case, quicker reaction time suggests that the goals are more accessible, and more accessible goals are also more likely to be activated in response to tempting stimuli (Fishbach et al., 2003).

The motivation behind goal pursuit has also been proposed to affect self-control. For example, Sheldon and Elliott (1999) examined the long-term benefits of pursuing self-

concordant goals. In line with self-determination theory (SDT; Ryan & Deci, 2000), goals are defined as self-concordant when they are pursued because of intrinsic motivation. Such goals are usually self-generated and presumed to represent an individual's well-established values and interests (Sheldon & Elliot, 1999). Results of Sheldon and Elliott's (1999) study, showed that individuals performed better at self-concordant goals, mainly because they invested greater sustained effort into such goals. The outcome of that effort, however, went beyond just achieving the goal. In the process of goal striving, individuals also increased their competence, autonomy, and relatedness, which positively affected their overall well-being in the long run. Also drawing from SDT, Milyavskaya et al. (2015) examined the influence of *want-to* and *have-to* goal motivation on self-control processes and found that, when participants pursued goals they wanted to work on, as opposed to those they felt they had to work on, they experienced fewer temptations, weaker conflicting desires, and put up greater resistance.

Furthermore, some researchers have suggested that when people highly value their goals, they develop cognitive processes that counteract temptations (e.g., Trope & Fishbach, 2000; Fischbach & Shah, 2006). For instance, several studies examined the automatic associations between temptations and goals and found that exposure to temptations activated higher-priority goals, which in turn, inhibited temptations and bolstered self-control (Fishbach et al., 2003). These studies reflect a more recent approach to examining goal pursuit, grounded in the implicit cognition perspective (Ferguson & Porter, 2010). Findings emerging from the implicit cognition perspective suggest there are many ways by which goals can be implicitly and automatically activated from the stimuli

in the environment, including temptations (Fishbach et al., 2003). These findings imply that the processes underlying self-control can also be automatic, which challenges the view of self-control as always effortful and deliberate and supports the broader conceptualization of self-control that includes effortless means of resolving conflict (previously discussed).

The scholarship on goals has, without a doubt, advanced our understanding of self-control and self-control dilemmas. It is widely accepted that when goals are construed as global, higher-order goals, are perceived as more proximal in time, and are deemed as particularly important to the individual, the self-control efforts will be stronger. Yet, the fact that, even under those circumstances, people still occasionally fail at self-control, strongly suggests that goals alone cannot entirely explain self-control processes. To understand how self-control dilemmas unfold, it is necessary to also understand various internal and external forces that stand in the way of long-term goal pursuit.

## Temptations

Compared to goals, temptations have received much less attention in research on self-control. In the context of self-control dilemmas, the term temptation is commonly used to refer to any type of desire that creates an internal conflict (Werner & Milyavskaya, 2018). Temptation is closely related to an impulse – a sudden urge to act a certain way.

Although the two terms are often used interchangeably[1], it is important to note some ways in which they differ. Temptation can be thought of as a stimulus of any kind that has some perceived hedonic value for an individual and, as a result, can generate an impulse, or the automatic inclination to engage in behavior that satisfies the desire (Hofmann et al., 2009). Impulse is specific to an activating stimulus in the environment and the intensity of an impulse wanes with temporal and spatial distance from the stimulus (Hofmann et al., 2009). In other words, the distinction between temptation and an impulse can be thought of as a difference between a stimulus (i.e., temptation) and a reaction to that stimulus (i.e., impulse or urge to act). The implication of this distinction is that although impulse and temptation are often used interchangeably, there may be subtle differences between the two terms. For example, while temptations are presumed to be situated in the environment surrounding the individual, impulses are generally believed to originate in the individual's internal impulsive system, appearing upon activation of certain associative clusters in long-term memory by a precipitating event (i.e., perceptual or imagined stimulus input; Hofmann et al., 2009; Metcalfe & Mischel, 1999; Strack & Deutsch, 2004). Thus, temptations represent stimuli in the environment (e.g., desserts in a bakery window) that make impulses (e.g., craving a dessert) salient through cognitive and affective associations that formed via the organism's learning history, typically operate outside of conscious

[1] Given that in research, the terms impulse, temptation, and desire are used interchangeably, the term used by the original authors is kept in the following literature review.

awareness, and frequently result in automatic behavior (Gawronski & Bodenhausen, 2006; Strack & Deutsch, 2004; Hofman et al., 2009; 2012a; Miliavskaya et al., 2015).

Although it is suggested that activation of impulses is mostly automatic, once an impulse is generated, people are aware of an urge to act and can recognize when acting to satisfy the urge might interfere with their long-term goals and carry significant albeit delayed costs (Hofmann et al., 2012a). For this reason, regardless of how natural it might feel to respond to our impulses and desires, human beings have developed an ability to resist temptations. In fact, from the standpoint of evolutionary adaptation, an appropriate response to an urge to act sometimes is to suppress the impulse (Baumeister, Heatherton, & Tice, 1994; Metcalfe & Mischel, 1999; Mischel et al., 1996). As mentioned earlier, suppressing an impulse was historically considered to be an act of self-control, one that requires deliberate, conscious, and effortful action (Hofmann et al., 2009; Metcalfe & Mischel, 1999).

In one of the few studies that specifically focused on temptations, Hofmann and colleagues (2012a) found that experiencing a desire is a frequent occurrence in daily life, with participants reporting (a) feeling desire about half of the time they were awake and (b) desires lasting on average 16-20 minutes. Additionally, 47% of those desires were described as conflicting with a person's goals or values. In general, the results showed that stronger desires were more likely to be acted upon than weak ones; however, when conflict was present, the strength of a desire mattered more than it did in the absence of conflict. Specifically, as desire became stronger, attempts to resist it (i.e., self-control) became less effective (Hofmann et al., 2012a). On the other hand, results also revealed interesting

findings about the strongest desires (i.e., those receiving a maximum strength rating of 7). Those desires, termed "irresistible," were relatively infrequent (6.3% of all desires) but when they were present without resistance, people acted upon them about 71% of the time. Surprisingly, however, when resisted, acting upon irresistible desires dropped to 26%, suggesting that people can be effective in self-control even when facing strong urges to act a certain way (Hofmann et al., 2012a).

Similar findings emerged from Kroese et al. (2011) who examined how people handle strong versus weak temptations. The results revealed, paradoxically, that participants who were confronted with a strong temptation (i.e., very attractive chocolate cake) were more successful in self-control than those confronted by a weak temptation (i.e., not a very attractive chocolate cake). In yet another study, people who were offered tempting snacks in larger packages were less likely to initiate eating snacks and, if they did, they ate less than those who were given snacks in smaller packages (Coelho do Vale et al., 2008). Taken together, the results of these studies suggest that, while desire strength is an important factor impacting self-control, success or failure of self-control cannot be explained by powerful desires alone.

Additional insights into temptations can be gained from examining the nature of the temptation itself (i.e., tempting stimulus). It has been suggested that tempting stimuli can be appetitive (triggering an approach impulse), aversive (triggering an avoidance impulse), and neutral (triggering a cognitive conflict; Steimke et al., 2016). In a novel approach to assessing self-control, Steimke et al. (2016) assessed participants' ability to keep their eyes on a cued target location and perform assigned tasks (press a specific

button when a target appears) while exposed to tempting, aversive, and neutral distractions (i.e., pictures). Duration of eye gaze, reaction time, and error rates were measured as dependent variables. The results showed that the three types of stimulus, appetitive, aversive, and neutral, produced higher error rates and lower response times than a control condition. However, performance in those three self-control conditions did not correlate with each other, and those who performed well in one condition did not necessarily perform well in other conditions. These findings challenge the prevalent approach in research on self-control – one that treats temptations as a single construct – and instead suggest that self-control effectiveness may depend on the nature of the impulse that needs to be suppressed and that there are individual differences in susceptibility to particular impulse domains (Stiemke et al., 2016; Tsukayama et al., 2012).

The existence of individual differences when it comes to appetitive versus aversive stimuli has been proposed before by Gray's influential theory (1987a, 1987b) of two motivational systems: the behavioral activation system (BAS) and the behavioral inhibition system (BIS). According to this framework, the BAS system is responsible for facilitating behavior and is more responsive to positive outcomes, whereas the BIS system is responsible for inhibiting behavior and is more sensitive to negative outcomes (Elliot, 2006; Elliot & Trash, 2002). The two systems, also known as approach and avoidance motivation, are believed to be distinct and their sensitivities are assumed to independently represent dispositional tendencies (Higgins et al, 2001; Quay, 1993). Predictions regarding sensitivity to different types of temptations can thus be derived from this model. Presumably, individuals with predominant approach motivation (high BAS) would be more

sensitive to appetitive stimuli whereas those high in avoidance motivation (high BIS) would be more sensitive to aversive stimuli. Expanding on the role of approach and avoidance motivation in self-control, Dholakia et al. (2006) examined how regulatory focus impacts the experience and subsequent control of the desire for temptations. The findings demonstrated that a promotion focus associated with approach motivation led to stronger desire but also a greater resistance, relative to a prevention focus associated with avoidance motivation. These findings align with evidence for differences in sensitivity coming from neurocognitive science, such as findings from neuroimaging studies that different regions of the brain are activated when responding to positive and negative emotional distractors (Erk et al., 2007).

Temptations have overwhelmingly been viewed as obstacles to long-term progress on goals. Recently, however, empirical evidence has emerged suggesting that temptations can be beneficial for self-regulatory efforts because they can trigger adaptive cognitive and behavioral processes associated with the pursuit of long-term goals. For example, Fishbach et al. (2003) found that presenting a tempting stimulus enhanced the mental accessibility of the long-term goal, which, in turn, led to goal-directed behavior and resulted in healthier long-term choices. Moreover, the goal activation by a tempting stimulus occurred automatically and outside of conscious awareness suggesting a possibility of an effortless path to self-control, one that leads through temptations themselves. In a similar fashion, prior exposure to real temptations (e.g., actual candies that can be consumed by the participant), as opposed to tempting images (e.g., pictures of candy) decreased the hedonic

consumption at a subsequent opportunity for consumption, presumably because a related eating goal was activated in the former but not the latter case (Geyskens et al., 2008).

Overall, these recent studies challenge several prevailing assumptions about temptations, the nature of their relationship with goals, and the role temptations play in self-control dilemmas. For instance, research suggests that temptations should be viewed as a multidimensional and not a singular construct. Therefore, examining temptations should not be restricted to just one domain because successfully resisting temptations in one domain does not necessarily translate to other domains. Additionally, the exact nature of the relationship between temptations and goals is still not fully known. Although a great deal of research has approached temptations as being inherently "bad" and having negative consequences for goal pursuit, it appears that there are times when temptations can promote self-control and contribute to overall progress on goals. Finally, although some researchers have started alluding to the role of individual differences in the perception and experience of temptations, that area remains largely unexplored (Ferguson, 2007; Milvyskaya, 2019).

## Conflict

According to most conceptualizations of self-control, conflict is a necessary feature of self-control dilemmas. Although not all perspectives address it explicitly, the assumption is that a need for self-control arises in the presence of conflict (Inzlicht et al., 2021). However, how conflict is defined and what the nature of the conflict is differs among perspectives.

In self-control dilemmas, one of the most prevalent conceptualizations of conflict is between salient temptations and long-term goals. In this view, temptation represents a need or an impulse to engage in momentary hedonic pleasure that in some way jeopardizes (partially or fully) a long-term goal. The battle between temptation and long-term goal resonates with philosophical and classical literature dating to Plato and Aristotle, although colloquially this internal struggle has been depicted as a battle between 'passion' and 'reason' (see Duckworth et al., 2014; Kotabe & Hofmann, 2015). This intrapsychic conflict is similarly featured in a number of different approaches, from Freud's battle between id and ego to Mischel's short-term and long-term gratification in marshmallow experiments (Duckworth et al., 2016; Metcalfe & Mischel, 1999; Mischel, Shoda, & Peake, 1988).

Some approaches take a slightly broader view of the conflict, and frame temptations in terms of short-term goals (see Inzlicht et al., 2021). In this view, short-term goals are suggested to be of lower order, offer immediate but smaller benefits, and can conflict with long-term goals, which are of higher order and offer delayed but larger benefits. Another common definition of a self-control dilemma involves conflict between proximal and distal motives, with proximal motives being more concrete and immediately satisfiable, whereas distal motives are abstract and remote (Duckworth et al., 2016; Fujita, 2011). Similarly, when a self-control dilemma is conceived as an internal conflict between the pursuit of different behavioral plans (Ainslie, 1992; Loewenstein, 1996; Fischbach et al., 2003; Metcalfe & Mischel, 1999; Rachlin, 1997), the premise is that one of the behavioral plans is of greater long-term importance than the other. In all of these

definitions, the common thread is that self-control dilemmas are manifested in a conflict between short-term allurements and long-term benefits (Kroese et al., 2011).

Theoretical support for this view stems from dual system models which tie temptations to the impulsive system (System I) and long-term goals to the deliberate system (System II). A self-control dilemma arises when the two systems are in conflict with each other, and an act of self-control is manifested when System II can override System I to resolve conflict (see Hofmann et al., 2014; Inzlicht et al., 2021). As discussed previously, perhaps the strongest evidence for this approach comes from neuroimaging evidence, which shows that the two systems are associated with activity in different regions of the brain (Heatherton & Wagner, 2011).

In some approaches, conflict plays a less prominent role. For example, in control theory, the focus is on detecting and resolving the discrepancy between current and desired state, rather than on conflict per se (Inzlicht et al., 2011). Another example is goal systems theory, which is primarily centered on goals and goal pursuit, independent of conflict. However, this theory too acknowledges that conflict can occur when incompatible goals are activated; in those cases, it is suggested that conflict between goals produces an aversive state that an individual seeks to resolve (Shah & Kruglanski., 2004; Proulx & Inzlicht, 2012). Finally, choice models challenge the very notion that conflict is required for self-control; instead, they frame self-control dilemmas as value-based propositions where one has to decide between two response options based on their expected utility (Berkman et al., 2017).

Although perspectives accommodating a wider array of conflicts are more broadly applicable, one of the criticisms of this broad approach has been that not all conflicts reflect self-control dilemmas or require self-control to resolve (Kotabe & Hofmann, 2015; Kung & Scholer, 2021). This is especially evident when considering certain types of goal conflict; because there are different means of accomplishing goals, in some cases the resolution might depend more on time management or prioritization than on self-control. For instance, although the goals of completing one's dissertation and spending time with family are incompatible in a given moment, both can be pursued over time with careful planning and time management.

To further distinguish among different types of conflicts, Kotabe and Hofmann (2015) proposed that the source of conflict can originate in one of three broad sets of self-regulatory phenomena: desire-goal (D-G) conflict (e.g., eating cake versus losing weight), desire-desire (D-D) conflict (e.g., choosing between two dessert options), and goal-goal (G-G) conflict (e.g., spending time with family versus completing a work project). Of the three, the D-G conflict is the one that represents the classic self-control dilemma, whereas the other two may reflect broader motivational tendencies and can be resolved by means other than self-control. In D-D conflict, for example, it may be possible to simply opt for a stronger desire, and in G-G conflict, the more important goal may be prioritized in the moment (Kotabe & Hofmann, 2015). However, the asymmetric D-G conflict involves "two qualitatively different psychological forces" (Kotabe & Hofmann, 2015, p. 619), one of which is related to reward processing and the other to executive control. It is this activation of two fundamentally different neuropsychological mechanisms that presumably

creates an asymmetrical conflict which is experienced as a self-control dilemma and whose successful resolution requires an act of self-control (i.e., deliberate System II overriding impulsive System I; Hofmann et al., 2014).

Finally, some researchers suggest that there are only two main sources of conflict: resource conflict and inherent goal conflict (Gorgos & Grund, 2017; McCallum et al., 1979; Kung & Scholer, 2021). Resource conflict arises when the pursuit of multiple goals is limited by available resources, such as time or money. Because most resources are finite, this type of conflict is common, but it is also potentially resolvable with increases in resources. For example, given enough money one could both make home improvements and go on vacation. The other type of conflict arises when desired end-states are at odds with each other, such as enjoying unhealthy food and leading a healthy life. Whether it is values that clash or goals that are fundamentally incompatible, this type of conflict is considered a form of inherent conflict (Kung & Scholer, 2021). Inherent conflicts are more difficult to resolve because additional resources do not diminish the conflict itself; instead, the conflict is "resolved" by overriding one value or goal in favor of another, which is consistent with a classical definition of self-control.

The diversity of perspectives and the plurality of definitions and conceptualizations of self-control dilemmas speak to the complexity of the phenomenon and highlight the need for a nuanced approach when researching it. However, it is not clear to what extent nuanced theoretical conceptualizations reflect the empirical reality. One would be hard-pressed to assume that in daily encounters with self-control dilemmas, people make the same intricate distinctions between the type or the source of conflict they experience, or

that they always neatly sort their thoughts and behaviors into well-defined goals and temptations.

In general, self-control research has paid less attention to how people spontaneously evaluate abstract, desired end-states, and, in particular, how individuals' beliefs about what their goals and the response options mapping onto those goals are, jointly influence subsequent construal of a situation as a self-control dilemma. Taking the most common self-control research scenario as an example, being presented with a piece of cake constitutes a self-control dilemma only if an individual has a goal related to eating healthy, is motivated to act on that goal in the moment, and recognizes cake as a temptation. For an individual not particularly concerned about eating healthy, this situation might not trigger the need for self-control. Additionally, even if the individual has a goal to eat healthy, a piece of cake might not represent a temptation by definition as some people might not care for sweets but are tempted by a large-size Big Mac. Finally, even if the individual has a healthy eating goal and is generally tempted by a piece of cake, there still may be situations when the presence of cake does not amount to a self-control dilemma. For example, attending a wedding may be a situation where eating a wedding cake is not seen as a self-control failure but as an act of adhering to social norms and expectations.

The main premise of the argument illustrated by the above example is that situations represent self-control dilemmas only when they are construed as such by an individual, as it is only the individual who can interpret internal and external stimuli as goals and temptations and determine if and when they are in conflict with each other. Moreover, in daily life, people are repeatedly confronted with situations whose

interpretation as a self-control dilemma can alternate depending on context. What drives an individual to construe certain situations as self-control dilemmas and subsequently act to resolve them? Why do people value certain goals more, experience certain stimuli as more tempting, and exert self-control in some areas of their lives better than in others? Certainly, one's unique construal of the situation and a subsequent interpretation of stimuli as goals and temptations are inextricably linked to a variety of self-conceptions and self-representations. Yet, the role "self" plays in the unfolding of self-control dilemmas, although implicitly acknowledged, has largely remained unexplored. Separate from self-control research, however, there has been a great deal of interest in the concept of self. In the next section, a brief overview of research on self-concept is presented before exploring the role self-concept may play in self-control dilemmas.

## Self-concept

The centrality of "self" in psychological experiences is undeniable. Self is implicated in a wide range of psychological processes, from self-evaluations and social perceptions to interpersonal interactions and decision-making (e.g., see Lodi-Smith & DeMarree, 2017). By extension, a person's beliefs about "self" - their self-concepts - are similarly implicated in such psychological processes because they are important drivers of a person's thoughts, feelings, and ultimately, behaviors (Baumeister & Vohs, 2016). It is thus not surprising that self-concept has long been considered an important topic across disciplines (e.g., psychology, sociology) and across a number of diverse settings, including educational, developmental, clinical, and health, to name just a few. Yet, despite its criticality and centrality, there is still considerable ambiguity and varying perspectives on

what self-concept is and how it should be measured (Mercer, 2012). This lack of consensus stems partially from differences in perspectives among disciplines and partially from the diversity and evolution of theoretical perspectives within the disciplines. Thus, before outlining the current dominant perspective, this discussion of self-concept will begin by acknowledging the multitudes of proposed definitions reflecting diverse theoretical perspectives and evolving conceptualizations of the construct.

## Conceptualizations of self-concept

Broadly, self-concept refers to how people see themselves, or what people believe to be true about themselves. On a very basic level, self-concept is reflected in an answer to the question "Who/What am I?" (Shavelson et al., 1976; Campbell et al., 2000; Morin, 2017). Early conceptualizations of self-concept reflect this broad view by defining self-concept as the "totality of the individual's thoughts and feelings with reference to the self as an object" (Rosenberg, 1986, p. 34). Implied in this definition is the notion that self-concept is a unitary entity, representing one broad, overarching self (McConnell, 2010). As a result, most of the early self-concept research was focused on examining how a global self-concept influences various complex behaviors, such as school achievement, learning, and social interactions. In fact, a great deal of this research was centered on a single aspect of self-concept, self-esteem (Markus & Wurf, 1987).

However, the research findings that emerged over the last few decades frequently challenged the unitary view. For example, a meta-analysis of self-concept interventions found significantly greater effects when the intervention was related to facets of self-concept than when the intervention was targeting a more global self-concept (O'Mara et

al., 2006). These findings are generally better aligned with a second influential perspective on self-concept, one that views it as a multidimensional, dynamic construct. The core proposition of this perspective is the existence of multiple selves, although exactly what those selves are varies from scholar to scholar. For example, Higgins (1987) suggested that the self is comprised of the actual, the ideal, and the ought self, whereas Brewer and Gardner (1996) argued that the self exists at the personal, relational, and collective level, depending on how people think of themselves in relationship to others. While some scholars emphasized the broad aspects of self (e.g., private, public, and collective; see Greenwald & Breckler, 1986; Triandis, 1989), others, especially in the educational field, focused on more specific, narrow aspects, such as academic, social, emotional, and physical self (Craven & Marsch, 2006; Shavelsen et al., 1976). The lack of agreement on the possible selves notwithstanding, recent research has firmly moved toward the view of self-concept as consisting of multiple, contextually activated selves (McConnell, 2011).

## Overlap with other constructs

One of the issues associated with researching self-concept has been differentiating it from other conceptually related terms. One of the most obvious entanglements is with the construct of "self". Summarizing decades of scholarly thought, Gecas (1982) provided a useful distinction between self as "a reflexive process that develops through social interactions" and self-concept as "a product of that reflexive process" demonstrated in how a person sees themselves "as a physical, social, and spiritual or moral being" (p. 2). This was an important distinction, because once self-concept was conceptualized as a cognitive phenomenon, it was effectively extracted from the realm of philosophical inquiry, where

the self has largely been debated, and moved into the realm of scientific inquiry, opening the doors for empirical research.

Self-esteem is another construct that has been used interchangeably with self-concept, especially in educational and developmental psychology research (Schaubroeck et al., 2012). Self-esteem refers to a person's overall evaluation of their worth or value as a person (Harter et al., 1998) and has often been associated with one's global view of self. Under the unitary conceptualization of self-concept, self-esteem was often considered as the higher-order construct representing a broad, overarching self. Under the multifaceted view, it is considered to be one of the aspects of self-concept. To more clearly delineate the two constructs, some researchers adopted the view that self-esteem represents an evaluative component of self-concept as opposed to knowledge components such as beliefs about one's attributes (Campbell et al., 1996). Drawing from a cognitive perspective, Greenwald et al. (2002) hinted at a similar distinction by proposing that "self-esteem is the association of the concept of self with a valence attribute and self-concept is the association of the concept of self with one or more (nonvalence) attribute concepts" (p. 6). In general, researchers have moved away from equating self-esteem and self-concept and instead are increasingly conceptualizing self-esteem as an evaluative aspect of self-concept or as a distinct but related construct.

Identity is another construct that is difficult to tease apart from self-concept. In fact, in social psychology, the investigation of self-concept is mostly tied to the social identity perspective and seen through the prism of the role-dependent nature of self (see Schaubroeck et al., 2012). At a high level, a distinction has been drawn between identity as

a sense of self in relationship to a specific social context (Mercer, 2012) and self-concept as a theory about who one is (Oyserman, 2009; Oyserman et al., 2012). However, when one takes a closer look at the nature of some identities, the line between self-concept and identity becomes decidedly blurry. Although many identities are social in nature (i.e., connected to membership in a group or a relationship; e.g., gender, racial/ethnic, spouse) not all of them are. Some identities are classified as personal because they focus on characteristics that apply across contexts, such as being a rugged individual or being smart (Oyserman, 2009). When defined in terms of attributes, personal identities are difficult to separate from self-concept. Believing that one is a rugged individual can be seen both as a theory about who one is and as a personal identity. The extent to which a clear line can be drawn between identity and self-concept is dubious at best. Rather than focusing on what delineates the two constructs, Oyserman (2001) advanced a more integrated view of the two terms by suggesting that personal and social identities are part of the self-concept. She proposed that the role of identities is to organize experiences and form "a basis for making predictions about oneself and about others' responses to the self" (p. 251). In this view, identities directly contribute to forming a theory about who one is, and, in turn, the theory about who one is - one's self-concept - is expressed via one's personal and social identities.

Finally, in a recent attempt to develop a glossary of self-related terms, Morin (2017) classified self-concept as self-views, a category that includes content and feelings about self. Elaborating on the content about self, Morin offered a more nuanced view of self-concept by distinguishing it from self-knowledge. He argued that, unlike self-knowledge which is presumed to contain mostly accurate information about the self, self-

concept is not necessarily a faithful representation of the self. Indeed, research has provided ample evidence that people tend to hold unrealistic views of themselves (Pronin, 2008). As part of his tentative taxonomy, Morin provided two definitions of self-concept, one conceptualizing it as a global or a situation-specific perception/image of self, and the other referring to self-concept as a coherent and organized set of self-information acquired through self-awareness and social feedback/comparison (Marsh & Shavelson, 1985; Hornsey, 2008; Racy, 2015). The two definitions represent and, to some extent, integrate diverse viewpoints from self-concept literature by acknowledging that self-concept can be both global and situation-specific in the first definition, and by including the increasingly prevalent cognitive perspective in the second definition.

## Cognitive perspective

Although Kinch, as early as 1963, wrote about self-concept as "*the organization of qualities that the individual attributes to himself*" (p. 481), it was not until the cognitive revolution of the '80s and '90s that the conceptualization of self-concept as cognitive schema firmly took hold in psychological research. Since then, the cognitive perspective has become a dominant paradigm when discussing self-concept. Defining self-concept as an organized knowledge structure consisting of one's beliefs about self, episodic and semantic memories about self, and evaluations of self (e.g., Greenwald & Pratkanis, 1984; Campbell et al., 2000; Kihlstrom & Cantor, 1984) spurred further refinement of the construct. Namely, this conceptualization allowed for differentiation between the contents of the self-concept and its structure (Campbell et al., 2000). Self-concept content refers to beliefs about one's attributes (e.g., traits, physical characteristics, abilities, roles, and

values) and evaluation of such attributes, which is consistent with how self-concept has been historically viewed and studied. Self-concept structure refers to how the knowledge components or specific self-beliefs are organized and represented in memory; conceiving self-concept in terms of its structure is firmly grounded in the cognitive perspective and is the focus of most of the subsequent scholarly thought and research on self-concept. In particular, researchers have recently been preoccupied with how self-beliefs are organized and how such organization impacts various individual outcomes. Some of the frequently studied structural features of self-concept are the extent to which individuals differ in how strongly their self-beliefs are interrelated (self-complexity), how different self-beliefs are from each other (self-differentiation), how clearly people understand themselves (self-concept clarity), and how malleable self-beliefs are over time (self-concept stability; Campbell et al., 2000; Schaubroeck et al., 2012).

Also drawing from the cognitive perspective, Greenwald et al. (2002) advanced the conceptualization of the self-concept as an associative network containing links between the concept of self and attribute concepts. Recognizing the centrality of the self in the associative knowledge structure, they proposed that the self is associated with a number of other, highly interconnected concepts. The term self-concept is used when the concept of self is associated with a nonvalenced attribute (akin to the knowledge component in prior definitions), whereas the term self-esteem represents the association of the concept of self with a valence attribute (Greenwald et al., 2002). There are several important implications of this conceptualization. First, the notion that the concept of self can be associated with any number of other concepts, such as personal attributes, identities, roles, activities, and

even objects, provides a theoretical underpinning for the multiple selves view. Second, the idea that association strength, direction, and valence can vary, aligns with the dynamic view of self-concept. Third, the proposition that activation of self-concept can occur by association with other, momentarily active concepts implies a bi-directional nature of associations. In other words, self-concept can both initiate and be activated by a wide range of thoughts, feelings, and behaviors. Finally, it is generally accepted that activation of links through association happens outside of our awareness. Consistent with this view, at least some of the association between the concept of self and other concepts could be occurring automatically. Furthermore, such associations would mostly be context-dependent, meaning they would be activated in specific situations, as a consequence of a particular external input or due to an activation of an associated concept (Deutsch & Strack, 2009; Hirschmuller et al., 2012; Schnabel & Asendorpf, 2010).

In summary, the conceptualization of self-concept has evolved over the years from a stable, unitary, and generalized entity to a dynamic, malleable, multidimensional, and multifaceted structure implicated in both intrapersonal and interpersonal processes (Markus & Wurf, 1987; McConnell, 2010). Increasingly, self-concept is understood from a cognitive perspective as an organization of self-representations in an associative knowledge network. Although there are different perspectives on the exact nature and form of self-concept organization, the unifying premise of the last several decades of research is that self-concept plays a major role in human behavior: self-concept is involved in interpreting and processing self-relevant information, in guiding and influencing a wide range of behaviors, and in course-correcting based on input from the social environment. A

great deal of research is now dedicated to understanding how self-concept operates and how and when it impacts behavior. However, in existing self-concept research, relatively little attention has been paid to the role of affect in the organization of self-relevant experiences. Although there is a consensus among scholars that the self is implicated in most, if not all, affective experiences, how affect interplays with self-representations to guide day-to-day behavior remains largely unexplored in empirical studies.

# Affect

Affect is an umbrella term that includes a wide range of feelings people can experience. Those can be stable personality tendencies (i.e., trait affect), more diffuse feeling states that can be short or long-lasting (i.e., moods), or discrete emotions that are short-lived, intensive, and targeted (Barsade & Gibson, 2007). Substantial empirical research over the past 40 years has established that affect, both trait and state, plays a significant role in a wide range of human behaviors (Damasio et al., 1994; Davidson et al., 2003; Keltner & Lerner, 2010; Lerner et al., 2015). For instance, positive and negative affect have been associated with task performance, organizational citizenship behaviors, counterproductive work behavior, and occupational injury (Kaplan et al., 2009). Affective states have also been found to influence cognitive performance by promoting particular styles of processing (Huntsinger & Ray, 2016). In negotiations, positive mood has been linked to more cooperative behavior, more innovative problem-solving strategies, and more "win-win" agreements (Barsade, 2002; Carnevale & Isen, 1986), whereas negative mood has been associated with more competitive behavior and poorer negotiation outcomes (Forgas, 1995). Discrete emotions have been found to play a critical role in early

parent-child attachment, in social interactions, in shaping memories (for review, see Keltner & Lerner, 2010), and in neurological responses to stimuli (Bechara et al., 2014; Phelps et al., 2014). However, perhaps nowhere has the inquiry into the role of emotions dominated the recent conversation more than in the area of judgment and decision-making (George & Dane, 2016; Lerner et al., 2015). Research from this discipline not only cemented the notion that emotions arising from the decision at hand (i.e., integral emotions) are vital to the decision-making process but also highlighted the fact that even emotions that arise from factors unrelated to the decision (i.e., incidental emotions) can exert a strong influence on how decisions are made (Lerner et al., 2015; Lowenstein & Lerner, 2003). As a result, it is now widely accepted that emotions in general are a critical driver of most important decisions in life (e.g., Frijda et al. 1989; Keltner & Lerner, 2010; Lazarus, 1991; Loewenstein et al., 2001).

The compelling evidence emerging from judgment and decision-making research has begun to drive scholars across other disciplines to also consider the role of affect in a variety of psychological processes. One area where the role of affect has historically not been given a lot of attention is in research on self-control. This is unfortunate, because self-control dilemmas are inherently tied to decision-making, and thus any insight about the role of affect from decision research can be potentially leveraged to enhance our understanding of how people resolve self-control dilemmas.

## Affect and Self-Concept

The notion that the processing of information important to the person is inherently laden with affect is not contested in cognitive psychology. In fact, cognitions representing

beliefs about self and one's future have long been labeled "hot" and "emotional" (Mischel & Shoda, 1995). One of the early attempts to capture a more nuanced interplay between cognition and affect was Mischel and Shoda's (1995) cognitive-affective processing system model (CAPS). Grounded in cognitive psychology, this personality model conceptualized a person's mind as a network of interconnected units, which include cognitive representation and affective states that interact dynamically and influence each other reciprocally. These cognitive-affective units (CAUs), ranging from basic evaluative reactions to more abstract goals and plans, are involved in the encoding of information at multiple levels of awareness and automaticity and can be activated by situational factors. One of the central tenets of the theory is that the processing of information important to the person is intrinsically affect-laden and that cognitive representations and affective reactions/states are very much intertwined (Mischel & Shoda, 1995).

It is thus somewhat surprising that affect has largely been neglected in research on self-concept. That is not to say that the role of affect in self-relevant experiences is completely dismissed. Early views of self-concept refer to it as a "totality of thoughts and feelings" related to self (Rosenberg, 1989, p. 34); however, in research, the focus has been mainly on cognitive aspects, such as the content and structure of self-concept. This is also reflected in current views of self-concept, from Greenwald's (2002) conceptualization of self-concept as "the association of self with one or more *nonvalence* attribute concepts" (p. 5) to Morrin (2017) referring to it as "global, *emotionally flat*, view that one has of oneself" (p. 6; italics added for emphasis).

When research on self-concept has involved affective states, it has generally taken one of two directions. One direction was to explore the consequences of affect, mood in particular, for self-views. Consistent with the mood-congruency hypothesis, research has mostly confirmed that those in happy moods, as opposed to sad moods, recall more positive information about self, make more positive self-judgments, and expect more positive outcomes for self in the future (Sedikides, 1992). The other research direction was to examine the effects of self on affective states. Several interesting findings emerged from this line of research. For instance, self-complexity was found to be associated with reduced negative affect (Linville, 1987), social comparisons with others have been found to elicit positive or negative affect depending on whether they were downward or upward (Buunk et al., 1990), and discrepancies between different self-aspects (e.g., ideal versus actual self as opposed to actual versus ought self) were found to lead to the emergence of different discrete emotions (Higgins, 1987). The line of research pertaining to different self-aspects reflects a more recent conceptualization of self-concept, the multiple self-aspect framework (MSF; McConnell, 2011). One of the theoretical propositions of this framework concerns the role of affect as well. Specifically, MSF proposes that the overall affect is a reflection of combined evaluations of one's multiple self-aspects accessible in the moment (McConnell, 2011).

Regardless of whether one adopts the view that affect is a consequence of active self-concepts or the view that affect functions as a heuristic that aids the organization of self-relevant experiences (see Markus & Wurf, 1987), many theoretical and empirical questions about the relationship between affect and self-concept remain unanswered.

## Affect and Self-Regulation

In self-regulation research, similar to self-concept research, affect has not played a prominent role. However, on occasion, affect has been incorporated into models of self-regulation or otherwise addressed in one of several ways.

First, one of the most frequent ways affect has been approached in self-regulation research is as a target of self-regulation. This line of research focuses on the modulation of affective experiences and consequences (Diamond & Aspinwall, 2003). Consistent with broader self-regulation frameworks, one of the core features of emotion regulation is "*the activation of a goal"* that leads to "*altering the emotion trajectory*" (Gross, 2014, p. 6). Contrary to the early focus on the down-regulation of negative emotions, contemporary emotion regulation models include both up- and down-regulation of positive and negative affect (McRae & Gross, 2020). Perhaps the most well-known is the process model of emotion regulation (Gross, 1998). This model identifies five broad categories of strategies people use to regulate their emotions, as well as four stages at which emotion regulation can occur.

Affect has also been studied as an outcome of goal pursuit. This view is consistent with control theory insofar as it proposes that feelings arise as a function of a feedback process central to the goal pursuit (Carver, 2004). Specifically, when the rate of progress toward the goal is better than expected, positive feelings are expected to emerge. However, when the rate of progress is not sufficient to reduce the discrepancy, negative feelings should emerge - signaling a need for further action (Carver, 2004, 2006). In this view, the role of affect in self-regulation is to assess how quickly the discrepancy is being reduced and send the signal through the feedback loop, indirectly guiding subsequent action

(Carver, 2004). The proposed signaling function of affect is consistent with the evidence that emerged from the emotions research, which indicated that negative feelings promote further action more so than positive feelings (Carver & Scheier, 1990; Higgins, 1997).

Focusing more broadly on goal-directed behavior, some scholars have proposed that "emotions function in complex ways to motivate, direct, and regulate actions in the service of goal pursuit" (Bagozzi & Pieters, 1998, p. 2). In a model of goal-directed emotions, Bagozzi and Pieters (1998) identified anticipatory emotions and goal-outcome emotions as critical drivers of goal-related behaviors. In their view, anticipatory emotions are generated upon entering a goal situation by one's assessment of the likelihood of goal success and/or goal failure. Goal-outcome emotions are elicited by one's actual goal attainment or failure and, once generated, they become signals in the feedback loop that continually updates appraisals of goal situations (Bagozzi & Pieters, 1998). The core assumption of this model is that anticipatory emotions, if intense enough, play a pivotal role in motivating volitional processes, which then lead to the initiation of instrumental behaviors aimed at attaining the goal.

Affect has also been linked to goal-directed behavior via two types of motivation, approach and avoidance. These two motivational systems are believed to be based in two conceptual nervous systems, BAS and BIS, discussed earlier (see Gray, 1982, 1990). Research in neurophysiology has provided compelling evidence that BAS is responsible for facilitating behavior and generating positive affect, and BIS is responsible for inhibiting behavior and generating negative affect (Elliot, 2006; Elliot & Trash, 2002). When applied to goal-directed behavior, the model suggests that a positive mood, which is associated

with the approach system, would promote goal adoption and goal striving. Conversely, a negative mood, which is associated with an avoidance system, would be more likely to lead to goal rejection (Fishbach & Labroo, 2007). This theoretical framework and related empirical evidence also have implications for self-control, which is discussed next.

## Affect and Self-Control

Extending the approach and avoidance motivation framework to self-control, some researchers have proposed that a positive mood, as opposed to a neutral or negative mood, would lead to greater self-control efforts (Fishbach & Labroo, 2007). This is consistent with the mood-as-information hypothesis (Schwarz & Clore, 2003), which suggests that a positive mood signals that the environment is safe for goal pursuit whereas a negative mood signals the opposite. Support for this proposition can be found in prior research on delay of gratification, which showed that happy children were better able to resist an immediate reward for a more valuable but delayed one (Moore et al., 1976; Schwarz & Pollack, 1977). In the same vein, some studies found correlations between positive mood and accomplishing tasks perceived to have short-term costs but long-term benefits (Aspinwall & Taylor, 1997; Raghunathan & Trope, 2002; Trope & Pomerantz, 1998). Interestingly, the relationship was also found to work in the other direction. In several studies conducted by Schmeichel et al. (2010), exercising self-control temporarily increased approach motivation. Specifically, after participants exercised self-control in the experiment, they (a) reported greater desire to seek out opportunities for reward, (b) increased betting behavior in a low-stakes gambling game, and (c) demonstrated greater perceptual sensitivity to reward-related stimuli.

A different stream of research has approached managing affect (e.g., moods and emotions) as a short-term goal per se. According to this view and consistent with the mood-congruency perspective, people are driven to maintain a positive mood, improve a neutral mood, and repair a negative mood (Fishbach & Labroo, 2007). Furthermore, the evidence suggests that concern with mood maintenance is particularly pronounced for those in a positive mood, as they are more invested in preserving and prolonging such mood (Handley et al., 2004). Applying these findings to the self-control context, it can be derived that when self-control interferes with maintaining a positive mood, people might be motivated to avoid such activities – in contrast to what the approach-avoidance motivation view suggests. To account for these somewhat contradictory predictions, Fishbach and Labroo (2007) proposed that the effect of moods and emotions on self-control depends on the type of goal that is accessible to the person: a self-improvement or a mood-management goal. Across six studies, they found that happy people, compared to neutral or unhappy people, performed better on self-control tasks when their self-improvement goal was accessible; however, when a mood-management goal was accessible, happy people were more likely to forgo self-control tasks (Fishbach & Labroo, 2007).

In early models and theories of self-control (Baumeister et al., 1994a; see Inzlicht et al., 2021), a critical component of self-control was proposed to be the ability to inhibit undesired impulses, which are implicitly assumed to be loaded with strong affective components. The appeal of temptations is believed to come from their hedonic value, which is often in conflict with more beneficial long-term goals. In that case, affective

experiences, manifested as desires and temptations, are viewed as hindrances to goal pursuit that need to be suppressed. According to these models, suppression or inhibition of an impulse is more successful when an impulse is weak and/or control is strong. In contrast, a strong impulse or desire would likely lead to failure of self-control (Schmeichel et al., 2010). Empirical findings, however, paint a more complicated picture. As mentioned previously, the evidence suggests that people seem to resist stronger temptations better than the weak ones (Coelho do Vale et al., 2008; Kröese et al., 2011). Additionally, temptations have been found to play an important role in goal activation (Fishbach et al., 2003); thus, suppressing them might have an opposite effect from what would be anticipated (i.e., weakening self-control).

A similarly complicated relationship between affect and temptations emerged from Hofmann et al.'s (2013) study which tested assumptions of a standard utilitarian model (see Mellers, 2000). This influential model posits that people give in to temptations because they expect that doing so will result in an immediate reward (i.e., hedonic pleasure) greater than any long-term reward associated with resisting temptation (Ainslie, 2001; Stroud & Tappolet, 2003). Hofmann and colleagues (2013) examined this utilitarian model assumption by testing competing hypotheses predicting gains in momentary happiness when enacting tempting desires versus non-tempting ones. In contrast to the model predictions, they found that participants gained substantially less momentary happiness from enacting temptations than from non-temptations (i.e., low-conflict desires they did not attempt to resist). A subsequent mediation analysis revealed that the decrease in hedonic pleasure was the result of self-conscious emotions. More specifically, when

participants enacted tempting desires, they also experienced more guilt and less pride, which affected their momentary happiness. Hofmann and colleagues pointedly referred to this effect as "spoiled pleasures."

Taken together, there is now considerable evidence that various affective states, and emotions in particular, play a significant role in self-control. The nature and the extent of that role in processing self-control dilemmas are discussed next.

## Affect & Self-Control Dilemmas

A significant gap in our understanding of self-control concerns the role of affective processes in self-control dilemmas. In early theories of self-control, affect was typically linked with the impulse side in the dilemmas, whereas rational thought (i.e., cognition) was linked to the restraint side (see Giner-Sorolla, 2001; Strack & Deutsch, 2004). Similarly, Kuhl's theory of action control (Kuhl & Kraska, 1989) proposed that when self-control is exercised, actions that are based on emotional preferences are effectively overruled in favor of actions that are based on cognitive preferences. Consistent with this view, research findings coming from earlier work on delay of gratification have associated negative affective states with choosing immediate rewards, presumably in an effort to improve the unpleasant mood (Moore et al., 1976; Schwarz & Pollack, 1977).

Although these results provide some support for the notion that emotions promote short-term focus associated with impulses and temptations, there are other research findings that tell a more complex story. For instance, it has been suggested that experiencing goal conflict, as is the case in self-control dilemmas, is a source of mixed emotions in and of itself (Berrios et al., 2015). Across multiple studies, Becker et al. (2019)

confirmed that experiencing conflict during decision-making fueled negative emotions, with the intensity of emotions rising as the strength of the conflict increased. Furthermore, in several of their studies, negative emotions emerged regardless of the choice that was made. In other words, even when participants resisted temptation and acted in accordance with their long-term goal (e.g., resisting dessert and choosing salad), they still experienced negative affect afterward, in some cases leading to the reversal to the unhealthy choice in subsequent dilemmas (Becker et al., 2019). The concurrent presence of both positive and negative emotions was also found in a qualitative study examining how participants feel after succeeding and failing at self-control. More specifically, participants in that study reported that positive emotions were often followed by negative emotions, and vice versa, in both self-control failures and successes (Andrade & Hoyle, 2022).

Additionally, there is compelling evidence that, beyond just positive and negative affect, there is a wide range of discrete emotions implicated in self-control dilemmas. In experience sampling and qualitative studies, participants typically report experiencing guilt, remorse, regret, shame, pride, gratitude, and relief, in addition to more general sadness and happiness (Andrade & Hoyle, 2022; Hofmann & Fisher, 2012b).

Finally, some scholars argue that the very act of giving in or resisting temptation can have emotional consequences, guiding future behaviors (Becker et al., 2019). For example, Wertheim and Schwartz (1983) found that male participants (but not female) who experienced guilt were more likely to enter an aversive situation that carried a clear long-term benefit rather than delaying it. Other studies have found that guilt is present when people feel they are acting inconsistently with their higher-order goals and pride is present

when acting in congruence with long-term goals (Hofmann & Fisher, 2012b; Hofmann et al., 2013). Another emotion, regret, has been associated with both giving in and resisting temptations and has been found to significantly influence subsequent choices in similar situations (Hofmann et al., 2013; Kivetz & Keinan, 2006).

To summarize, although there is strong cumulative evidence for the pervasive role of emotions in processing and resolving self-control dilemmas, a lot less is known about the exact role various emotions play in self-control, the source of such emotions, how they interact with each other, and when their unique or joint influence on self-control decisions is most pronounced. The next section will primarily focus on discussing self-conscious emotions due to their relevance for processing self-control dilemmas.

## Self-conscious emotions

Self-conscious emotions (e.g., embarrassment, guilt, pride, shame) are proposed to constitute a special class of emotions characterized by their dependence on the cognitive processing of self-relevant information (Tangney, 1999; Tracy & Robins, 2004). The central feature of these emotions is their focus on self, manifested through complex self-awareness and self-representation. In fact, self-conscious emotions are believed to arise from self-evaluations and thus a prerequisite for experiencing this class of emotions is a developed sense of self (Tangney, 2012). This makes them distinct from basic emotions (e.g., joy, anger, fear) which have a biological basis and are not predicated on the sense of self (Campos, 1995; Ekman, 1992; Tangney & Fischer, 1995). Evidence from developmental psychology provides support for this distinction as research shows that self-conscious emotions emerge later in life than basic emotions, and their emergence

corresponds with the onset of rudimentary self-recognition in young children (see Tangney, 1999). Another difference between basic and self-conscious emotions involves the universality of facial expressions associated with emotions; unlike basic emotions, self-conscious emotions are not associated with universally recognized facial expressions (Ekman, 1992: Keltner et al., 2003).

Self-conscious emotions are believed to be vital to psychological functioning, supporting both social and intrapsychic functions (Tracy & Robin, 2004). They have been linked to improved performance in two important domains: task-related achievements (Stipek, 1995; Weiner, 1985) and social interactions (Baumeister et al, 1994b). In terms of socialized needs, self-conscious emotions seem to facilitate and advance the fulfillment of social goals (Keltner & Buswell, 1997). For instance, researchers have proposed that pride might be implicated in establishing dominance, guilt in promoting group cooperation and protecting close relationships, and embarrassment and shame in facilitating conciliation (Baumeister et al., 1994b; Gilbert, 1998; Keltner & Buswell, 1997; Tracy & Robins, 2007). Collectively, these self-conscious emotions are proposed to coordinate and motivate behaviors relevant to social dynamics, from affirming status to maintaining the stability of social hierarchies (Tracy & Robins, 2004).

It is also suggested that self-conscious emotions play an important role in the motivation and regulation of one's thoughts, feelings, and behaviors (Campos, 1995; Tangney & Fisher, 1995). This intrapsychic function is evident in the extent to which self-conscious emotions steer one's behavior toward both socially valued actions and goals consistent with one's self-representations (Tangney & Dearing, 2003). It is this role of self-

conscious emotions in intrapsychic processes that is especially relevant for self-control dilemmas, as such dilemmas represent an inherently within-person process.

Tracy and Robins (2004, 2007) used a prominent appraisal framework to propose that self-conscious emotions emerge as a result of how a precipitating event is appraised in terms of self-relevance, identity-goal congruence, and attribution of causality. According to their process model of self-conscious emotions, events that are appraised as relevant to one's identity, potentially congruent or incongruent with one's goals, and attributed to internal causes, are expected to trigger self-conscious emotions (Tracy & Robins, 2004). Thus, in the context of self-control dilemmas, guilt or shame would be expected to emerge when people perceive behavior under their control to be inconsistent with their self-representations and goals. Conversely, behaving consistently with one's standards is expected to elicit pride.

The degree of complexity associated with research findings in this area is evident in the findings from Hofmann et al.'s (2012b) experience sampling study. In this study, the impact of anticipated guilt and pride on success/failures of self-control was examined over a period of time. Although pride had a consistently positive effect on self-control, the results were mixed for guilt. On one hand, experiencing guilt increased awareness of the self-control conflict and led participants to assign more importance to their subsequent self-control goals. On the other hand, experiencing guilt had a negative relationship with behavioral inhibition, suggesting weaker self-control efforts.

These equivocal findings challenge the assumption that self-conscious emotions always elicit greater self-control efforts. According to the opposing view, negative self-

conscious emotions could lead to attempts to repair the bad mood that arises from giving in to temptations, thus undermining future attempts at self-control. Indeed, the results of empirical studies have been mixed, with some studies finding that self-conscious emotions lead to subsequent over-indulgence (e.g., overeating or binge behaviors) and other studies reporting that self-conscious emotions halt indulgence (e.g., subsequent drinking; see Giner-Sorolla, 2001). Several self-conscious emotions, with implications for self-control, are discussed next.

**Guilt.** Guilt arises primarily from a disapproval of one's specific actions resulting in a sense of tension and remorse over the act (Tangney, 2004). Guilt is often used interchangeably with shame although empirical evidence suggests they are distinct emotions eliciting different "action tendencies" (see Tangney, 2004). Compared to shame, people who experience guilt typically focus their negative evaluations on a specific behavior rather than the whole self, thus suggesting guilt is a less painful and destructive experience. As a consequence of this narrower focus, guilt seems to motivate people to engage in reparation, to try to undo the damage that was done. Because guilt seems to promote more proactive and future-oriented behaviors, it has been viewed as a more adaptive emotion than shame. Indeed, empirical evidence supports this view. Guilt-prone individuals appear to be more empathetic, more likely to engage in attempts to repair damaged relationships, and less likely to report having their core identity shaken when feeling guilty (Tangney, 1999). Experiencing guilt is believed to motivate people to course-correct thus serving an important self-regulatory function. Given the considerable

evidence that guilt is more effective in promoting self-regulation than shame (Tangney, 1994), our focus will be on guilt and not on shame in this research.

**Pride.** Pride is considered to be one of the few "positive" self-conscious emotions, meaning that people overwhelmingly describe feeling pride as a positive experience. Pride is defined as an emotion that arises when individuals feel responsible for a socially valued outcome or feel they are a socially valued person (Mascolo & Fischer, 1995). It is widely assumed that pride enhances one's self-worth and may motivate people to pursue behaviors that conform to personal and/or social standards of worth (Barrett, 1995). Some researchers have proposed that pride has two facets: authentic pride and hubris (Lewis, 2008). According to this view, authentic pride arises when a person attributes success to one's specific action or behavior, whereas hubris is experienced when one attributes success to the entire, global self. It has been further proposed that hubris could be a maladaptive form of pride. Several lines of research provide support for the distinction between the two facets. Across multiple studies, Tracy and Robins (2007) found psychometric evidence of two pride factors, with different personality correlates and distinct cognitive antecedents. Overall, feelings of pride are believed to promote and reinforce socially valued behaviors implicated in maintaining a positive self-concept and obtaining others' respect (Tracy & Robins, 2007).

**Regret.** Literature on self-conscious emotions is fairly silent on regret. In fact, there is no consensus on whether regret is a self-conscious emotion at all or if it should be conceptualized as an affective state that gives rise to self-conscious emotions (Kedia & Hilton, 2011). Yet, there is some evidence that regret and several self-conscious emotions

(i.e., guilt, shame, and remorse) are commonly identified as belonging to the same cluster of emotions suggesting that, in real life, they might be difficult to tease apart (Kedia & Hilton, 2011). Given these findings, as well as the implications regret has for self-control dilemmas, regret is discussed in this paper as one of the emotions strongly associated with the self-conscious cluster.

Broadly speaking, regret is an experience of feeling sorry over something that has taken place or has not taken place in the life of an individual. What is regretted can be a misfortune or a loss, a wrongdoing or lack of action, a mistake or a shortcoming; however, most frequently, regret is associated with a decision that one made or did not make (Gilovich & Medvec, 1995; Landman, 1993). There is a consensus among scholars that regret is a cognition-dependent emotion because it requires cognitive processes such as appraising, evaluating, and judging. On the other hand, regret is also "loaded with *feeling* and therefore qualifies as a true emotion" (Gilovich & Medvec, 1995, p. 381).

Regret includes both acts of commission and those of omission, referred to as action regret and inaction regret, respectively. Evidence suggests that the two types of regret evoke different emotions. For instance, action regrets have been associated with feelings of shame, embarrassment, anger, guilt, and frustration, whereas inaction regrets have been associated with experiencing wistfulness and despair (Gilovich et al., 1998). In terms of intensity of the feelings, action regrets seem to be more intense in the short-term, but inaction regrets seem to linger longer in people's minds (Gilovich et al., 1998).

Some scholars have argued that regret arises from comparisons between a selected option and other alternatives available at the time of the decision (Sarver, 2008). Given that

self-control dilemmas typically involve two alternative courses of action, there is reason to believe that regret would be implicated in self-control dilemmas. In fact, action regret has been found to bolster self-control in studies of food preferences, leading participants who reported previously regretting their choices to select a healthier option (i.e., fruit salad instead of chocolate chip cookie; Park, 2020). Presumably, this is because people generally want to avoid feeling regret over their decisions and thus would avoid choosing an option that previously led to regrets. Contradictory evidence also has emerged - research on consumer choices shows that, once the decision is made, people often regret loss of the other, non-chosen option, sometimes even choosing that option in subsequent dilemmas (i.e., "behavior switching"; Carmon et al., 2003).

## Interaction of self-conscious emotions with hedonic emotions

Evidence emerging from emotions research suggests that self-conscious emotions (e.g., guilt, pride, shame), might have a different effect on self-control behaviors, compared to more general affective states, such as positive and negative mood (Baumeister et al., 1995). Across multiple studies, Giner-Sorolla (2001) found that both hedonic affect and self-conscious emotions were present in self-control dilemmas and that each type of affect followed a different pattern of associations with short-term and long-term options. In delayed-cost dilemmas (i.e., doing something attractive in the short-term that has negative long-term consequences), positive affect, both hedonic and self-conscious, was associated with lower self-control. On the other hand, negative self-conscious emotions were associated with higher self-control, but the relationship was curvilinear – the positive correlation with self-control was strongest with the highest and lowest levels of negative

self-conscious emotions and weaker for those in the middle. However, in the delayed-benefit dilemmas (i.e., doing something negative or aversive in the short-term but positive in the long-term), it was a hedonic negative affect that had a negative relationship with self-control (Giner-Sorolla, 2001). Together with previously discussed evidence of the concurrent presence of positive and negative emotions in a qualitative study by Andrade and Hoyle (2022), these results raise the possibility that self-conscious emotions might interact with the hedonic affect associated with a short-term focus, either bolstering or offsetting its effect.

## Anticipated self-conscious emotions

For the most part, the focus of the studies discussed above is on the emotional consequences of self-control choices; however, some scholars have also proposed that anticipating how one is going to feel about their choices might exert a strong influence on the self-control decisions. Although scarce compared to general emotions research, some evidence supporting this proposition has emerged from studies on goal-directed behavior, decision-making, self-regulation, as well as self-control.

For instance, Bagozzi and Pieters (1998) proposed that emotions are implicated in goal attainment through multiple roles: they can motivate, direct, and regulate goal-pursuit behaviors. Anticipatory emotions in particular, serve a motivational function. More specifically, anticipatory emotions elicited by the prospect of goal success or failure serve to motivate volitional processes, (i.e., plans, intentions, and expenditure of effort). Consistent with these propositions, Bagozzi and Pieters (1998) found that among participants who had a goal related to their weight, the strength of anticipatory emotions

was related to the reported intent, formulation of plans, and willingness to expend effort to diet or exercise. Similarly, Perugini and Bagozzi (2001) expanded the theory of planned behavior (Ajzen, 1991) by suggesting that anticipated emotions serve as an antecedent to the decision-making process. In two contexts, losing weight and studying, they found that anticipated emotions affected motivation to form behavioral intentions, although the effect of positive and negative anticipated emotions differed depending on the context. Anticipated positive emotions, as opposed to negative, predicted desire to diet and exercise in Study 1. In Study 2, however, it was anticipated negative emotions, but not positive, that predicted the desire to study.

In terms of the impact on choices people make, Mellers and McGraw (2001) found that anticipated pleasure drives the decision-making process. In several experiments, they confirmed that participants consistently chose an option with the greater average anticipated pleasure. In another set of experiments, Shiv and Huber (2000) found that anticipated satisfaction impacted not only consumer choices, but also the processing strategy when deciding. In their studies, anticipated satisfaction elicited an effort-intensive mental imaging processing strategy when evaluating purchase options, which led to a preference for options with more vivid imagery.

In the context of self-control dilemmas, motivational effects of anticipated self-conscious emotions have been documented as well. Research on the role of regret in particular shows that anticipating regret can be a powerful facilitator of self-control behavior. For example, Abraham and Sheeran (2003) found that anticipated regret moderated the relationship between intention to exercise and actually exercising, after

controlling for the effects of past behavior. Others have found that anticipating pride might bolster self-control, whereas anticipating shame may actually lead to self-control failures (Patrick et al., 2009). In contrast, some studies have found an opposite effect of pride and guilt. For example, Katzir et al. (2010) showed in two experiments that imagining a happiness-eliciting event decreased self-control, but pride had no effect. Hynie et al. (2006) found that anticipated shame and guilt had a direct positive relationship with intention to use condoms and mediated the relationship between attitudes toward using condoms and the intent and subsequent behavior.

Two frameworks addressing the role of anticipated emotions in self-control have recently been proposed. The first one is an impulse-control model proposed by MacInnis and Patrick (2006). Building on the prominent dual system model by Strack and Deutsch (2004), they outlined a broader role of affect in inhibition of impulses. In MacInnis and Patrick's (2006) view, when facing situations that require impulse control, affective forecasting (i.e., anticipating emotions related to decision outcomes) becomes part of the decision-making process. Specifically, they proposed that anticipating emotional consequences of giving in or not giving in to impulses would activate different types of conflicts along the approach-avoidance continuum. According to this model, there are four possible ways conflict can be experienced. Approach-approach conflict is experienced when pleasure from giving in to temptation is paired with anticipating pride from resisting the temptation. Avoidance-avoidance conflict occurs when guilt and shame from self-control failure are paired with the feeling of deprivation/regret associated with not indulging in temptation. Approach-avoidance conflict can be manifested in two ways:

pleasure from satisfying urges can be paired with guilt and shame from giving in, and pride from resisting the temptation can be mixed with deprivation/regret of not satisfying urges (MacInnis & Patrick, 2006).

Elaborating on this notion of mixed anticipated emotions, another theoretical framework was recently proposed by Kotabe et al. (2019). Aligning their model of anticipated emotion in self-control to the integrative self-control theory (Kotabe & Hofmann, 2015), Kotabe et al. (2019) outlined how conflicting anticipated emotions guide self-control judgments. In short, once an individual recognizes the conflict between their impulses and long-term goals, they are likely, during the decision-making process, to mentally simulate emotions they might experience as a result of their choices (Mellers & McGraw, 2001). In doing so, a person can focus on giving in to the temptation or resisting the temptation. If focused on enacting the temptation, one can consider feelings associated with fulfilling a desire (positive hedonic emotions, such as pleasure) or feelings associated with violating their long-term goals (negative self-conscious emotions, such as guilt). Conversely, if one focuses on resisting temptations, then simulated feelings might be associated with not fulfilling a desire (negative hedonic emotions, such as frustration) or with adhering to their goals (positive self-conscious emotion, such as pride). In the empirical test of hypotheses derived from their model, Kotabe and Hofmann (2019) confirmed that pleasure and guilt are primarily associated with a focus on giving in to temptation whereas pride and frustration are associated with a focus on resisting temptation. In terms of self-conscious emotions, they found that people exhibit a "guilt bias" and "pride neglect" when weighing their options, meaning that anticipated guilt

carries more weight than anticipated pride. Additionally, they found that anticipating self-conscious emotions, but not hedonic emotions, strengthened self-control efforts, with guilt having the strongest impact. Taken together, these findings give credence to the notion that imagining how one might feel about their choices plays an important role in processing and resolving self-control dilemmas.

# Chapter 3
# Hypothesis Development

## Current study

Prior research on self-representations, instrumental in uncovering the self-concept's role in information processing, has been less concerned with motivational and self-regulatory processes. On the other hand, self-control research, preoccupied with uncovering processes involved in directing and controlling one's behavior, has rarely examined self-concept as a driver of these self-control processes. In the current study, we try to integrate some of the disparate research on "self" and self-control by investigating the role self-concept plays in the processing of self-control dilemmas. In our view, self-concept, as an organizing and interpretive cognitive structure, is largely responsible for mobilizing cognitive and affective resources in service of promoting and facilitating behaviors and actions consistent with the self-concept. In self-control dilemmas more specifically, we believe that self-concept mobilizes cognitive resources by activating facilitative links between temptations and goals and making relevant goals more accessible. We additionally propose that self-concept mobilizes affective resources by activating self-conscious emotions, which are instrumental in downgrading the value of temptations, affectively forecasting outcomes, and providing feedback on the emotional consequences of dilemma decisions – all of which serve as guides for current and future self-control behavior.

To investigate the link between self-concept and self-control, we first focus our attention on the role self-concept plays in the unfolding of self-control dilemmas, or more

specifically, three key features of a self-control dilemma: goal, temptation, and conflict. Then, we examine how self-concept generates self-conscious emotions which are both present before (i.e., anticipated emotions) and after self-control decisions are made (i.e., experienced emotions).

## Self-concept and self-control dilemmas

Although the role self-concept plays in self-control dilemmas is not explicitly discussed in the literature, it is reasonable to suggest that self-beliefs are involved in how and why we come to experience certain situations as self-control dilemmas. Self-concept's role in interpreting and organizing self-relevant information (Marcus & Wurf, 1987) would logically extend to the organization of goal- and temptation-relevant information and subsequent interpretation of a situation as conflicting to the person. Given that self-relevant information is undoubtedly affect-laden (Mischel & Shoda,1995), self-concept would also be implicated in the affective experience of the conflict and the attempts to resolve a self-control dilemma that gave rise to the conflict. In our view, the effect of self-concept on self-control dilemmas is not a direct one; rather, it is through the influence on the three key features of a self-control dilemma (i.e., goal, temptation, and conflict) that self-concept contributes to the unfolding of self-control dilemmas.

Consistent with recent conceptualizations of self-concept as a multifaceted and multidimensional construct (McConnell, 2011), we adopt the view that multiple self-concepts represent beliefs we have about ourselves in different aspects of life (i.e., in different roles and different contexts). Thus, when we use the term self-concept, we are referring to the collection of self-conceptions and self-representations, some of which are

more central to the individual than others. Not all self-concepts are accessible at all times, but any self-concept can be activated as a result of salient contextual stimuli (Markus & Wurf, 1987), which makes identifying contexts pertinent for a specific inquiry especially important. In this study, we are particularly interested in multiple self-concepts in aspects of life relevant to self-control dilemmas because we believe that domain-specific self-concept would exert a stronger influence on goal-related behaviors and actions in the same domain than would a general self-concept. Research evidence supports this approach: targeting specific self-concept through interventions has been found to be more effective than targeting a global self-concept (O'Mara et al., 2006).

Two of the most frequent contexts for empirical examinations of self-control have been related to health and achievement domains (Duckworth et al., 2018, 2019; Fishbach & Zhang, 2008; Kroese et al., 2011), although some studies in consumer psychology have also used shopping as a framework to investigate self-control choices and impulsive decisions (Vohs et al., 2008; Dholakia et al., 2006). For the most part, the selection of the study context was up to the researcher. However, when studies were designed to elicit participants' self-generated goals, personal or life projects, or related temptations, four life domains consistently emerged: health/fitness, academic/occupational, social/relationships, and financial/monetary (Little, 2020; McGregor & Little, 1998; Hofman et al., 2012a; 2012b; Tsukayama et al., 2012; Williamson & Wilkowski, 2019). Although certainly not an exhaustive list, these four domains seem to capture life areas where most of our goals and temptations reside and thus we rely on these same four broad domains to investigate the relationship between self-concept, goals, and temptations.

## Self-concept and goals

Several propositions about the relationship between self-concept and goals can be derived from the literature. First is the proposition that one's self-concept is, to a certain extent, reflected in the goals one chooses to pursue. For instance, McGregor and Little (1998) make a broad connection between self and personal projects (i.e., "self-generated accounts of what a person is doing or planning to do"; p. 3) in proposing that personal projects symbolically mediate the self-concept (McGregor & Little, 1998). The link between goals and a person's enduring interests and values also plays a central role in Sheldon and Elliot's (1999) self-concordance theory. As mentioned previously, this theory argues that the self-concordance of individuals' goal systems, that is the degree to which stated goals express enduring interests and values, is a driving force behind goal striving and attainment. Sheldon and Elliot (1999) in fact suggest that personal goals are themselves one type of self-concept (p. 485). Indeed, in the empirical test of their theory, they found that participants invested greater sustained effort and performed better overall when their goals reflected self-based values and interests. Another empirical study found that goals more valued by the individual led to the faster recognition of words related to that goal, suggesting that personally important goals are also cognitively more accessible (Kroese et al., 2011). A similar idea about the connection between one's view of self and one's actions has been proposed in identity research. Summarizing a large body of work dating back to James (1890), Schwartz et al. (2011) highlighted the overlap between " 'identity' as the process of searching for and settling on a set of commitments to personal standards and life roles and 'self' as the view of oneself that develops from (and

influences) these commitments" (p. 373; see also Greenwald & Pratkanis, 1985; Harter et al., 1998; Cote´& Levine, 2002).

This view of self as both arising from and giving rise to personal commitments is another proposition that is implied in existing literature. Marcus and Wurf (1987), for example, attribute important motivational properties to self-conceptions in proposing that "the person may select goals that represent not just achievement, but enduring self-definitions" (p. 310). At the same time, they emphasize that goals, through behavior enactment, also contribute to the formation, refinement, and activation of relevant self-concepts. Their view is consistent with a more recent cognitive perspective, namely Greenwald et al.'s (2002) characterization of associative links between self-concept and other active concepts as bi-directional in nature, which suggests that self-concept can both initiate and be activated by a wide range of thoughts, feelings, and behaviors.

Finally, building on early theories of cognitive consistency (Festinger, 1957; Heider, 1958; Osgood & Tannenbaum, 1955), several researchers have explored the notion of congruency between one's view of self and one's goal-directed behaviors and actions. For example, when discussing how personal projects represent samples of various aspects of the self, McGregor and Little (1998) argued that it is the consistency between personal projects and the core elements of the self that gives rise to the experience of meaning in life. In other words, individuals who appraise their personal projects as consistent with their values, commitments, and other important aspects of self-identity experience greater purpose and meaning (McGregor & Little, 1998). Similarly, Oyserman (2009, 2012), in her work on identity motivation, advanced the notion that people are highly motivated to

engage in identity-congruent action. She suggested that most of our choices are identity-based and that we prefer pursuing identity-congruent actions even if that sometimes results in selecting options that might not be entirely beneficial to us (Oyserman, 2009). Indirect support for this view comes from several experiments conducted by McConnell et al. (2002), which demonstrated that people strive for and expect consistency in their own behavior relative to expectations they have for other individuals or social groups.

Recent work by Jiang et al. (2022) has linked self-concept and self-consistency to self-control. In a series of studies, they found that self-continuity (i.e., a person's sense of connectedness among their past, present, and future views of self) mediated the relationship between self-concept clarity and self-control. These findings suggest that both the internal consistency of beliefs about self (i.e., self-concept clarity; Campbell et al., 1996), as well as the continuity of such beliefs over one's lifetime (i.e., self-consistency), play an important role in our efforts to exert self-control.

In the present study, we are interested in further examining the link between self-concepts and goal-directed behaviors in the context of self-control dilemmas. We conceptualize goals and goal-directed behaviors broadly, ranging from specific, well-defined goals to vague aspirations toward desired outcomes. In our view, even if the goals are not explicit or well-defined in a person's mind, those who have strongly held self-beliefs in a particular domain are likely to evaluate stimuli in a way that is consistent with their concept of self, which in turn facilitates behaviors congruent with that self-concept (Fujita, 2008; Fujita & Carnevale, 2012; Rees et al., 2018). Although self-concepts (i.e., beliefs) can be positive or negative, in this study our focus is on positive beliefs about the

self, because we infer from the literature that positive self-beliefs are especially consequential for goal-directed behavior. In line with consistency theories (Festinger, 1957; Heider, 1958; Osgood & Tannenbaum, 1955), we assume that people are motivated to maintain such positive beliefs by acting in accordance with them. Thus, we propose that people are more likely to identify behaviors and actions as preferred and desirable when they are consistent with their positive self-concepts and, in order to maintain such beliefs about self, are motivated to act congruently with them. By extension, goals and goal-like activities that are consistent with one's positive self-concept in a particular domain would be deemed more important than those not reflecting self-concept in that domain. Using a prototypical self-control dilemma as an example, a person who sees themselves as highly health-conscious would be particularly concerned with activities in the health domain. The stronger their positive self-concept is in the health domain, the more likely they are to identify with beneficial actions that promote a healthy life, attribute greater importance to health-related goals and activities, and be motivated to engage in such activities. This is likely to hold both in general and specifically in the context of self-control dilemmas.

*Hypothesis 1: Domain-specific self-concept will be positively associated with (a) self-identification with goals in the same domain and (b) importance attributed to goals in the same domain.*

*Hypothesis 2: In the self-control dilemma scenarios, domain-specific self-concept will be positively associated with goal importance.*

## Self-concept and temptations

The relationship between self-concept and temptations is rarely mentioned in existing literature. A temptation represents a stimulus that has some hedonic value for the individual and generates an automatic inclination (i.e., an impulse) to satisfy the temptation (Hofmann et al., 2009). Although the urge to act on a temptation resides within an individual, the tempting stimulus itself is presumed to be situated in the environment surrounding the individual. Because the temptation is tied to an external stimulus and results in an automatic urge to act, its link to self-concept might not appear intuitive. However, some scholars have argued that despite their automatic activation, desires are, once they arise, experienced consciously (Hofmann et al., 2012a). In other words, people are not only aware of their desires, but they are also able to recognize when these desires conflict with their goals, their values, and by extension, their concept of self.

Deriving inferences about a possible link between self-concept and temptations is further complicated by the fact that, in self-control research, temptations have mostly been examined in relationship to the goals they interfere with and, as such, have been conceptualized as hindrances to goal pursuit. In this view, stronger temptations should present a greater challenge to goal pursuit, and indeed, there are some empirical findings that support this view. In an experience-sampling study of daily desires, Hofmann et al. (2012a) reported that 47% of desires were described by participants as conflicting with their goals and values. Additionally, desire strength was positively related to acting on that desire and negatively related to the effectiveness of resistance. However, as mentioned previously, there is a recent stream of findings suggesting the relationship between temptations and goals is more complicated in the context of self-control dilemmas. In

several studies conducted by Fishbach et al. (2002; 2003; 2006), the presence of temptations enhanced the accessibility of long-term goals, which in turn had a bolstering effect on self-control. This was particularly true for highly important goals, suggesting that people might rely on automatic cognitive processes to guard their highly valued goals (Trope & Fischbach, 2000). Furthermore, some studies that examined the relationship between temptations and self-control found, somewhat counterintuitively, that stronger temptations were associated with more effective self-control than weaker ones (Coelho de Vale et al., 2008; Kroese et al., 2011). Even in Hofmann et al.'s (2012a) study of daily desires, one of the findings was that participants were able to resist the strongest desires surprisingly well when they tried.

These equivocal findings suggest a need for continued inquiry into the nature of temptations and the role they play in self-control dilemmas. In developing our argument for linking self-concepts and temptations, we again draw from theories of cognitive consistency (Festinger, 1957; Heider, 1958; Osgood & Tannenbaum, 1955), namely that people are generally motivated to maintain their positive self-beliefs. Thus, if people are driven by a need to maintain their positive self-beliefs, then acting incongruently with such beliefs is likely to be resisted, despite the temptation's hedonic appeal. To assess the relationship between self-concepts and temptations, we once again consider the four major life domains: health, achievement, social, and financial. We propose that the stronger one's positive self-concept is in the specific domain, the more likely that person is to consider behaviors that challenge their self-beliefs as harmful and see themselves as less tempted to

engage in such behaviors. In other words, they are likely to be especially sensitive to violations of the self-concept when the positive self-concept is stronger.

*Hypothesis 3: Domain-specific self-concept will be (a) positively associated with how harmful temptations in that domain are perceived to be and (b) negatively associated with temptation strength in the same domain.*

We further extend this logic to the specific context of self-control dilemmas. Given that in self-control dilemmas, temptations are always juxtaposed with goals, we also consider temptations in relationship to the goals they interfere with, as is common in self-control literature. In our view, if goals are associated with a particular self-concept, then, when temptations interfere with that goal, they represent a challenge not only to the goal itself but also to the goal-associated self-concept. Furthermore, giving in to the temptations would represent behavior incongruent with a goal-related self-concept and, by extension, acting on temptation would be experienced as a violation of the self-concept associated with the goal.

Two sources of empirical evidence implicitly provide support for this view. One is the finding that, for highly important goals, temptations seem to enhance the accessibility of that goal and facilitate self-control (Fishbach et al., 2003). We suggest that the formation of these facilitative links between temptations and high-priority goals might occur precisely because temptations represent not only a strong challenge to the goal but also a violation of the self-concept associated with that goal. The other evidence comes from a series of studies examining the effects of *want-to* and *have-to* motivation on the reflective and impulsive systems of self-regulation (Milyavskaya et al., 2015). Across four studies,

Milyavskaya et al. (2015) found that when participants pursued goals that represented their personal values and general interests and were identified as personally important and meaningful (i.e., *want-to* goals), they demonstrated lower automatic attraction toward goal-disruptive stimuli, reported fewer obstacles while pursuing goals, and experienced fewer and less tempting day-to-day desires conflicting with their goals. These findings strongly suggest that pursuing goals that are internalized and deeply personal not only impacts how we respond to temptations but also, in an effort to buffer against goal disruptions, fundamentally changes how we construe and experience tempting stimuli (Milyavskaya et al., 2015). Given self-concepts' role in processing and organizing self-relevant information, it stands to reason that self-concept would also be involved in (a) identifying temptations that can jeopardize personally relevant goals, and (b) triggering the protective action against the influence of such temptation by increasing accessibility of the goal and downgrading the appeal of the temptation. Thus, we expect that, in the presence of a strong, positive self-concept in the goal's domain, one would feel less tempted to engage in activities that interfere with that goal.

*Hypothesis 4: In the self-control dilemma scenarios, domain-specific self-concept will be negatively associated with temptation strength in that same domain.*

On the other hand, it is important to acknowledge that examining temptations primarily in their relationship to goals could constrain our understanding of temptations and the role they play in self-control dilemmas. For one, defining temptations in relationship to the goal has often limited us to researcher-imposed notions of what constitutes a temptation for a participant and has led us to neglect the likelihood that what

is very tempting to one person may not be at all tempting to another. After all, are we all tempted by a proverbial 'piece of cake' – a researcher's "go-to" temptation? There are a few studies that suggest there are individual differences in our susceptibility to temptations within specific domains. For example, Van Dillen et al. (2013) found that individual differences in sensitivity to (a) tempting food and (b) alternative relationship partners predicted the degree of attention to attractive stimuli in the corresponding domain. In a series of studies examining the domain-specificity of impulsive behavior, Tsukayama et al. (2011) found that temptations were highly domain-specific and reported that, in their sample, the within-individual variance in impulsive behavior across domains was significantly larger than domain-general variance across individuals. The results of their studies suggest that individuals are more tempted in certain domains than others and, as a result, the frequency with which they give in to temptations may vary significantly between domains. Certainly, these results could explain why someone might be able to adhere to a strict diet and fitness regimen but not be able to resist shopping impulsively.

When considering these results in the context of the role self-concept plays, we wonder if, beyond the hedonic appeal of temptations, some activities are also tempting because they are associated with another aspect of self, that is, self-concept not related to the goal domain but to a different yet equally important aspect of self. Let's consider another common example of a self-control dilemma: a student studying for an important exam is tempted by an invitation to attend a friend's party. In this example, going to a friend's party is characterized as a temptation because it is an appealing activity, pleasurable in the moment but interfering with a long-term beneficial goal of studying.

However, beyond the fact that going to the party is much more fun than studying for most students, would the student be more tempted to go if they also saw themselves as a gregarious party-goer, friendly and social person, and someone who does not like to disappoint their friends? For anyone who has a strong self-concept in the social domain, going to a party might be tempting not only because of its hedonic value but also because of its strong association with the social aspect of self. One of the aims of the current research is to investigate these possible associations between temptations and self-concepts unrelated to the goal domain. Thus, we posed the following research questions:

*Research Question 1: What are common domain pairings of goals and temptations in everyday self-control dilemmas?*

*Research Question 2: How common are goal-temptation pairs in the same domain as opposed to different domains?*

*Research Question 3*: *What is the relationship between temptations and self-concepts not associated with the goal domain?*

## Self-concept and conflict

The defining characteristic of the self-control dilemma is the presence of conflict. Thus, to better understand the role self-concept plays in self-control dilemmas, it is also necessary to consider how self-concept may be associated with the experience of conflict. One way that self-concept can be implicated is through its relationship with goals and temptations. More specifically, we propose that subjective goal importance and temptation strength represent psychologically meaningful aspects of conflict and that both arise from their relationship with one or more self-concepts. That is, holding a strong positive self-

concept in one domain may lead to goals in that domain being given greater importance, and the subjective perception of goal importance would have an impact on the degree to which one would experience a conflict in the presence of a temptation that jeopardizes that goal.

As Milyavskaya et al.'s (2015) research has shown, pursuing personally more valuable goals (i.e., "want-to" as opposed to "have-to" goals) correlates with experiencing weaker and fewer temptations in relation to that goal and, as a result, may be associated with experiencing weaker conflict. On the other end of the continuum, it is reasonable to assume that goals of low importance could also be associated with lesser conflict. If a goal or action is not deemed very important to a person, then they are less likely to be very conflicted about goal-incongruent behaviors. This would suggest a curvilinear relationship between goal importance and strength of conflict, with weaker conflict for goals of low and high importance than for those of medium importance. Simply put, in the case of low goal importance, people might not care enough about adhering to the goal, and in the case of high importance, they might care so much that not adhering to the goal is inconceivable to the individual. When it comes to the relationship between temptation strength and conflict strength, all other things being equal, the associations should be positive, as the more tempted one is to engage in behavior that can derail their goal, the more likely they are to feel conflicted about violating their goal.

The complication, of course, is that the strength of conflict in self-control dilemmas depends on both the goal importance and the temptation strength, each potentially related to one or more self-concepts. To examine how self-concept affects the

strength of conflict through subjective goal importance and perception of temptation strength, we consider two scenarios.

First, we examine the relationship between a goal and a temptation when both are associated with the same domain. An example would be a dieter who is tempted by a dessert. In this case, a dieting goal and a tempting dessert are both associated with the food domain, and the temptation represents a challenge to the goal and to the self-concept associated with that goal. As outlined earlier, we expect that the self-concept associated with the goal domain will be positively associated with goal importance and negatively associated with temptation strength in the same domain. Furthermore, goal importance and temptation strength would demonstrate a negative association, akin to a seesaw effect – goals of greater importance will be associated with weaker temptations (Figure 1).

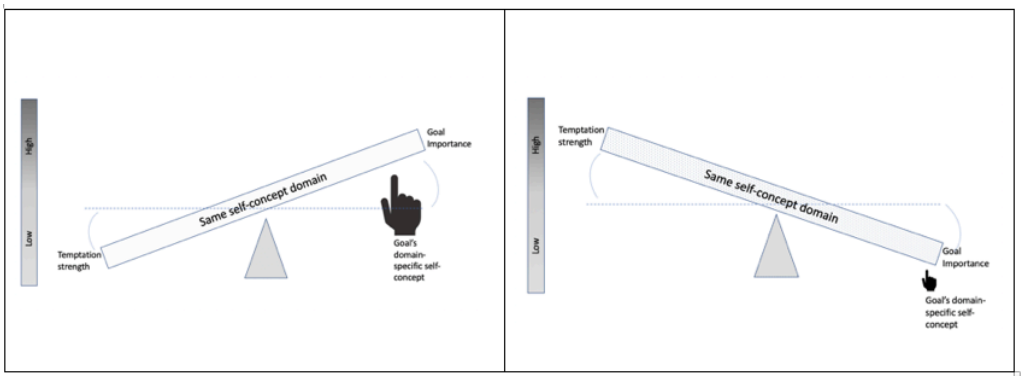


**Figure 1. Implications of the same self-concept domain on the goal-temptation relationship**

In other words, although we still expect temptation strength to be positively associated with conflict strength, we propose that the strength of the temptation may depend on the goal importance and the strengths of the associated self-concept in a particular domain.

*Hypothesis 5: When a goal and a temptation are associated with the same self-concept domain, (a) goal domain self-concept will be positively associated with goal importance, (b) goal domain self-concept will be negatively associated with temptation strength, (c) goal importance will be negatively associated with temptation strength, (d) temptation strength will be positively associated with conflict strength, and (e) goal importance and temptation strength will mediate the relationship between self-concept and strength of conflict (Figure 2).*

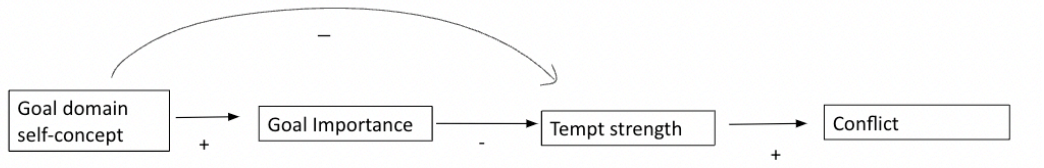


**Figure 2. Hypothesized model when a goal and temptation are associated with the same self-concept domain**

Second, we consider the relationship between a goal and a temptation when they are associated with different self-concept domains. This scenario captures the type of self-control dilemma where temptation, in addition to its hedonic value, may also reflect another self-concept, different from the self-concept associated with the goal. We refer back to an earlier example of a student who, instead of studying, is tempted to go to a friend's party not only because it is fun but also because the student does not want to disappoint their friend. Temptation, in this case, would not only represent the violation of the goal's domain-specific self-concept (e.g., self-concept related to being a good student) but could also represent the association with another self-concept (e.g., self-concept related

to being a good friend), one that exerts a significant pull on an individual to act in congruence with that aspect of self.

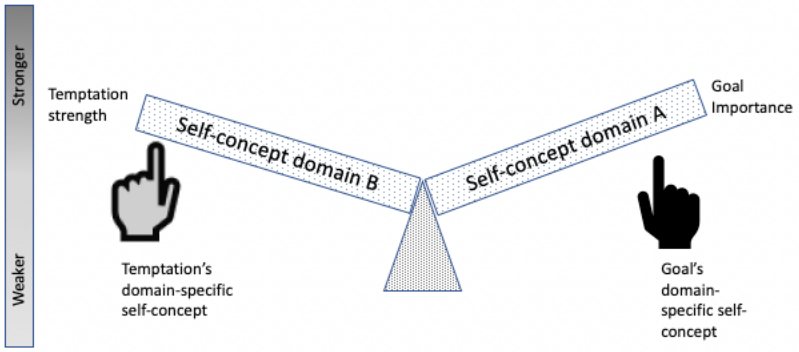


**Figure 3. Implications of different self-concept domains on the goal-temptation relationship**

As a result, the nature of the relationship between goal and temptation would not be the same as when both are associated with the same self-concept domain, and neither would the manner in which they contribute to the strength of the conflict. In cases when a goal and a temptation are associated with different self-concepts, we expect temptation strength not only to be affected by the goal importance but also by the strength of the self-concept in the temptation's domain, and we further propose that the interaction between goal importance and temptation strength will affect conflict strength. To illustrate once again with the example of our tormented student: if the student is only weakly tempted by a friend's invitation, then the more important his goal of studying is, the less conflicted the student would be about how to spend the evening. However, if the student is highly

tempted to attend a friend's party, then the more important the studying is, the more conflicted the student would be between these two options.

*Hypothesis 6: When a goal and a temptation are associated with different self-concept domains, (a) self-concept in the goal domain will be positively associated with goal importance, (b) self-concept in the temptation domain will be positively associated with temptation strength, (c) goal importance will be positively associated with conflict, (d) temptation strength will be positively associated with conflict, (e) goal importance will be negatively associated with temptation strength, and (f) temptation strength will moderate the relationship between goal importance and conflict (Figure 4). Specifically, when temptation is weak, goal importance will have a negative association with conflict strength, and when temptation is strong, goal importance will have a positive association with conflict strength (Figure 5).*

Finally, if the association of goals and temptations with one or multiple self-concepts affects how conflict is experienced in self-control dilemmas, then it is reasonable to assume that it would also affect the intensity of that conflict. We propose that dilemmas that involve multiple self-concepts are likely to result in a stronger conflict, both in average intensity and in frequency.

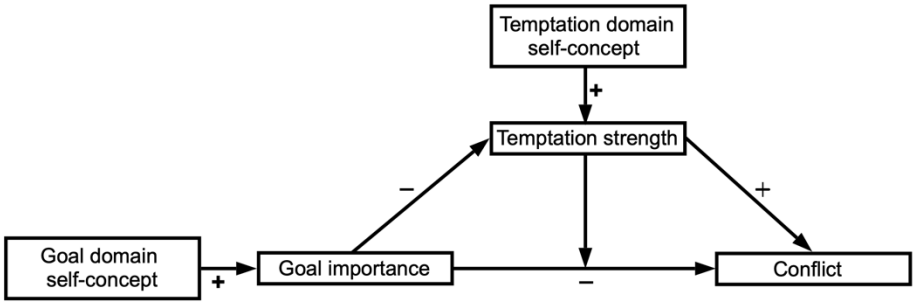


**Figure 4. Hypothesized model when a goal and a temptation are associated with different self-concept domains**

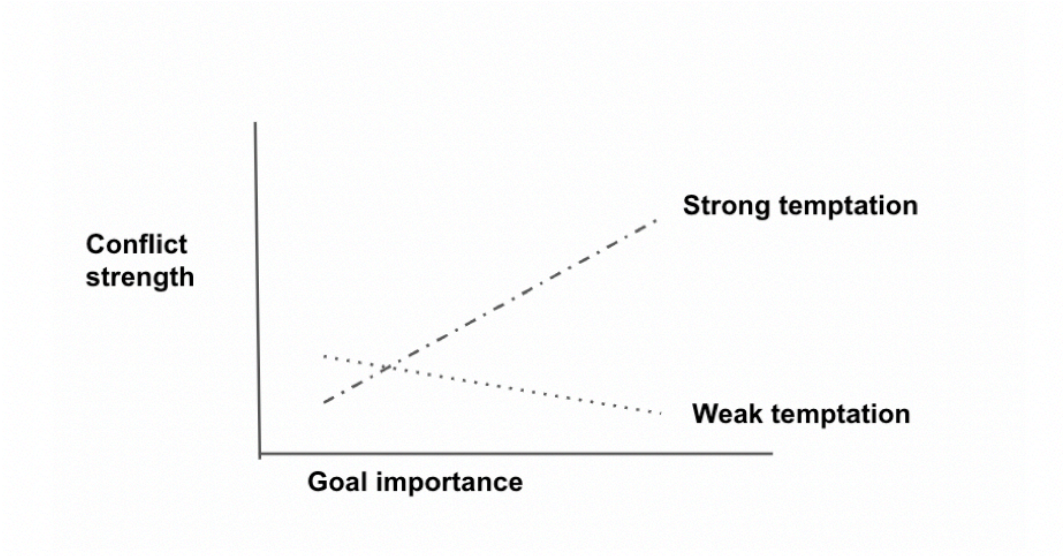


**Figure 5. Expected moderation effect when a goal and a temptation are associated with different self-concept domains**

As discussed earlier, when a goal and a temptation are associated with the same self-concept, the temptation strength is negatively associated with goal importance, creating a seesaw effect. In this case, goal importance and temptation strength can exert a comparable pull, experienced as a conflict, only around a midpoint. Thus, on average these situations may involve relatively modest conflict. In contrast, when different self-concepts are involved, we expect temptation strength to be additionally influenced by the strength of the self-concept related to that temptation, and, as a result, both could exert a comparable pull at any point on the scale, from low to high. Consequently, we would expect stronger conflict to be more frequent when multiple self-concepts are involved.

*Hypothesis 7: When a goal and a temptation are associated with different self-concept domains (as opposed to the same self-concept domain), (a) conflict strength will on average be higher and (b) stronger conflict will be more frequent.*

**Conflict and self-control dilemma decisions**. We further consider the impact of conflict's domain origins on the actual decision-making in self-control dilemmas. Despite the centrality of conflict in conceptualizations of self-control dilemmas, only a handful of studies have assessed a direct link between conflict strength and dilemma outcomes, with mixed results (Becker et al., 2019). For example, in one of the experimental studies examining how self-control conflicts are resolved in real-time, Stillman et al. (2017) found that greater average conflict resulted in a reduced likelihood of making a healthy choice. On the other hand, in an experience-sampling study of daily desires, Hofmann et al. (2012a) found that stronger conflict led to greater resistance, which in turn, increased self-control. Building on our prior arguments, we propose that these inconsistent findings may

partially stem from whether the conflict involves one or multiple self-concept domains. Comparatively speaking, we anticipate that the conflict between goals and temptations associated with the same self-concept domain (as opposed to different self-concept domains) will overall result in decisions favoring goals (i.e., self-control). Once again, we base this on the assumption that when only one self-concept is involved, greater conflict represents a greater challenge to the self-concept, which in turn, creates greater resistance. For example, if exercising regularly is an important aspect of one's self-concept, that person might resist a strong urge to skip exercising in favor of going home to rest after work because it would violate how they see themselves in that domain. By contrast, the involvement of multiple self-concepts creates a more troubling dilemma for an individual, as behavior consistent with one self-concept may be inconsistent with another; as a result, the stronger conflict weakens self-control efforts. In the case of our dedicated exerciser, if they also happen to have a very strong self-concept in the social domain, then the invitation from friends to join them for a happy hour instead of exercising may present a bigger dilemma and lead to failure of self-control.

*Hypothesis 8a: When a goal and a temptation are associated with the same self-concept domain, conflict strength will be positively associated with self-control.*

*Hypothesis 8b: When a goal and a temptation are associated with different self-concept domains, conflict strength will be negatively associated with self-control.*

## Self-concept and self-conscious emotions

The presence of emotions in self-control dilemmas has been well-documented in the literature (Becker et al., 2019; Berrios et al., 2015; Katzir et al., 2010; Li & Jia, 2021;

Tracy & Robins, 2004). Although both hedonic emotions (e.g., joy, happiness, anger) and self-conscious emotions (e.g., pride, guilt, shame) have been reported before, during, and after self-control dilemmas (Giner-Sorolla, 2001), research has identified self-conscious emotions as particularly relevant for self-control (Becker et al., 2019; Hofmann & Fisher, 2012b; Kotabe et al., 2019; Patrick et al., 2009). More specifically, self-conscious emotions have been associated with a focus on long-term goals which tends to bolster self-control (Katzir et al., 2010; Eyal & Fishbach, 2010; Williams & DeSteno, 2008). Accordingly, one of the core propositions of self-conscious emotions theory (Tracy & Robins, 2004) is that self-conscious emotions signal whether one's actions are consistent or inconsistent with higher-order, personally relevant goals. Beyond providing information to the individual about standing on their goals, this type of internal feedback also guides an individual's subsequent behavior, as proposed by control theory (Carver & Scheier, 1982). The affective information signaling that behavior is inconsistent with a higher-order goal provides the motivation to return to the goal pursuit, whereas the affective information signaling that behavior is consistent with a higher-order goal provides the motivation to maintain successful goal pursuit (Baumeister et al., 1994a; Becker et al, 2019). Thus, from the self-conscious emotions theory perspective, self-conscious emotions have both motivational and self-regulatory properties, as they are believed to compel us to act in accordance with personal as well as societal norms and values we have internalized (Tangney, 1999; Tracy & Robins, 2004).

Several characteristics of self-conscious emotions strongly imply they are linked with one's self-concepts. First, according to prominent appraisal frameworks, self-

conscious emotions emerge when an eliciting event is appraised as self-relevant and attributed to internal causes (e.g., Lazarus, 1991; Tracy & Robins, 2004). In other words, for self-conscious emotions to emerge, the focus must be on "me" which requires activation of self-representations. Second, an activated self-concept serves as an appraisal standard against which the eliciting event is further evaluated (Scheier & Carver, 1988). Specifically, events that are appraised as important and meaningful for one's identity (i.e., who a person believes they are or who they would like to be) are likely to elicit self-conscious emotions (Higgins, 1987; Markus & Nurius, 1986). This is an important distinction because there may be other goals, such as basic survival goals, that are deemed important to the person but are unrelated to their identity; although appraisals related to these goals may very well generate emotions (e.g., fear, anger), they would not necessarily generate self-conscious emotions (Tracy & Robins, 2004). Finally, self-conscious emotions emerge in response to the appraisal of identity-goal congruence, or the extent to which the event is appraised as congruent with one's goals and needs. The process of reflecting on discrepancies between the event-related current state and the evaluative standard relevant to one's identity (e.g., self-concept) is proposed to be an important generator of self-conscious emotions (Carver, 2004; Carver & Scheier, 1990; Tracy & Robins, 2004).

At the center of this cascade of appraisals is the existence of already formed, relatively stable self-representations (i.e., self-concepts). Simply put, self-conscious emotions are generated when one has a well-formed sense of who they are and encounters an event they deem relevant to that sense of self because the action the individual takes in response to the event has the potential to either reinforce or challenge one's self-beliefs. In

our view, this is precisely what occurs in self-control dilemmas. By their very nature, self-control dilemmas involve a self-relevant situation, where one's higher-order goals are challenged in some way. Furthermore, this challenge comes from within (i.e., temptation), resulting in an internal conflict. Conflicts generate emotions, and because the internal conflict arises from within the "self", many of the emotions that emerge in this context are self-conscious ones. Thus, the activation of self-concept in self-control dilemmas is expected to trigger self-conscious emotions in response to the conflict.

Since emotions are presumed to be present as the self-control dilemma unfolds, we expect self-conscious emotions to be both anticipated before the dilemma is resolved and experienced afterward. This is consistent with prior research which suggests that, when confronted with conflicting choices, people often imagine how they would feel if they selected one course of action over another, and then use these anticipated emotions to guide their decisions (Bagozzi & Pieters, 1998; MacInnis & Patrick, 2006; Kotabe et al., 2019). Also known as affective forecasting (Wilson & Gilbert, 2003), anticipated emotions in self-control dilemmas thus involve the prediction of the emotional consequences of two possible decision outcomes: adhering to a long-term goal (i.e., self-control goal) or giving in to the temptation (MacInnis & Patrick, 2006). Research has also shown that self-conscious emotions persist even after people make their choices. For instance, in a recent study by Becker et al. (2019), participants reported experiencing lingering pride, guilt, and regret in the aftermath of self-control dilemmas. These post-choice emotions are believed to provide emotional feedback to the individual and serve as a guide for future behavior (Tracy & Robins, 2004).

We propose that self-concept is implicated in the generation of self-conscious emotions in self-control dilemmas in two ways. First, in response to the conflict itself, we expect self-concept to be largely responsible for eliciting self-conscious emotions. More specifically, we expect the strength of conflict to be associated with the intensity of self-conscious emotions, which is consistent with prior research on the relationship between conflict and emotions (Becker et al., 2019: Berrios et al., 2015). However, we additionally propose that self-concept will be responsible for eliciting self-conscious emotions above and beyond those elicited by the conflict itself.

*Hypothesis 9: In self-control dilemmas, (a) conflict strength will be associated with self-conscious emotions and (b) self-concept will be associated with self-conscious emotions over and above conflict strength.*

Second, beyond its role in eliciting self-conscious emotions, we propose that self-concept is also implicated in which self-conscious emotions are anticipated and experienced for different outcomes. Among self-conscious emotions, pride, guilt, and regret have been most frequently associated with self-control dilemmas, although research has produced mixed results on the role they play in self-control. For example, Hofmann and Fisher (2012b) found that anticipating pride had a positive effect on subsequent self-control, whereas anticipating guilt produced mixed results; guilt increased goal importance and conflict awareness but also reduced subsequent resistance to temptations. In other studies, however, pride had no effect on self-control (Becker et al., 2019; Katzir et al., 2010) but regret and guilt did. Specifically, anticipated regret predicted the intent to exercise (Abraham & Sheeran, 2003), and anticipated guilt predicted the intention to use

and the actual use of condoms (Hynie et al., 2006). The inconsistent results, we propose, could potentially be reconciled if we consider the role of self-concept in self-control dilemmas. To that end, we again consider the two scenarios discussed earlier.

**Goals and temptations associated with the same self-concept**. The first scenario is when a goal and a temptation are associated with the same self-concept domain. Earlier, we proposed that a strong association between self-concept and a goal implies that a temptation represents a challenge to both the goal and the self-concept associated with that goal. The two important assumptions in this scenario are that (1) the higher-order goal serves as an appraisal standard precisely because it is tied to one's identity, and (2) one's actions are evaluated based on whether they are consistent or inconsistent with that identity goal. Under these conditions, self-conscious emotions are triggered in response to the detection of behavior congruency or incongruency with a goal that is aligned with one's positive self-concept. This is consistent with self-conscious emotions theory (Tracy & Robins, 2004) which proposes that positive self-conscious emotions (e.g., pride) are elicited by appraisal of identity-goal congruence, and negative self-conscious emotions (e.g., guilt, shame, embarrassment) are elicited by appraisal of identity-goal incongruence.

Thus, when conflict arises from a goal and a temptation associated with the same self-concept domain, we expect the self-conscious emotions, whose key function is to signal if one's actions are consistent or inconsistent with the higher-order goal, to be centered on goal adherence and goal violation. More specifically, we expect that the actions associated with goal-congruent behavior will result lead to pride, whereas the actions associated with goal-incongruent behavior (i.e., giving in to the temptation) will

lead to guilt. Extending this to the role of self-concept, we presume that when dealing with self-control dilemmas, people will both anticipate and experience pride if they perceive their behavior as confirming and reinforcing a relevant self-concept and, conversely, they will anticipate and experience guilt if they perceive their behavior as inconsistent or incompatible with a relevant self-concept (Tracy & Robins, 2004). This is consistent with the results of several empirical studies which found that imagining goal adherence and acting accordingly was associated with pride and imagining goal violation and giving in to temptation was associated with guilt (Hofmann et al, 2013; Kotabe et al., 2019).

*Hypothesis 10: In self-control dilemmas,* w*hen a goal and a temptation are associated with the same self-concept domain, (a) self-control will be positively associated with pride, and (b) self-control will be negatively associated with guilt.*

**Goals and temptations associated with different self-concepts.** The assumption that a higher-order goal represents the primary appraisal standard (i.e., that people mostly appraise their actions as consistent or inconsistent with self-control goals; Inzlicht et al., 2015; Tracy & Robins, 2004), has dominated the self-control dilemma literature. However, some scholars have raised the possibility that a hedonic goal (i.e., a goal associated with a temptation) can also serve as an appraisal standard (Becker et al., 2019). The literature is fairly silent on what would cause such a shift in an appraisal process, but Tracy and Robins (2004) hint at the activation of different self-representations. Specifically, they theorize that "appraisals of identity-goal congruence may be highly complex because events can be congruent or incongruent with a wide range of often-conflicting self-representations" (Tracy & Robins, 2004, p. 112). We further elaborate on this notion by proposing that

appraisals of identity relevance can be applied to both goals and temptations and, as a result, such appraisals can activate multiple self-concepts across various domains. In fact, this maps on our second proposed dilemma scenario, a case when a goal and temptation are associated with different self-concepts. To illustrate using our prior example, a student with a positive self-concept in an achievement domain would likely appraise studying for an exam as congruent with the achievement self-concept. However, when a student with a strong self-concept in both the achievement and social domains is invited to attend a friend's party the night before the exam, actions consistent with each self-concept are suddenly at odds with each other.

This second dilemma scenario presents a more complex case for the emergence of self-conscious emotions. Despite the scarcity of research on this topic, we infer from the literature that when multiple self-concepts are involved, negative emotions are more likely to arise regardless of the choice that is ultimately made. In making this inference, we draw from Higgins' (1987) self-discrepancy theory which proposes that the detection of discrepancies between different self-representations (i.e., actual self, ought self, and ideal self) generates mostly negative emotions, including negative self-conscious emotions, such as guilt and shame.

Additional indirect evidence for the presence of negative emotions when multiple self-concepts are involved comes from the empirical findings that people often experience negative emotions even when they adhere to their self-control goals (Becker et al., 2019). Also known as an outcome-independent hypothesis (Becker et al., 2019), these findings imply that the emotions in self-control dilemmas are shaped less by the choices we make

and more by the intensity of the struggle we experience when making these choices. This view mostly emerged from research on decision-making, where ample evidence shows that people often experience lingering post-decision guilt and regret, regardless of the decision they made. For instance, in a series of studies, Becker et al. (2019) empirically confirmed that making highly conflicted choices comes at a cost, as conflict strength was consistently associated with more intense feelings of guilt and regret. Although these studies merely assessed conflict strength and did not investigate what makes some choices more difficult than others, we propose that the activation of multiple self-concepts in self-control dilemmas could be one of the drivers of conflict strength. As discussed earlier, we expect that when a goal and a temptation are associated with two different aspects of self, an especially strong conflict is likely to result, precisely because the association between different self-concepts with both a self-control goal and a hedonic goal can cause appraisal shifts between the two. As a result, we believe that negative self-conscious emotions are likely to emerge when one considers two outcomes in a self-control dilemma that involves multiple self-concepts. In terms of which specific emotions are likely to emerge in this scenario, research has not directly addressed this question. However, in a conceptual model of impulse control, MacInnis and Patrick (2006) considered anticipated emotions that would emerge in response to giving in to and resisting temptations. According to their model, guilt would be anticipated for giving in to the impulse (i.e., selecting temptation); however, not giving in to the impulse (i.e., selecting a goal) would be associated with anticipating regret. We extend this thinking to the case when a goal and a temptation are associated with different self-concepts. Accordingly, we propose that selecting a

temptation would still lead to both anticipating and experiencing guilt for not acting in congruence with the goal and self-concept associated with that goal. However, because in the multiple self-concept scenarios, the appeal of temptation at least partially stems from its association with another self-concept, we expect the temptation to exert a considerable pull on an individual to act in congruence with that other aspect of self. As a result, engaging in self-control to pursue a goal can lead to both anticipating and experiencing regret for missing out on the non-chosen alternative (i.e., temptation).

*Hypothesis 11: When a goal and a temptation are associated with different self-concept domains, (a) self-control will be positively associated with regret and (b) self-control will be negatively associated with guilt.*

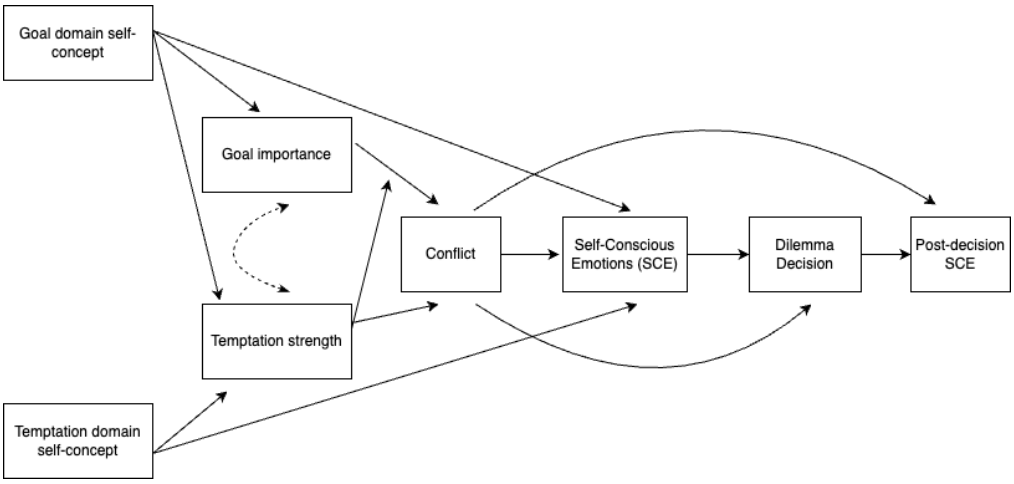


**Figure 6. Proposed conceptual model of self-concept's role in self-control dilemmas**

# Chapter 4
# Pilot Study

In the Pilot Study, we examined the dimensionality and construct validity of the two measures developed for this research: the domain-specific self-concept measure (DSSC) and the domain-specific goals measure (DS Goals). Additionally, we collected qualitative data by asking participants to report typical or frequent self-control dilemmas they experience. The purpose of gathering examples of self-control dilemmas via an open-ended question was to inform the hypothetical self-control dilemma pairs that were presented to participants in Study 2.

## Participants

Participants were recruited through Prolific, one of the crowdsourcing platforms commonly used for conducting human participant research. Research has shown that crowdsourcing samples tend to be more diverse while producing responses indistinguishable from responses of those recruited through more traditional methods (e.g., snowball, in-person; Casler et al., 2013; Peer et al., 2017; Peer et al., 2021). Responses from 170 participants who participated in the survey were evaluated based on several criteria: captcha score, attention checks, time taken to complete the survey, and the quality of a response to an open-ended question (e.g., response answers the question, provides unique details, and makes sense). Elimination criteria included captcha score <.50 or failing two or more out of three attention checks. In addition, the time taken to complete the survey was evaluated in conjunction with the quality of the open-ended response.

Specifically, responses with the shortest completion time (responses below 10 minutes which was half of the mean time of 20 minutes for completion) were flagged for a qualitative response check. If the response to the open-ended item was adequate, the participants were kept in the dataset. In the end, no participants were removed from the dataset based on these criteria, resulting in a sample of 170 individuals. Participants were on average 42 years old (*SD* = 15.55), with 58% identifying as female, 39% as male, and 3% as other. The sample was 81% White, 8% Black/African American, 5% Asian, and 6% all other ethnicities/races combined. Participants reported different levels of formal education, ranging from those with less than a high school diploma (2.4%) to those with doctorate degrees (1.8%). Participants with bachelor's degrees (31%) and those with some college (25%) comprised the majority. In terms of work status, 44% were employed full-time, 19% did not work, 16% worked part-time, and 13% were retired. Some participants (11%) reported multiple categories, such as working part-time and being a student. Overall, the sample was fairly diverse in age, gender, race/ethnicity, and education.

## Procedure

Participants completed an online survey consisting of 200 items and 1 open-ended question, using the survey platform Qualtrics. The average length of the response time was 20 minutes. At the beginning of the survey, participants were presented with the DSSC measure and the DS Goals measure, followed by an open-ended question about an example of a self-control dilemma they frequently experience or have recently experienced. When answering the open-ended question, participants were offered an option to provide a second example. Next, participants were presented with five additional self-report

measures to assess the construct validity of the two focal measures developed for this research. Demographic questions were presented at the end of the survey.

## Measures

**Domain-specific self-concept measure (DSSC).** To assess the four domain-specific self-concepts, 40 items were presented as part of a domain-specific self-concept measure described earlier. The measure has four scales, one for each domain. The health domain and achievement domain were assessed with 11 items each, the social domain with 10 items, and the financial domain with eight items (see Table 3 for reliability coefficients). A sample item assessing self-concept in the health domain is "I see myself as a healthy eater." The degree to which participants agreed with each statement was assessed on a Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Based on the results of exploratory factor analysis (EFA) discussed in more detail later, the final measure was reduced to 31 items across four domains.

**Domain-specific goals measure (DS Goals).** Goal activity in each of the four domains (i.e., health, achievement, social, and financial) was assessed with 37 items developed for this research (see Table 3 for reliability coefficients). Items described goals that are fairly typical but also worded broadly enough to represent a wide range of activities across four domains. Statements captured what a person is trying to do as well as what they are trying to stop or avoid doing (e.g., "I am trying not to drink/drink less alcohol"). A sample item is "I am trying to eat healthy." Using a Likert-type scale, all items are rated on the extent to which a respondent identifies with the statement (1 = not at all like me, 4 = very much like me) and the extent to which it is personally important,

ranging from 1 (not at all) to 5 (extremely). Based on the results of the EFA discussed later, the final measure was reduced to 34 items across four domains.

**Global self-esteem**. Global self-esteem represents overall positive versus negative feelings about the self and it is conceptualized as a unidimensional construct not based on any specific behaviors (Robins et al., 2001). One of the most widely used measures of global self-esteem is the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965). RSE assesses global self-concept with 10 items that do not refer to specific aspects of self but instead ask about general feelings of self-regard (e.g., "On the whole, I am satisfied with myself"). The items are rated on a 4-point Likert-type scale, ranging from 1 (strongly agree) to 4 (strongly disagree). The measure has demonstrated concurrent, predictive, and construct validity, with alpha reliabilities ranging from .72 to .90 across numerous assessments (Brailovskaia & Margraf, 2018; Gray-Little et al., 1997; Robins et al., 2001; Rosenberg, 1965). Omegas for the present study are reported in Table 4. We expected RSE to be correlated with the DSSC measure; however, we do not expect these correlations to be exceedingly high given that the RSE is a global measure and our self-concept measure is domain-specific.

**Health behaviors**. Health behaviors were assessed with a 16-item Good Health Practices scale (Hampson et al., 2019). This brief self-report measure provides fairly broad coverage of health behaviors, correlates with other similar measures (e.g., Wellness Maintenance Scale, Vickers et al., 1990), and is predictive of important health outcomes (e.g., blood pressure, BMI; Hampson et al., 2019). A sample item is: "I exercise to stay healthy." All items are rated on a 5-point Likert-type scale, ranging from 1 (not at all like

me) to 5 (very much like me). The reported internal reliability (alpha) in prior studies was .83 (Hampson et al., 2019). Omegas for the present study are reported in Table 4. We expected scores on the Good Health Practices scale to correlate with self-concept in the health domain in our measure.

**Domain Specific Hope Scale (DSHS).** The DSHS (Sympson, 1999) assesses an individual's level of dispositional hope in six life areas: social, romantic relationships, family, academic, work/occupation, and leisure. Dispositional hope is proposed to reflect motivation to pursue and attain goals, and facilitate change in general (Snyder et al., 1991) or, as is the case with DSHS, reflect dispositional hope in a specific life domain. For each life area, respondents are asked to rate how much each item applies to them, using an 8-point Likert scale, ranging from 1 (Definitely false) to 8 (Definitely true). A sample item for social relationships is "I can think of many ways to make friends." DSHS has demonstrated good internal consistency, with alphas ranging from .86 to .93 across life areas, as well as adequate construct validity (Snyder, 2000; Sympson, 1999). Omegas for the present study are reported in Table 4. We used DSHS to assess the construct validity of our domain-specific self-concept measure, for the two overlapping domains: social/relationships and achievement. Our main assumption is that holding positive self-beliefs in a specific domain should correspond to one's rating of dispositional hope (i.e., how important and satisfied they are in that same life domain). Thus, we expected scores in achievement and social domain in our measure to correlate with the scores on the corresponding sub-scale of the DSHS.

**Financial satisfaction and perceived financial capability**. Financial satisfaction was assessed with a single item asking participants how satisfied they were with their current financial situation. Response options ranged from 1 (not at all satisfied) to 10 (extremely satisfied). Perceived financial capability was also assessed with a single item: "I am good at dealing with day-to-day financial matters, such as checking accounts, credit and debit cards, and tracking expenses." Participants were asked to rate the extent to which they agreed with the statements, from 1 (strongly disagree) to 7 (strongly agree). Both measures were previously used in studies assessing subjective and objective financial outcomes (Xiao et al., 2014). In our study, the scores on these two items were expected to be correlated with the scores in the financial domain in the self-concept measure more strongly than with the other three domains in our measure.

**PINT taxonomy of goals**. Using a lexical approach, Wilkowski et al. (2020) recently developed and validated a taxonomy of higher-order goals. Based on the goal content, they found that most goals can be organized into four factors: Prominence, Inclusiveness, Negativity prevention, and Tradition (PINT). The resulting measure has 43 items covering these four categories; goals within each category are assessed by asking participants to rate their commitment to the goal, ranging from 4 (I have an extremely strong commitment to this) to -4 (I have an extremely strong commitment to avoiding this). Omegas for the current study are reported in Table 5. We examined the convergent and discriminant validity of the domain-specific goals measure by assessing its relationship with the four categories of goals in the PINT taxonomy.

**Participant-generated self-control dilemmas.** Participants were asked to provide two examples (the second example was optional) of a self-control dilemma. In the instructions, participants were provided with a brief definition of a self-control dilemma, followed by a prompt to think about a dilemma they are currently experiencing or have recently experienced or a dilemma that they frequently experience even if not recently. The participant-generated self-control dilemmas were used for a qualitative analysis which informed the development of the hypothetical goal-temptation pairs presented to participants in Study 2.

# Results and Discussion

## Exploratory Factor Analysis

After removing cases with missing values, the final sample size for the two focal measures (DSSC, $N = 163$; DS Goals, $N = 154$) was within the range recommended in prior research (110-180 participants for 4-factor solutions and variables-to-factor ratio of seven; Mundfrom et al., 2005). Both measures were assessed with EFA using orthogonal (minimal residual factoring, varimax rotation) and oblique rotation (minimal residual factoring, oblimin rotation) and the more appropriate rotation was selected based on the results. The difference between these two approaches is that orthogonal rotation produces factors that are not correlated whereas oblique rotation allows factors to correlate (Tabachnick & Fidell, 2013).

For DSSC ($N = 163$), parallel analysis (Hayton et al., 2004) suggested four factors, consistent with the four proposed domains. When oblique rotation was performed, factor correlations between several factors exceeded .32, which has been suggested as a threshold

for selecting oblique rotation (Tabachnick & Fidell, 2013). Specifically, the achievement factor was correlated with the health factor at .46, with the social factor at .43, and with the financial factor at .41. Additionally, the health and financial factors were correlated at .36. Given these moderately high inter-factor correlations, oblique rotation was selected. Items with factor loadings < .40 or with cross-loadings were removed, resulting in the final scale consisting of 31 items, with eight items for health, achievement, and social scale, and seven items for the financial scale (see Table 1 for the factor loadings for final scale items).

For the DS goals measure ($N$ = 154), parallel analysis (Hayton et al., 2004) suggested five factors; thus, both four and five factors were explored. Because three items related to addictive behaviors did not load at all in the four-factor solution but loaded cleanly on the fifth factor and given that controlling various addictions emerged frequently in self-control dilemmas in the qualitative analysis, we retained the five-factor solution in the analysis. When oblique rotation was performed, the achievement and financial factors were correlated at .35. However, since this was the only correlation exceeding .32, and the remaining correlations were fairly low, orthogonal rotation was selected. After items with loadings <.40 or with cross-loadings were removed, 33 items remained in the final scale. More specifically, we retained six items for the health scale, three items for addictive behaviors scale, eight items for the achievement scale, nine items for the social scale, and eight items for the financial scale (see Table 2 for the factor loadings for final scale items).

## Convergent and Discriminant Validity

Descriptives, correlations, and reliabilities for the DSSC and DS Goals measures are reported in Table 3.

In general, we found moderate correlations between the four self-concept domains in the DSSC measure, ranging from $r$ = .22 to .49, which supported the assumption of distinctiveness of domain-specific self-concepts. As expected, scores on DSSC in each domain were positively correlated with scores on the goal activity and importance in the same domain. However, there were also positive correlations between self-concept domain scores and goals in some other (but not all) domains. For example, self-concept in the health domain was positively associated with the goals in social and achievement domains, self-concept in the achievement domain was positively associated with goals in all domains except those related to addictive behaviors, self-concept in the social domain was associated with goals in achievement in financial domain, and self-concept in financial domain was associated with goals in health and achievement domain. Similarly, we found moderately positive correlations between goals in different domains (ranging from $r$ = .20 to .46), with one notable exception involving goals in health and financial domains which were not correlated. These findings are consistent with the multiple self-concept conceptualization which suggests that people hold views of themselves in many different life domains, some of which may be correlated whereas others are not.

We conducted a preliminary investigation of the DSSC measure's convergent and discriminant validity by assessing its relationship with a global self-esteem measure (i.e., RSE) and three domain-specific measures that correspond to our four proposed domains. As mentioned previously, self-esteem and self-concept are often used interchangeably, and many proposed measures of self-concept are in fact assessments of self-esteem (Morin, 2017). Thus, we expected the two measures to be correlated. However, given that the RSE

is a global measure and our self-concept measure is domain-specific, we did not expect these correlations to be exceedingly high. The results were consistent with our expectations. DSSC and RSE correlations ranged from .40 to .66, suggesting both convergent and discriminant validity.

To further examine the construct validity of the domain-specific scales, we assessed each scale with a measure that taps into a corresponding domain. Self-concept in the health domain was correlated with the General Health Practices scale ($r = .58$, $p < .001$), self-concept in the achievement domain was correlated with DSHS-academic ($r = .67$, $p < .001$), and DSHS-work ($r = .67$, $p < .001$), self-concept in social domain was correlated with DSHS-family ($r = .64$, $p < .001$), and self-concept in financial domain was correlated with financial satisfaction and financial capability ($r = .48$, $p < .001$, and $r = .71$, $p < .001$, respectively). In addition to these correlations providing evidence of convergent validity of the DSSC measure, the pattern of correlations between self-concept domains and scales in non-corresponding domains also offered evidence of discriminant validity insofar as the correlations were smaller or non-significant (see Table 4).

The convergent and discriminant validity of the DS goals measure was assessed using the PINT taxonomy. We expected scores on the prominence scale to be correlated with scores on items in the achievement and financial domain, inclusiveness to correlate with the social domain, and negativity prevention with the health/wellness domain. We expected weaker correlations between the tradition items and our measure. The results were mostly consistent with our expectations. In general, we found small to moderate correlations between all domains (except health) and prominence ($r = .20$ to $.31$) and

inclusion ($r$ = .15 to .37; the strongest correlation was with the social domain as expected). We also found weaker correlations between tradition and achievement, social, and financial domains ($r$ = .15 to .19). Contrary to our expectations, negativity prevention was not correlated with the health domain. It was, however, negatively correlated with goals related to drugs or addictive behaviors ($r$ = -.17, $p$ = .03). Overall, we found the pattern of correlations between DS Goals and PINT taxonomy to provide evidence of both convergent (i.e., significant correlations discussed above) and discriminant validity (i.e., non-significant correlations between health domain and PINT and weaker correlations with non-corresponding domains; see Table 5).

## Qualitative Data Analysis

**Coding**. Participants were asked to provide examples of self-control dilemmas they experienced either recently or frequently. The second example was optional. A total of 206 responses were collected, with 36 participants providing two examples. Upon review of the response content, 137 responses were deemed valid, resulting in a 66% response rate. Responses that did not describe situations or dilemmas that mapped clearly on self-control were eliminated from further analysis. Retained self-control dilemma examples were then coded following a four-step process. First, a goal and a temptation were identified in each response. Behaviors or outcomes participants identified as something they are striving for or trying to achieve were labeled as goals. The opposing behaviors or outcomes (e.g., distraction, obstacle) were labeled as temptations. Second, each goal and temptation were assigned to one of the domains (e.g., health, achievement, social, financial, other) and each domain's unique number was entered into a column. If

participants indicated that more than one domain was involved in either a goal or a temptation, then a secondary domain was identified and recorded (e.g., "I know I should not drink because it's a waste of money and puts a strain on my relationship"; this statement was assigned financial as a primary and social as a secondary domain). Third, for each self-control dilemma, a numeric pairing of the goal and temptation's primary domain was represented with a two-digit number [e.g., "57" represents a goal in the health domain (5) and temptation in the social domain (7)]. In addition to the four focal domains (i.e., health, achievement, social, and financial), several other options were added based on categories that emerged from the data. Finally, all pairings were categorized based on whether the goal and temptation were in the same domain (coded as "1") or different domains (coded as "2").

**Results of qualitative analysis.** To address our first research question about common dilemma pairings of goals and temptations in self-control dilemmas, we calculated frequencies and percentages to examine the distribution of goals and temptations across different domains, as well as the prevalence of different domain pairings (see Table 6). Participants in our study reported most goals in the financial domain (32%), followed by goals in the social domain (26%), health (21%), and achievement (18%). These findings deviate somewhat from patterns reported in prior qualitative studies, which found goals in the achievement and health domains to be the most frequent ones in self-control dilemmas (Little, 2020; McGregor & Little, 1998; Hofman et al., 2012a; Veilleux et al., 2018). It is possible that these results reflect differences in the sample sources. For predominantly student samples, which prior research has mostly relied on, emphasis on goals in

achievement and health domains (e.g., weight control, exercise, fitness) would be expected. However, in our more diverse sample, with an average age of 42, it would be reasonable to expect greater emphasis on financial and social goals, as these goals reflect the priorities of older, working adults. Additionally, the emphasis on financial goals may also reflect the current economic outlook, with persistent inflation and post-Covid challenges. About 9% of goals involved multiple domains, with 7% of these secondary goals being linked to controlling drug-related or addictive behaviors. The greatest number of temptations were social (36%), followed by the financial domain (25%), and health and achievement (15%, each). Secondary domains were reported in 22% of the cases; 15% of those were hedonic in nature (e.g., described as inherently pleasurable and enjoyable).

Our second research question was to examine how common self-control dilemmas are where both a goal and a temptation are in the same domain as opposed to different domains. In terms of self-control dilemma pairings, 73% of dilemmas were in the same domain, as opposed to 27% of dilemmas with a goal and a temptation in different domains. Among the same domain dilemmas, the financial domain was the most frequent (23%), followed by social (20%), health (15%), and achievement (11%). For different domain dilemmas, a very clear pattern emerged – goals in health, achievement, and financial domains were most frequently challenged by temptations in the social domain (7%, 6%, and 6%, respectively). Other domain combinations represented between 1% and 2% of dilemma pairs (see Tables 7 and 8).

## Summary

The two primary goals of the Pilot Study were to (1) examine the dimensionality and construct validity of the two measures developed for this research, DSSC and DS Goals, and (2) gather examples of real-life self-control dilemmas. EFA results confirmed a four-factor solution for the DSSC measure, which is consistent with the four proposed domains. However, EFA results suggested a five-factor solution for the DS Goals measure, with the fifth factor consisting of items that focus on the control of drug-related or addiction-related behaviors. Given that drugs and addiction control emerged frequently in examples of self-control dilemmas, these items were retained in the final measure and allowed to load on the fifth and distinct factor. In examining the relationships between the DSSC and DS Goals measures and a global self-esteem measure, domain-specific measures, and taxonomy of goals, we found evidence supporting the convergent and discriminant validity of the two focal measures. Finally, the analysis of the qualitative data confirmed that self-control dilemmas are linked to all four proposed domains (i.e., health, achievement, social, and financial), with some interesting patterns emerging from our data. Specifically, our participants reported a majority of goals in the financial and social domain; however, regardless of the goal domain, the most frequently experienced temptations were in the social domain. These findings informed the development of the hypothetical goal-temptation pairs presented to participants in Study 2.

# Chapter 5
# Study 1

Study 1 had three main objectives. Our first objective was to confirm the dimensionality of the two scales, DSSC and DS Goals, in an independent sample. The second objective was to gather additional evidence of the convergent and discriminant validity of these two measures. Finally, our third objective was to assess how domain-specific self-concepts relate to goal activity and temptation susceptibility in the same and different domains.

## Participants

As in the Pilot Study, participants were recruited through the crowdsourcing platform Prolific. Responses from 161 participants were evaluated based on several criteria: captcha score, attention checks, and time taken to complete the survey. Elimination criteria included captcha score <.50 or failing two or more out of three attention checks. In addition, the time taken to complete the survey was evaluated in conjunction with the attention checks. Specifically, responses with the shortest completion time (10 responses with a completion time of less than 8 minutes, which was half of the mean time of 15 min) were flagged for elimination if they failed one of the attention checks. Participants in this group who did not fail any attention checks were retained in the dataset. In the end, one participant was removed from the dataset based on these criteria, resulting in a sample of 160 individuals. After checking for outliers, two additional cases

with standardized scores above the recommended threshold of 3.29 (Tabachnik & Fidell, 2013) were removed from the dataset, resulting in the final sample of 158 participants.

Participants ($N$ = 158) were on average 39 years old ($SD$ = 13.77), with 71% identifying as female, 26% as male, 2% as other, and 1% preferred not to say. The sample was 60% White, 13% Black/African American, 11% Hispanic, 11% Asian, and 5% all other ethnicities/races combined. Participants reported different levels of formal education, ranging from those with high school diplomas (15%) to those with doctorate degrees (2%). Participants with bachelor's degrees (40%), associate degrees (15%), and those with some college (18%) comprised the majority. In terms of work status, 49% were employed full-time, 22% worked part-time, 16% did not work, 4% were students, and 4% were retired. Some participants (15%) reported multiple categories, such as working part-time and being a student. Overall, the sample was fairly diverse in age, gender, race/ethnicity, and education.

## Procedure

Participants completed an online survey consisting of 139 items, using the survey platform Qualtrics. The average response time was 15 minutes. At the beginning of the survey, participants were presented with two focal measures, the DSSC and the DS Goals, followed by three other self-report measures. Demographic questions were presented at the end of the survey.

## Measures

**Domain-specific self-concept measure (DSSC).** To assess the four domain-specific self-concepts, 31 items were presented as part of a domain-specific self-concept measure revised based on the results of the Pilot Study. The revised measure has four scales, one for each domain. The health domain, achievement domain, and social domain were assessed with eight items each, and the financial domain was assessed with seven items (see Table 14 for reliability coefficients). A sample item assessing self-concept in the health domain is "I see myself as a healthy eater." The degree to which participants agreed with each statement was assessed on a Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

**Domain-specific goals measure (DS Goals).** Goal activity in different domains was assessed with 33 items revised based on the results of the Pilot Study. The revised measure consists of the four initially proposed domains (i.e., health, achievement, social, and financial) and the fifth domain, related to addictive behaviors, which emerged from the empirical data in the Pilot Study. Goals in the health domain were assessed with six items, goals related to addictive behaviors were assessed with three items, and goals in the achievement, social, and financial domains with eight, nine, and eight items, respectively (see Table 14 for reliability coefficients). A sample item for the health domain is "I am trying to eat healthy." Using a Likert-type scale, all items were rated on the extent to which a respondent identifies with the statement (1 = not at all like me, 4 = very much like me) and the extent to which the goal is personally important, ranging from 1 (not at all) to 5 (extremely).

**Domain-Specific Impulsivity Scale – Temptation (DSIS-T).** Susceptibility to temptations was assessed with the Domain-Specific Impulsivity Scale – Temptation (DSIS-T), developed by Tsukayama et al. (2011). This measure consists of 51 items, covering six domains: work, relationships, drugs, food, exercise, and finance. Two of those domain areas, food and exercise, map on the sub-facets in the health domain in our self-concept measure. Thus, to be consistent with our self-concept measure, we also treat them as part of the health domain when assessing domain-specific temptation susceptibility.

The measure consists of statements about activities that are often considered tempting to people. A sample item is "Snacking on junk food." For each item, participants rated how tempted they would be to engage in these activities and how bad/harmful they think these activities are. Each item was assessed on a 5-point Likert-type scale ranging from 1 (not tempted at all) to 5 (very tempted) to gauge temptation, and 1 (not bad at all) to 5 (very bad) to gauge perceived harm. In Tsukayama et al.'s (2011) initial assessment of the scale's reliability, the average alpha was .88, ranging from .81 to .94 across the validation studies. Reliability coefficients for the present study are reported in Table 15. Additionally, the authors produced evidence for distinct factors, as well as evidence supporting convergent validity and incremental validity for the scale (see Tsukayama et al., 2011).

**Trait Self-Control**. Trait self-control has been consistently linked to self-control successes and failures, and by extension, is expected to play a role in one's capacity to resist temptations (Cobb-Clark et al., 2022; Gillebaart & Kroese, 2020; Tangney et al., 2004). Thus, in order to investigate the unique influence of self-concept on self-control

dilemmas, it is important to account for the role trait self-control plays. Research has shown that people differ in levels of trait control, which we assessed with the commonly used Brief Self-Control Scale (BSCS; Tangney et al., 2004), a 13-item self-report questionnaire. A sample item is "I am good at resisting temptation." Items are rated on a 5-point scale ranging from 1 (not at all like me) to 5 (very much like me). The reported internal reliability for this scale in previous studies is between alpha = .83 and alpha = .85, across different samples (Manapat et al., 2021). Reliability coefficients for the present study are reported in Tables 14 and 15.

**Hedonic and Eudaimonic Motivation**. Hedonic and eudaimonic motivation is also proposed to play a role in hindering or promoting self-control efforts. Hedonic motivation is reflected in a strong desire to seek pleasure and avoid pain, and for individuals high on this motivation, the pursuit of pleasure, enjoyment, and comfort are key drivers of behavior (Giuntoli et al., 2021; Huta, 2017). Eudaimonic motivation is reflected in a need to develop the best in oneself, consistently with one's values, and is characterized by the pursuit of authenticity, growth, and excellence (Giuntoli et al., 2021; Huta & Ryan, 2010). In daily life, hedonic or eudaimonic motivations are represented by one's orientation, which some scholars have suggested can be understood as a way of life, one that is reflected in the choice of personal priorities, motives, values, goals, and ultimately, behaviors (Huta & Waterman, 2014). Accordingly, hedonic orientation is the propensity of an individual to seek experiences that are subjectively pleasant (Huta, 2016; Pearce et al., 2020). In empirical studies, hedonically oriented individuals have been found to prefer fun, pleasurable, and enjoyable activities, be more focused on the present

moment, and value power and material possessions (Huta, 2016). Thus, hedonic orientation might promote giving in to temptations and achieving more immediate gratification. On the other hand, eudaimonic orientation is the propensity of an individual to seek experiences that are personally meaningful and authentic and contribute to personal growth and a sense of accomplishment (Huta, 2016; Pearce et al., 2020). In empirical studies, eudaimonic orientation has been associated with ambition, future orientation, planning for and persevering at personal goals (Huta, 2016; Pearce et al., 2020), and promoting self-control (Anic & Toncic, 2012).

We expected hedonic motivation to correlate with greater susceptibility to temptations, and eudaimonic orientation to positively correlate with self-concepts and goal activity across all domains. Therefore, in addition to assessing the convergent and discriminant validity of our focal measures, DSSC and DS Goals, we also sought to control for the influence of hedonic and eudaimonic motivation on overall goal activity and susceptibility to temptations.

Hedonic and eudaimonic orientations were assessed with a 10-item questionnaire comprising two sub-scales (Hedonic and Eudaimonic Motives for Activities – Revised (HEMA-R); Huta & Ryan, 2010; 2016). Each sub-scale has five items with a reported average alpha of .80. Reliability coefficients for the present study are reported in Tables 14 and 15. All items are rated on a 7-point Likert-type scale, ranging from 1 (not at all) to 7 (very much). Items ask participants to rate the degree to which they approach their daily activities with a specific intention (e.g., seek relaxation, pursue excellence, learn a skill).

# Results and Discussion

## Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) was conducted to examine the dimensionality of the two measures developed for this research, DSSC and DS Goals. The final sample size for both measures ($N$ = 158) was within the range for CFA recommended in prior research (Koran, 2020). Specifically, for four to five factors, with an average of 6 indicators per factor, the minimum recommended sample size is 150 (Koran, 2020). For DSSC, we examined and compared fit indices for several different models. First, we examined a one-factor model to assess the potential for common method variance (Cortina et al., 2020). Next, we examined a four-factor model that emerged based on the EFA from the Pilot Study. Because items in the health domain could be grouped into two to three subdomains, we also examined five- and six-factor models. The results of the one-factor model do not suggest common method variance is a major issue. Overall, results for the four-, five-, and six-factor models indicated that none of these models produced fit indices consistent with the thresholds commonly recommended in the literature (e.g., CFI > .95, Hu & Bentler, 1999); however, the five-factor and six-factor models demonstrated marginally better fit than the four-factor model (see Table 9 for fit indices and Table 10 for factor loadings).

To further explore model fit, we examined modification indices (MI) and standardized residuals. In general, examining MI can help identify additional parameters to be estimated, which can yield a better statistical model fit (Perry et al., 2015). Examining standardized residuals can identify items that may contribute to model misfit. However,

scholars have urged caution when using these data-driven approaches without clear theoretical relevance, suggesting that re-specifications may mainly capitalize on chance (e.g., Kaplan, 2009; Perry et al., 2015). Thus, we examined MI and standardized residuals in this study against the backdrop of their theoretical relevance. Ultimately, adjustments did not result in significant improvements to the model fit and, without compelling theoretical reasons to re-specify the model, we decided against modifying it.

For DS Goals, in addition to the one-factor model, we examined a five-factor model that emerged from the EFA conducted in the Pilot Study, and a six-factor model with health items split into two sub-domains: food and exercise. It is important to note that the DS Goals measure consists of two responses for each item, one that assesses identification with the activity (i.e., "How much is this like you?") and the other that assesses the importance of each activity (e.g., "How important is this to you?"). Thus, for each model, two CFAs were performed, one for identification responses and the other for importance responses. As with the DSSC measure, results indicated that common method variance may not be a major issue and none of the models produced fit indices consistent with the recommended thresholds. The differences in fit indices between five- and six-factor models were marginal (see Table 11 for fit indices and Tables 12 and 13 for factor loadings). The examination of modification indices and standardized residuals did not produce significant improvements to the model fit and, given the lack of theoretical reasons to modify the model, we decided against it.

Finally, to further evaluate these findings and determine if the models should be rejected, we consulted extensive literature discussing the limitations of the CFA technique,

and in particular the interpretation of CFA models using cut-off values (e.g., Cooper et al., 2010; Donnellan et al., 2006; Perry et al., 2015). Because CFA allows items to load on only one, intended factor and constrains all other non-intended loadings to zero, its main limitation is that all trivial cross-loadings contribute to model misspecification (Ashton & Lee, 2007). This is especially problematic for long, multidimensional scales that generate individual subscale scores, as these measures tend to have moderate to high inter-correlations and many cross-loadings (Perry et al., 2015). In fact, many well-known and widely accepted personality assessments, including IPIP-FFM and Mini-IPIP, achieve only poor to modest fit, well below the recommended criteria (Cooper et al., 2010; Hopwood & Donnellan, 2010). For example, findings have indicated that these prominent personality measures demonstrate values from .74 to .88 for CFI and .07 to .10 for RMSEA (see Donnellan et al., 2006; Lim & Ployhart, 2006). Similar findings have been reported for measures other than personality assessments as well. For example, Perry et al. (2015) examined six measures from sports and exercise psychology and found they all failed to meet recommended cutoff values. As a result, researchers are increasingly advocating against automatically rejecting scales that do not achieve a good model fit with CFA (Perry et al., 2015). Instead, other factors, such as content, construct, and criterion-related validity, internal reliability, the strength of EFA loadings on the primary factor, and cross-loadings of items across the factors should be considered (Cooper et al., 2010; Perry et al., 2015). When assessing our two focal measures (i.e., DSSC and DS Goals) based on these recommendations, we found evidence of convergent and discriminant validity, good internal reliability, strong EFA loadings on the primary factor, and small cross-loadings of

items across factors. We also found inter-correlations between factors to be small to moderate, which supported the distinctiveness of each factor. Finally, we found that our measures produced fit indices in the same range as other commonly accepted measures (e.g., CFI between .70 and .90, RMSEA between .07 and .10, see examples in Appendix A, Table S.2). Therefore, we determined that the current CFA results are consistent with prior findings involving widely accepted measures and other results are generally supportive of our two focal measures and thus decided to proceed with these measures in further analysis.

## Convergent and Discriminant Validity

Descriptives, correlations, and reliabilities for the DSSC measure and DS Goals measures are reported in Table 14, and for DSIS-T in Table 15. To gather additional evidence for the convergent and discriminant validity of our two focal measures, we assessed their relationships with a measure of trait self-control (BSCS; Tangney et al., 2013) and a measure of hedonic and eudaimonic orientation (HEMA-R; Huta & Ryan, 2010; 2016). As mentioned previously, self-control is often conceptualized as a trait-like quality and thus it is possible that holding positive views of oneself in a certain domain partially stems from believing in one's self-control capabilities in the same domain. As a result, we expected BSCS and DSSC to be correlated. However, given that the BSCS is a global measure and our self-concept measure is domain-specific, we expected these correlations to be in a moderate range. The results were consistent with our expectations. DSSC and BSCS correlations ranged from .32 to .57, suggesting both convergent and discriminant validity.

As further evidence of convergent validity, we found significant positive correlations between the DSSC scales and eudaimonic orientation. Self-concept in the achievement domain showed the strongest correlation ($r = .44$, $p < .001$), followed by health ($r = .29$, $p < .001$), social ($r = .29$, $p < .001$), and financial domain ($r = .23$, $p = .004$). Additionally, none of the DSSC scales were significantly correlated with hedonic orientation, confirming our expectations and providing evidence of discriminant validity.

As for domain-specific goal activity, we did not expect significant correlations with BSCS or hedonic motivation. However, we expected that goal activity across all domains would be significantly correlated with eudaimonic orientation, as people who are actively pursuing goals, regardless of the domain, are likely to be oriented toward the achievement of such goals. The results were consistent with our expectations, with two exceptions. First, as expected, BSCS was not significantly correlated with domain-specific goal activity in four out of five domains; however, we found a significant positive association between BSCS and self-identification with goals in the health domain ($r = .27$, $p < .001$). We can only speculate that this may be due to people strongly associating goals in the health domain with self-control capabilities; however, further research is needed to untangle this unique association. Second, eudaimonic orientation was positively associated with goals in all domains, except those related to controlling addictive behaviors. One possible explanation is that people might feel that addictive behaviors are not entirely under their control and thus intuitively disassociate goals in this domain from their overall need for achievement and growth. As for the relationships between the DS Goals scales

and the hedonic orientation scale, results were consistent with our expectations insofar as no significant associations emerged.

Overall, we found the pattern of correlations between the DSSC, DS Goals measure, BSCS, and HEMA-R's eudaimonic scale to provide evidence of convergent validity, and correlations between the DSSC and DS Goals measure and HEMA-R's hedonic orientation scale to provide evidence of discriminant validity.

## Hypotheses Testing

Two hypotheses were tested in Study 1. First, we assessed the relationship between domain-specific self-concept and domain-specific goal activity. Results revealed significant positive correlations between domain-specific self-concept and self-identification with goals in the corresponding domain (Hypothesis 1a) and between domain-specific self-concept and the importance attributed to goals in the corresponding domain (Hypothesis 1b). Specifically, for Hypothesis 1a, the correlation between DSSC Health and self-identification with health goals was $r = .44$, $p < .001$, and with health goal importance was $r = .19$, $p = .02$. For DSSC Achievement, the correlation with self-identification with achievement goals was $r = .18$, $p = .02$, and with achievement goal importance was $r = .20$, $p = .01$. For DSSC Social, the correlation with self-identification with social goals was $r = .22$, $p = .00$, and with social goal importance was $r = .24$, $p = .00$. For DSSC Financial, the correlation with self-identification with financial goals was $r =$

.29, $p < .001$, and with financial goal importance was $r = .18$, $p = .03$. Thus, Hypothesis 1 was supported[2].

To further investigate the unique relationship between domain-specific self-concept and domain-specific goals, we conducted hierarchical linear regression for variables in each domain. In each model, we first entered one of our control variables, self-control or eudaimonic orientation, followed by the domain-specific self-concept as an independent variable (IV) and self-identification with the domain-specific goal activity as a dependent variable (DV). We repeated the same process for each domain and the two DVs, one representing self-identification with goals in each domain and the other representing the importance of goals in each domain.

The pattern of results was generally consistent with our expectations. BSCS was a significant predictor of goals only in the health domain. When controlling for BSCS, DSSC in each domain was a significant predictor of self-identification with goals in that domain, and a significant predictor of importance attributed to goals in that domain, except for some health goals (see Table 16 for regression coefficients). On the other hand, eudaimonic orientation was a significant predictor of goals in all domains except the health domain. When controlling for eudaimonic orientation, DSSC was a significant predictor of self-identification with corresponding goals in all domains except achievement. However, when it came to predicting the importance attributed to the goals in each domain, DSSC

[2] Goals related to drugs (i.e., controlling addictive behaviors) were not significantly correlated with any of the four proposed domains and thus were excluded from the hypothesis testing. However, correlations for all the goals are reported in Table 14.

was not a significant predictor when controlling for eudaimonic orientation, except for goals in the social domain ($r$ = .19, $t$ = 2.39, $p$ = .02).

The next hypothesis examined in Study 1 (Hypothesis 3) assessed the relationship between domain-specific self-concept and susceptibility to temptations in the same domain. First, we examined the relationship between DSSC and temptation strength in the corresponding domain (Hypothesis 3a). We found that DSSC in each domain was significantly negatively correlated with temptation strength in the same domain. Specifically, DSSC Health was significantly negatively correlated with food temptations ($r$ = -.26, $p$ =.001), and with temptations related to exercise ($r$ = -.42, $p$ < .001), DSSC Achievement was negatively correlated with work temptations ($r$ = -.31, $p$ <.001), and DSSC Financial was negatively correlated with monetary temptations ($r$ = -.39, $p$ < .001). However, DSSC Social was not significantly correlated with temptations in the social domain ($r$ = -.14, $p$ = .07). Thus, Hypothesis 3a was partially supported.

Second, we examined the relationship between DSSC and how harmful temptations are perceived to be in the corresponding domain, expecting a positive relationship. However, the results were mixed, partially supporting Hypothesis 3b. For DSSC Achievement and DSSC Social, stronger self-concept scores were associated with perceiving temptations in the corresponding domain as more harmful ($r$ = .19, $p$ = .02 and $r$ = .26, $p$ < .001, respectively). These results were consistent with our expectations. However, for food-related temptations, association with DSSC Health was in the opposite direction ($r$ = -.22, $p$ = .00), suggesting that those with a stronger health self-concept did not see food temptation as harmful. Additionally, the relationship between DSSC Health

and the harmfulness of exercise-related temptations ($r$ = -.10, $p$ = .16) and between DSSC Financial and the harmfulness of money-related temptations ($r$ = -.07, $p$ = .37) were not significant. Taken together, Hypothesis 3 was partially supported.[3]

Additionally, we conducted hierarchical regressions to examine unique relationships between DSSC and temptations in each domain. When controlling for hedonic motivation, we found DSSC to significantly negatively predict susceptibility to temptations in the corresponding domain. However, the results were mixed when predicting how harmful temptations in each domain are perceived to be. Specifically, DSSC Achievement and DSSC Social were significant predictors of perception of harmfulness in their corresponding domains, above and beyond hedonic orientation ($r$ = .19, $t$ = 2.40, $p$ = .02 and $r$ = .27, $t$ = 3.39, $p$ < .001, respectively), but DSSC Financial was not ($r$ = -.05, $t$ = -.66, $p$ = .51). We also confirmed that DSSC Health predicted the harmfulness of food temptations in the direction opposite to what we expected ($r$ = -.22, $t$ = - 2.85, $p$ = .005), whereas DSSC Health was not a significant predictor of the perception of the harmfulness of exercise-related temptations, when controlling for hedonic orientation ($r$ = -.09, $t$ = -1.18, $p$ = .24).

Taken together, the results suggest that domain-specific self-concept is associated with identification with goals in the corresponding domain and susceptibility to temptations in the same domain. These relationships hold, even when other related

[3] Because drug-related behaviors did not map on any of the proposed self-concept domains, drug-related temptations were excluded from the hypothesis testing. However, correlations for all the variables are reported in Tables 14 and 15.

measures, such as BSCS and hedonic and eudaimonic orientation are considered. However, when it comes to predicting goal importance and the harmfulness of temptations, domain-specific self-concept is a less reliable predictor, especially when hedonic and eudaimonic orientations are added to the model. These findings suggest that it might be a eudaimonic orientation that primarily drives importance attributed to the goals, regardless of the domain. Similarly, we can speculate that those with hedonic motivation might generally perceive temptations as less harmful, also regardless of the domain.

## Research Question

Finally, we were interested in exploring what, if any, relationships exist between self-concepts and the temptations from different domains. To address this research question, we examined correlations between each domain-specific self-concept and susceptibility to temptations in three other domains. We found that those with strong positive self-concepts in the health, social, and financial domains were less susceptible to temptations in the achievement domain. This is somewhat consistent with our findings that achievement self-concept is positively correlated with self-concept in all other domains, suggesting that there is some overlap between achievement in one's profession and achievement across other domains (e.g., achieving health, social, or financial goals). Another interesting finding was that those with strong self-concepts in achievement, social, and financial domains consistently perceived social temptations as harmful. In other words, those who held strong positive beliefs about themselves in these domains were generally wary of social temptations.

The presence of significant relationships between self-concepts and temptations across several domains strongly suggests that cross-domain relationships should be considered when investigating the role of self-concept in self-control dilemmas. In particular, we feel that examining more closely the relationship between self-concepts and social temptations might be fruitful in further research.

## Summary

The primary goals of Study 1 were to further examine the dimensionality and construct validity of the two measures developed for this research, the DSSC and DS Goals, and assess how domain-specific self-concepts relate to goal activity and temptation susceptibility in the same and different domains. Overall, the DSSC and DS Goals measures demonstrated good convergent, discriminant, and incremental validity, despite a relatively modest fit produced by CFA. Additionally, our results suggest that the domain-specific self-concept is associated with goals and temptations in the corresponding domain, although some cross-domain relationships have also been noted and should be explored further.

# Chapter 6
# Study 2

The purpose of Study 2 was to examine the role self-concept plays in self-control dilemmas. Specifically, we examined the relationship between self-concept and goal importance, temptation strength, and conflict strength in self-control dilemmas. We also assessed emotions people anticipate for different outcomes of self-control dilemmas. We investigated these relationships by combining self-report data with hypothetical scenario data in two different conditions: one when the goal and temptation are in the same self-concept domain, and the other when they are in different self-concept domains.

## Participants

Participants were recruited through the crowdsourcing platform Prolific. Responses from 153 participants were evaluated based on the same criteria as in the previous studies: captcha score <.50, three attention checks, and time taken to complete the survey (i.e., the completion time of less than 10 min, which was half of the mean time of 20 min for the sample in Study 2). In the end, four participants were removed from the dataset based on failing two or more of these criteria, resulting in a sample of 149 individuals. No outliers were found with the standardized scores above the recommended threshold of 3.29 (Tabachnik & Fidell, 2013). Additionally, insufficient effort responding (IER; Huang et al., 2012) based on long string[4] was not detected in the dataset.

[4] To assess IER, we used the statistical package 'careless' (Yentes & Wilhelm, 2023) in R v.4.2.

Participants ($N$ = 149) were on average 40 years old ($SD$ = 13.88), with 64% identifying as female, 32% as male, 3% as other, and 1% preferred not to say. The sample was 56% White, 20% Black/African American, 12% Asian, 7% Hispanic, and 6% all other ethnicities/races combined. Participants reported different levels of formal education, ranging from those with high school diplomas (13%) and some college (21%) to those with doctorate degrees (5%). Participants with associate degrees (11%), bachelor's degrees (32%), and master's degrees (13%) comprised the majority. In terms of work status, 50% were employed full-time, 12% worked part-time, 23% did not work, 2% were students, 6% were retired, 3% were stay-at-home parents, 1% were volunteers, and 3% selected other. Some participants (13%) reported multiple categories, such as working part-time and being a student. Overall, the sample was fairly diverse in age, gender, race/ethnicity, and education.

## Procedure

Using the survey platform Qualtrics, participants first completed the domain-specific self-concept measure (DSSC) developed for this research. Next, participants were presented with 13 hypothetical self-control dilemma scenarios, five depicting the same domain and eight depicting different domain pairings (see Appendix B). Participants were asked about goal importance, temptation strength, and the degree of conflict for each self-control dilemma scenario. Additionally, participants were asked to report, for each option in the self-control dilemma scenarios, the emotions they would anticipate experiencing if they acted in accordance with that option. Participants were then presented with two

additional measures which were not used in this study. Demographic questions were presented at the end of the survey. The average response time was 20 minutes.

## Measures

**Domain-specific self-concept measure (DSSC).** To assess the four domain-specific self-concepts, we administered the same 31-item questionnaire as in Study 1, with all items rated on a Likert-type scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

**Goal-temptation pairs.** Hypothetical pairings between goals and temptations were developed based on prior literature and from the participant-generated dilemmas collected in the Pilot Study. The pairings consisted of a combination of goals and temptations from the same or different domains. For the same domain condition, five scenarios were presented capturing a goal and a temptation in the health, achievement, social, and financial domains. For the health domain, two scenarios were developed, one depicting a dilemma related to exercise and the other related to food. The qualitative data from the Pilot Study suggested that these are two prominent self-control dilemmas in people's lives; however, they each might relate to different aspects of a self-concept related to health. To capture these potentially distinct facets of health self-concept, we presented two health scenarios, for a total of five hypothetical scenarios in the same domain category. An example of the same-domain pairing is: **"**Your goal is to eat healthy, but you are tempted to order fast food/ takeout food."

For the different domain condition, eight hypothetical scenarios were presented, each depicting a goal from one domain and a temptation from another domain. Although

12 pairings were possible (i.e., 4 domain goals paired with temptations from 3 other domains), we selected eight combinations based on the results of the Pilot Study. Specifically, qualitative data from the Pilot Study revealed that the temptations in the social domain were the most frequent ones across all domains. Therefore, we presented three scenarios pairing a goal from each domain (i.e., health, achievement, financial) with a temptation from the social domain. We selected a second scenario for each domain to represent what appeared to be a common self-control dilemma in real life (i.e., from examples participants provided in the Pilot Study) by pairing a goal from that domain with a temptation from another domain. Goals in the social domain were paired with temptations from two of the other three domains. Thus, two scenarios were presented for each domain for eight scenarios total, pairing goals and temptations from different domains. In the following sample item, the goal is in the achievement domain and the temptation is in the social domain: "Your goal is to meet a tight deadline for a work/school project, but you are tempted to go out with friends instead."

**Goal importance**. Goal importance in each self-control dilemma was assessed with a single item: "How important would [*Insert goal from the scenario*] be to you?" The ratings were on a 5-point scale, ranging from 1 (not at all) to 5 (extremely).

**Temptation strength.** We assessed temptation strength in each self-control dilemma with a single item: "How tempting would it be to [*Insert temptation from the scenario*]?" The ratings were on a 5-point scale, ranging from 1 (not at all) to 5 (extremely).

**Conflict strength.** For each self-control dilemma, participants were asked to rate how conflicted they would be in the hypothetical scenario. The item was presented as follows: "If you faced this dilemma, how conflicted do you think you would be?" Ratings were on a 5-point scale, ranging from 1 (not at all) to 5 (extremely).

**Anticipated emotions**. Participants were asked to anticipate the intensity of the emotions they would feel if they selected each option in the self-control dilemma. Consistent with prior research on anticipated self-conscious emotions (e.g., Bagozzi et al., 1998; Hoffman et al., 2013; Kotabe et al., 2019), three emotions, pride, guilt, and regret, were rated on an 8-point scale, ranging from 0 (no emotion) to 7 (very intense emotion). The item was presented as follows: "If you would choose to [*Insert goal/temptation*], how do you anticipate feeling about it?"

**Control variables.** In Study 2, we included basic emotions and gender as additional controls due to their relevance for our assessment of self-conscious emotions.

***Basic emotions*.** Although we are primarily focused on self-conscious emotions in the current study, it is important to note that research has consistently found the presence of other, basic emotions during self-control dilemmas (Giner-Sorolla, 2001; Hofmann et al., 2013). Sometimes referred to as primary emotions (Gu et al., 2019), basic emotions include a range of non-self-conscious emotions, such as anger, fear, sadness, joy or happiness, disgust, and surprise (Ekman, 1992). Although early theories proposed between six and eight basic emotions, recent work has suggested that human beings have four basic emotions: fear, anger, joy, and sadness (Gu et al., 2015; Jack et al., 2014). Basic emotions are presumed to have a neural basis and are related to satisfying one's instinctual needs

(Schoeller et al., 2018). Two basic emotions, joy and sadness, reflect the hedonic value of the stimulus, whereas the other two, fear and anger, reflect the safety value (Gu et al., 2019).

In empirical studies, hedonic emotions have been associated with the pursuit of short-term goals (i.e., temptations; Eyal & Fishbach, 2010; Williams & DeSteno, 2008), although the strength of associations between basic emotions and goals and temptations has generally been weaker compared to self-conscious emotions. Nevertheless, it is reasonable to expect that people will, in addition to self-conscious emotions, also anticipate some basic emotions, particularly basic hedonic emotions, as they contemplate their future actions. For example, Kotabe et al. (2019) found that participants anticipated pleasure from fulfilling their desires and anticipated frustration when imagining unfulfilled desires. Both emotions were associated with weaker self-control. In further unpacking of the relationship between basic and self-conscious emotions during self-control dilemmas, Hofmann et al. (2013) found that the presence of self-conscious emotions reduced positive basic emotions (conceptualized as momentary happiness). In this study, we assessed the extent to which participants anticipated experiencing four basic emotions (i.e., joy, sadness, anger, fear) as a result of their future actions. Responses were on an 8-point scale ranging from 0 (no emotion) to 7 (very intense emotion).

***Gender*.** Several studies have suggested that, compared to men, women experience more guilt, shame, and embarrassment, and less pride (Plant et al., 2000). However, a recent meta-analysis investigating gender differences in self-conscious emotional expression (Else-Quest et al., 2012) found very small gender differences in the experience

of shame and guilt, and no differences in the experience of embarrassment and pride, with one caveat: when emotions were related to eating, body image, or sex, the effect of gender was significant and larger, favoring stronger expression of negative self-conscious emotions (i.e., shame, guilt) among women. Given that one of the domains we are investigating is related to eating and physical fitness, (i.e., health domain), we included gender as a control variable.

# Results and Discussion

## Preliminary Analyses

Before performing analyses, composite scores were created for each domain of the DSSC scale, including the three sub-facets of the health domain: food, exercise, and well-being. CFA results for the DSSC measure were consistent with the findings obtained in Study 1 ($X^2$ = 1007.37, $p$ = .000, CFI = .82, TLI = .81, RMSEA = .10, and SRMR = .09). Factor loadings were significant and ranged from .43 to .90 across items. Additionally, for each scenario, composites were created for self-conscious emotions and basic emotions related to selecting a goal and related to selecting a temptation in the scenarios. We note here that participants could choose as many emotions as applied to them, and as a result, many selected a mix of emotions in both conditions. This is consistent with some of the findings that people often experience mixed emotions related to self-control conflicts (Becker et al., 2019). The composite score thus represents the extent to which self-conscious (as opposed to basic) emotions were activated when participants anticipated pursuing a goal versus giving in to the temptation. Because our hypothesis involved examining if self-concept activates self-conscious emotions in general, we were not

interested in which discrete emotions occurred but rather in the overall activation level. Finally, composite scores for conflict strength were created for the same domain and different domain conditions.

We initially included gender and basic emotions as control variables in the emotion-related analyses. However, there were no significant differences between genders in reporting self-conscious emotions. In addition, for hypotheses related to the relationship between self-concept, conflict, and self-conscious emotions, basic emotions were not significantly correlated with conflict or with DSSC, except for one significant correlation with the facet of DSSC_Health related to exercise ($r = .19$, $p < .05$). Therefore, we excluded gender and basic emotions from further analysis.

One area of potential concern is the number of analyses we performed on the same dataset. Performing multiple statistical tests simultaneously can increase the risk of Type I error (i.e., detecting effect when there is none). Bonferroni correction is a commonly used statistical procedure to address this issue. However, scholars have recently argued against the use of the Bonferroni procedure because it further reduces the power and significantly increases the probability of Type II error (i.e., not detecting the effect when there is one; Nakagawa, 2004). Based on these recommendations, we did not use Bonferroni correction. Instead, when reporting results in the tables, we use .01 as the criterion for *p*-values but also note when the level of significance is > .01 but < .05, thus relying on more conservative criteria when interpreting results. Descriptives, correlations, and reliabilities for the measures across all scenarios are reported in Tables 17–26.

## Hypotheses Testing

Hypothesis 2 indicated that when the goal and temptation in the hypothetical scenario were in the same domain, the domain-specific self-concept would be positively associated with goal importance. Results supported this hypothesis, as there was a positive relationship across all four domains. This was also the case when the goal and temptation were from different domains, with a few caveats. Some health goals were correlated with a specific facet of health self-concept but not with others. For example, in one of the scenarios, the health goal was to get a decent night's sleep; that goal was correlated with the DSSC-wellbeing ($r$ = .22, $p$ <.01) and DSSC-overall health ($r$ = .17, $p$ <.05), but not with DSSC-food ($r$ = .08, n.s.) or DSSC-exercise ($r$ = .15, n.s.). We believe these results provide further evidence for the discriminant validity of the DSSC measure. The only non-significant correlation between a goal and DSSC in the corresponding domain was in the social goal-health temptation scenario ($r$ = .15, n.s.). This may be due to how the scenario was presented, given that the social domain is quite broad and can include many social roles that could not be all adequately captured in one scenario. The overall pattern of results, however, provides robust support for Hypothesis 2 across different scenarios.

We also hypothesized that the self-concept in the goal domain would be negatively correlated with the temptation strength in the same domain (Hypothesis 4). The results support this hypothesis in three domains: health, achievement, and financial (for two health scenarios, $r$ = -.18, $p$ < .05 and $r$ = -.20, $p$ < .05, respectively; for achievement, $r$ = -.20, $p$ < .05; for financial, $r$ = -.36, $p$ < .01). However, DSSC Social was not significantly correlated with temptation in the social domain ($r$ = -.14, n.s.). Although not hypothesized, we also explored the relationship between self-concept in the goal domain and the temptation in

another domain and found that relationship to be either negative and significant or not significant, depending on the scenario.

Hypotheses 5 and 6 involved the indirect effect of domain-specific self-concept on conflict strength through goal importance and temptation strength. Hypothesis 5 involved these relationships when the goal and temptation are in the same domain. Path analysis was conducted in R v.4.2, using the statistical package 'lavaan' v.6.14 (Rosseel, 2012). For five scenarios in the same domain, separate path analyses were conducted to assess relationships within the domain (see Figure 7-11). Across all five scenarios, the path from the domain-specific self-concept to goal importance was significant (Hypothesis 5a was supported). However, domain-specific self-concept was significantly negatively associated with temptation strength only for the health scenario involving exercise and for the financial domain scenario, providing only partial support for Hypothesis 5b. Goal importance was negatively associated with temptation strength for all domains except financial, partially supporting Hypothesis 5c. Temptation strength was positively associated with conflict strength, across all domains, supporting Hypothesis 5d. Finally, we found that goal importance and temptation strength fully or partially (depending on the scenario) mediated the relationship between domain-specific self-concept and conflict strength in all domains except financial. In the financial domain, we found a significant indirect effect through temptation strength but not through goal importance. Thus, Hypothesis 5e was partially supported (see Tables 27 and 28 for all path coefficients). Overall, we found support for the notion that goal importance and temptation strength

mediate the relationship between domain-specific self-concept and conflict strength in self-control dilemmas.

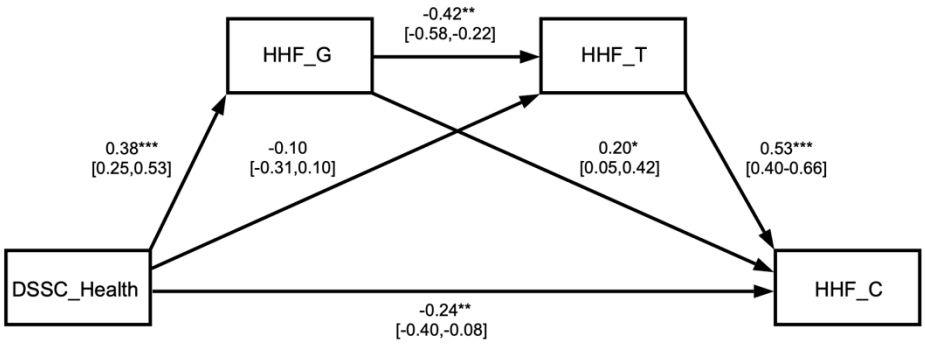


**Figure 7. Path coefficients for Scenario 1 (Health domain involving food)**

*Note*. DSSC_Health: Self-concept in the health domain. HHF_G: Goal importance in the health domain (food-related). HHF_T: Temptation strength in the health domain (food-related). HHF_C: Conflict strength in the health domain (food-related).

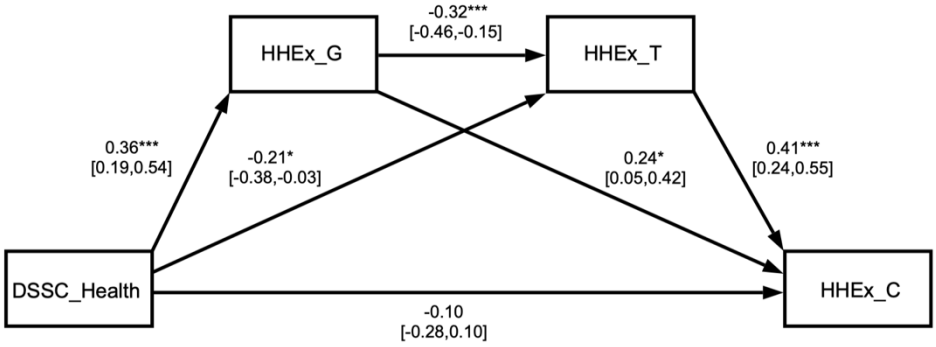


**Figure 8. Path coefficients for Scenario 2 (Health domain involving exercise)**

*Note*. DSSC_Health: Self-concept in the health domain. HHEx_G: Goal importance in the health domain (exercise-related). HHEx_T: Temptation strength in the health domain (exercise-related). HHEx_C: Conflict strength in the health domain (exercise-related).

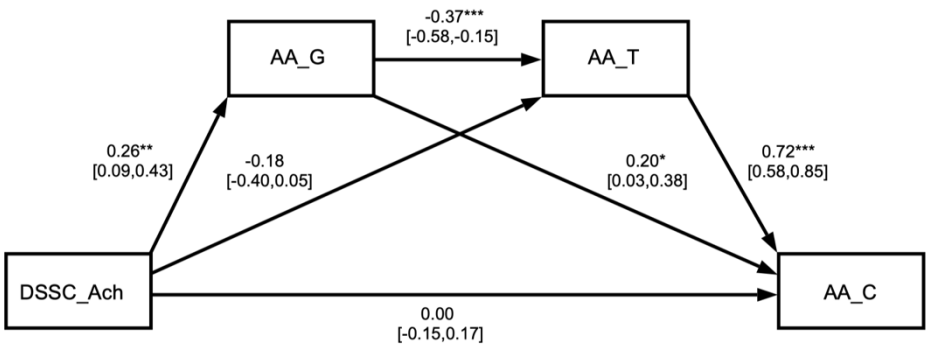


**Figure 9. Path coefficients for Scenario 3 (Achievement domain)**

*Note*. DSSC_Ach: Self-concept in the achievement domain. AA_G: Goal importance in the achievement domain. AA_T: Temptation strength in the achievement domain. AA_C: Conflict strength in the achievement domain.

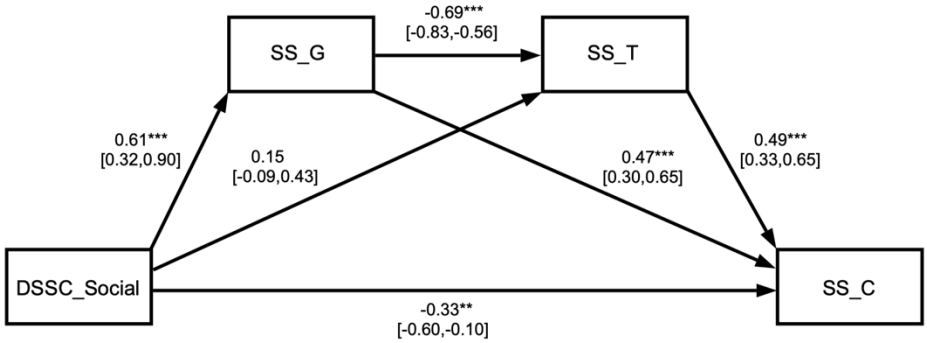


**Figure 10. Path coefficients for Scenario 4 (Social domain)**

*Note*. DSSC_Soc: Self-concept in the social domain. SS_G: Goal importance in the social domain. SS_T: Temptation strength in the social domain. SS_C: Conflict strength in the social domain.

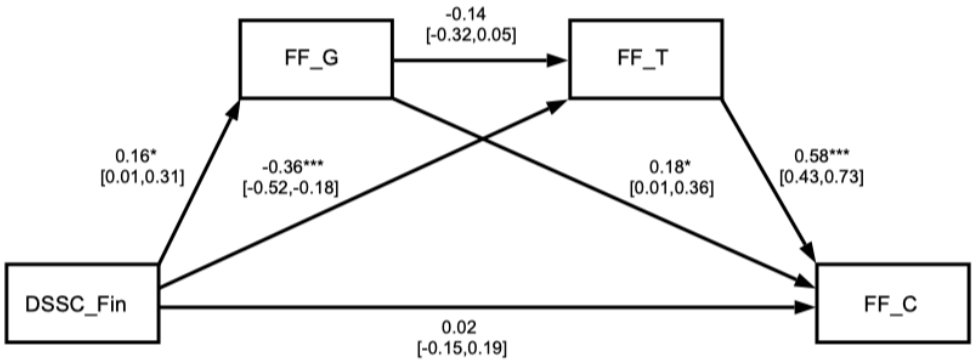


**Figure 11. Path coefficients for Scenario 5 (Financial domain)**

*Note.* DSSC_Fin: Self-concept in the financial domain. FF_G: Goal importance in the financial domain. FF_T: Temptation strength in the financial domain. FF_C: Conflict strength in the financial domain.

For Hypothesis 6, we performed a conditional process analysis to test the indirect effect of domain-specific self-concept on conflict strength through goal importance and temptation strength, as well as the conditional nature of the indirect effect when the goal and temptation are in a different domain. Once again, we performed the path analysis using the statistical package lavaan v.6.14 (Rosseel, 2012) in R v.4.2. We first constructed the same model as in Hypothesis 5 with the addition of self-concept related to the temptation to examine the non-interaction effects. We then created an interaction term between goal importance and temptation strength to assess if temptation strength moderates the relationship between goal importance and conflict in a second model. Results indicated reasonable fit for the first model (CFI = from .97 to 1.00, RMSEA = from .000 to .12, SRMR = from .000 to .04). Findings for this model provided mixed support for Hypothesis 6, depending on the scenario (see Table 29 for results for each scenario). Specifically, the relationship between domain-specific self-concept and the goal in the same domain was

significant in all but two scenarios, partially supporting Hypothesis 6a. The relationship between domain-specific self-concept and temptation strength in the same domain, as well as the relationship between temptation strength and conflict, were significant in the expected direction in four out of eight scenarios, partially supporting Hypothesis 6b and 6d. We found weaker partial support for Hypothesis 6c: the relationship between goal importance and conflict strength was significant in only two of eight scenarios. Goal importance and temptation strength had a significant negative relationship in all scenarios, fully supporting Hypothesis 6e.

Finally, results indicated poor fit for the second model (where the interaction term was added to the model; see Table 30 for model fit results). Thus, findings from this model should be interpreted cautiously. Results for this model indicated that the interaction effect was significant in three scenarios; two when the goal was in a health domain and one when the temptation was in a health domain. The interaction plots revealed that the moderating effect was mostly consistent with our expectations. Specifically, we proposed that conflict strength will increase with goal importance when temptation is strong and decrease when temptation is weak. In all three scenarios, we found that conflict strength increased with goal importance when the temptation was strong, which was consistent with our expectations. Also consistent with our expectations, conflict strength decreased with increasing goal importance when temptation was weak, in two scenarios. However, in one scenario (i.e., when health goal was paired with social temptation), conflict strength increased with goal importance even when temptation was weak, which diverged from our expectations (see Figures 12 - 14). Thus, Hypothesis 6f was partially supported.

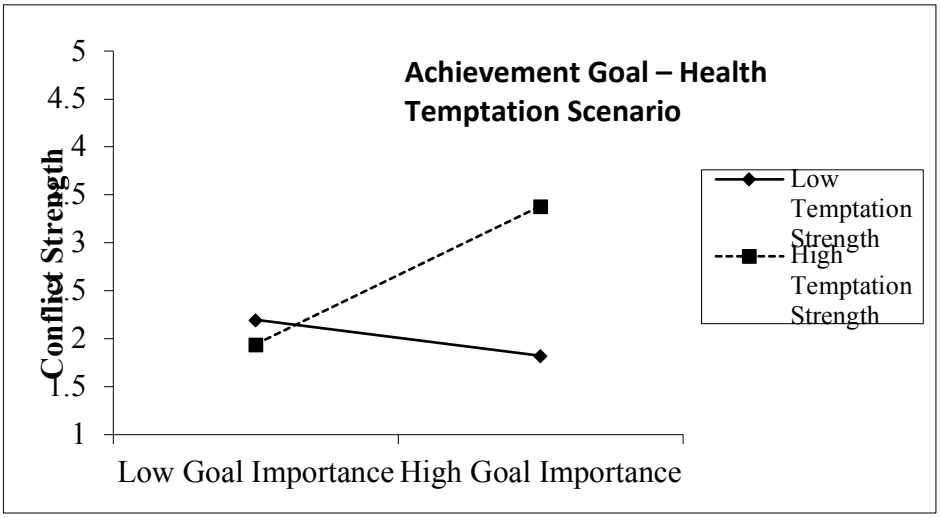


**Figure 12. Interaction Effect in Health-Achievement Scenario**

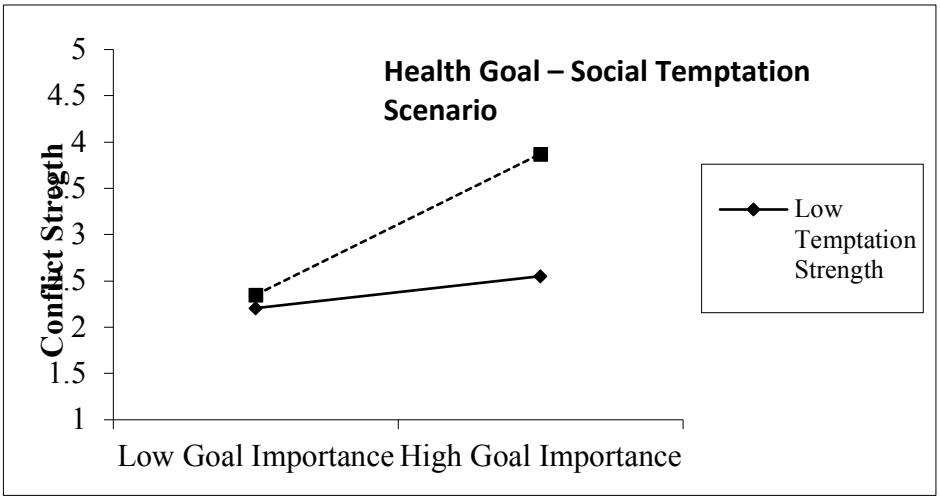


**Figure 13. Interaction Effect in Health - Social Scenario**

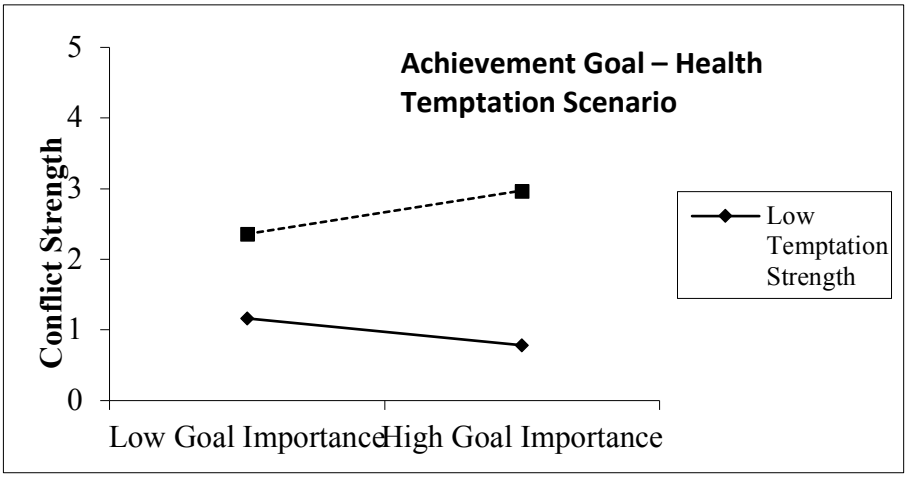


**Figure 14. Interaction Effect in Achievement - Health Scenario**

The overall pattern of the results leads us to make two observations. First, we noted that the results for the interaction effect in the scenarios involving both social and financial domains were consistently nonsignificant. In fact, the results from the four scenarios combining social and financial domains generally produced less support for several other paths in the model, compared to other scenarios. There may be subtle differences in how self-control dilemmas are processed when they involve financial and social goals and temptations. It is also possible that this is the result of how we wrote the scenarios and whether we captured the associated domains adequately. Relatedly, our second observation is that when self-control dilemmas involve a social domain, be it a social goal or a social temptation, mixed results emerge across all scenarios. Given the variety of social roles in one's life, there may be nuances in how people respond to questions depending on the role depicted in the scenario. For example, asking about a goal or temptation related to parenting may evoke different responses from those who are parents versus those who are not. As a result, exploring self-control dilemmas in a social

domain may require further differentiation of self-concept based on the social role one occupies.

Hypothesis 7 indicated that, when a goal and temptation are associated with different self-concept domains (as opposed to the same self-concept domain), conflict strength will on average be higher, and stronger conflict would be more frequent. To examine this, we investigated the extent to which conflict strength and frequency of strong conflict differed between the same domain and different domain self-control dilemmas. Contrary to Hypothesis 7, we found that conflict strength was on average higher when the self-control dilemma was in the same ($M = 2.80$, $SD = 0.69$) versus different domains ($M = 2.29$, $SD = 0.65$). Based on the results of the paired samples t-test, this difference was significant ($t_{(148)} = 8.93$, $p < .001$). Similarly, the distribution of scores in the histogram [i.e., > 3.0 on the scale from 1 (no conflict) to 5 (extreme conflict)] also suggested that stronger scores were more frequent in the same domain scenarios (36%) than in the different domain scenarios (19%). Taken together, although we found a significant difference in the strength of the conflict between the two scenario types, it was not in the expected direction. Thus, Hypothesis 7 was not supported.

We further investigated the relationship between the DSSC measure, conflict strength, and self-conscious emotions. In Hypothesis 9a, we proposed that conflict strength will be associated with self-conscious emotions; however, we also proposed in Hypothesis 9b that domain-specific self-concept will be associated with self-conscious emotions over and above conflict strength. We conducted linear regressions to test the hypothesis. For each scenario, we tested self-conscious emotions for the goal, temptation, and combined,

as dependent variables (DVs), and conflict strength (entered first in the model) and domain-specific self-concept (entered second in the model) as independent variables (IVs). We found partial support for Hypothesis 9a. In one scenario involving exercise, and three scenarios involving either social goal or temptation, conflict strength predicted self-conscious emotions related to temptation. In all other scenarios, conflict strength was not associated with self-conscious emotions. Hypothesis 9b was also partially supported, although a clear pattern emerged. In eight scenarios, two describing self-control dilemmas in the same domain (achievement and social domain) and six scenarios with dilemmas in different domains, domain-specific self-concept predicted self-conscious emotions related to the goal (see Table 31 for significant regression coefficients). This pattern of results suggests that the self-concept may indeed activate self-conscious emotions in the presence of the dilemma, in particular regarding the goal that is being challenged.

## Exploratory Analysis

Although not hypothesized in Study 2, we explored which emotions participants anticipated feeling if, in the future, they stuck with the goal as opposed to giving in to the temptation. Results indicated that when a goal and a temptation were in the same self-concept domain, participants, on average, anticipated more pride when selecting a goal ($M$ = 4.54, $SD$ = 1.60) than guilt ($M$ = 0.64, $SD$ = 1.22) or regret ($M$ = 1.29, $SD$ = 1.38). When selecting a temptation, participants anticipated more guilt ($M$ = 3.69, $SD$ = 1.52) than pride ($M$ = 1.12, $SD$ = 1.40) or regret ($M$ = 3.25, $SD$ = 1.43). Given the small difference in mean scores between guilt and regret, we conducted a paired sample t-test which confirmed that the difference was statistically significant ($t_{(146)} = 7.05$, $p < .001$).

When a goal and temptation were in different self-concept domains, results showed that when selecting a goal, participants still anticipated pride ($M$ = 4.31, $SD$ = 1.71) more than regret ($M$ = 1.46, $SD$ = 1.15) or guilt ($M$ = 1.42, $SD$ = 1.23). Selecting temptation was associated with guilt ($M$ = 3.58, $SD$ = 1.18) more than pride ($M$ = 2.17, $SD$ = 1.54) and regret ($M$ = 3.31, $SD$ = 1.12). Once again, given the small difference in mean scores between guilt and regret, we conducted a paired sample t-test which confirmed that the difference was statistically significant ($t_{(147)}$ = - 4.22, $p$ < .001).

Additionally, we compared the strength of each self-conscious emotion in the same and different domains. In general, participants anticipated stronger pride in pursuing the goal when the dilemma was in the same domain compared to different domains ($t_{(147)}$ = 2.93, $p$ = .004). However, in different domains, guilt was more commonly present when a goal was selected, compared to the same domain dilemma ($t_{(134)}$ = 8.30, $p$ < .001). There were no significant differences in anticipation of regret between same and different domain scenarios ($t_{(139)}$ = -1.78, $p$ = .08). When temptation was selected, participants were more likely to anticipate pride in a different domain than the same domain ($t_{(138)}$ = -9.54, $p$ < .001) but there were no significant differences in anticipated guilt or regret between the two conditions. Taken together, the pattern of results suggests that, regardless of whether the dilemma is in the same or different domains, people generally anticipate feeling pride for pursuing goals and a mix of guilt and regret for giving in to the temptation. In addition, although it is premature to draw conclusions based on the current results, there are some indications that people anticipate more mixed self-conscious emotions for self-control dilemmas in different domains.

## Summary

The primary goal of Study 2 was to examine the relationship between self-concept and goal importance, temptation strength, conflict strength, and self-conscious emotions in self-control dilemmas. We combined self-report data with hypothetical scenario data to investigate these relationships in two different conditions: one when the goal and temptation are in the same domain, and the other when they are in different domains. Under both conditions and across domains, we generally found that the domain-specific self-concept was positively associated with goal importance, goal importance was negatively associated with temptation strength, and temptation strength was positively associated with conflict strength. In the same domain condition, goal importance and temptation strength mediated the relationship between domain-specific self-concept and conflict strength. However, results were mixed for indirect and conditional effects in the different domain conditions. The results for the relationships between domain-specific self-concept, conflict, and self-conscious emotions were also mixed although there were several findings consistent with our expectations.

# Chapter 7
# Study 3

The main objective of Study 3 was to test additional hypotheses related to real-life self-control decisions and the emotional consequences of such decisions. To do so, we assessed the relationship between conflict, self-control dilemma decisions, and the associated emotions in two different conditions: one when the goal and temptation are associated with the same self-concept domain, and the other when they are associated with different self-concept domains.

## Participants

Participants were recruited through the crowdsourcing platform Prolific. In Study 3, data were collected in three waves. Participants who participated in Wave 1 were invited to take part in Waves 2 and 3. Responses from 309 participants were collected in Wave 1. In Wave 2, the response rate was 86% ($N = 267$), and in Wave 3, the response rate was 78%, ($N = 243$).

Responses from participants in Wave 1 were evaluated based on the same criteria as in the previous studies: captcha score, one attention check, and time taken to complete the survey (i.e., the completion time of less than 2.5 min, which was half of the mean time of 5 min for the sample in Study 3). Additionally, because the Wave 1 survey included two open-ended questions, we evaluated the quality of participants' responses in conjunction with other exclusion criteria. No participants were removed from the dataset based on the above criteria. However, after performing a preliminary analysis, three outliers were

detected with standardized scores above the recommended threshold of 3.29 (Tabachnik & Fidell, 2013). Once the outlier cases were removed, the final sample was 306 participants in Wave 1.

In Waves 2 and 3, the surveys had only eight items and, on average, took just over a minute to complete; thus, we relied on the captcha score and quality of one open-ended response instead of attention checks and duration. In Wave 2, one case was removed because it was an outlier in Wave 1, and one case was removed because the qualitative response was not understandable and could not be coded. The final sample for Wave 2 was 265 participants. In Wave 3, one preview case was detected and removed and one outlier case from Wave 1 was removed, resulting in the final sample of 241 participants.

Participants from Wave 1 ($N = 306$) were on average 35 years old ($SD = 10.52$), with 51% identifying as female, 45% as male, 3% as other, and 1% preferred not to say. The sample was 72% White, 10% Black/African American, 9% Asian, 8% Hispanic, and 1% all other ethnicities/races combined. Participants reported different levels of formal education, ranging from those without high school diplomas (2%), those with high school diplomas (10%), and some college (19%), to those with doctorate degrees (2%). Participants with associate degrees (12%), bachelor's degrees (40%), and master's degrees (14%) comprised the majority. In terms of work status, 65% were employed full-time, 18% worked part-time, 10% did not work, and 2% were students, stay-at-home parents, or volunteers. Some participants (16%) reported multiple categories, such as working part-time and being a student. Overall, the sample was fairly diverse in age, gender, race/ethnicity, and education.

## Procedure

Across three waves, we used an experience sampling approach to collect data on the participants' self-control dilemma experiences, including their goals, temptations they faced, conflicts they experienced, decisions they made, and emotions that followed their choices. Multiple waves were intended to access more immediate experiences and capture momentary self-conscious emotions. Wave 1 included one of the measures assessed in Study 2 (i.e., DSSC) and one control measure (i.e., BSCS), as well as demographic items.

**Wave 1.** At initial data collection ($T_0$), participants first completed the DSSC, the domain-specific self-concept measure developed for this research. Next, participants were asked to identify and write a goal they are currently pursuing and then select which domain category this goal best fits in. The five categories to choose from were goals related to the health/well-being domain, achievement domain, social domain, financial domain, and 'other' category. Participants rated the importance of the goal. Next, participants were asked to think of and write about a temptation they recently experienced that interfered with making progress or achieving their goal. Participants rated temptation strength, how conflicted they were, the extent to which they resisted the temptation, and the intensity of emotions they experienced after the dilemma. Finally, participants were asked how committed they were to working on this goal in the future. One control measure, BSCS, and five demographic questions were administered at the end of the survey. The survey took on average five min to complete.

**Waves 2 and 3.** Participants who completed Wave 1 were eligible to participate in Waves 2 ($T_1$) and 3 ($T_2$). Surveys for both waves were identical. Each survey became

available 24 hours after the previous wave was published and remained open for 72 hours. The goal participants reported in Wave 1 automatically populated in Waves 2 and 3. Participants were first asked to confirm that is their goal. If participants selected "no", they were asked to report another goal they were trying to accomplish. Next, participants rated how important the goal is currently to them and if they experienced any temptations that interfered with their goal since the last survey. Participants who reported experiencing temptations were asked to write the temptation they experienced and rate the temptation strength, the intensity of conflict they experienced, the outcome, and the emotions they experienced post-choice. If participants reported no temptations, they were asked to report how much progress they made on their current goal, satisfaction with the rate of progress, and any emotions they felt related to their progress. The purpose of these additional goal-related items was to ensure that participants had to answer a similar number of items whether they responded yes or no to temptations, and that way discourage answering "no temptations" only to end the survey early. These 'filler' items were not used in the subsequent analysis. Finally, participants were asked how committed they were to working on this goal in the future. Surveys in Waves 2 and 3 were completed in a little over a minute, on average.

## Measures

**Domain-specific self-concept measure (DSSC).** We administered the same 31-item questionnaire as in Studies 1 and 2, with all items rated on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

**Goal importance**. Goal importance was assessed with one item, "How important is this goal/outcome to you now", on a 5-point scale, ranging from 1 (not at all) to 5 (extremely).

**Goal commitment**. Goal commitment was assessed with one item, "How committed are you to working on this goal in the future?", with ratings on a 5-point scale from 1 (not at all) to 5 (extremely committed).

**Temptation strength.** Temptation strength was assessed with a single item: "How strong was this temptation?" The ratings were on a 5-point scale, ranging from 1 (not at all) to 5 (extremely).

**Conflict strength.** Conflict strength was assessed with the following item: "How conflicted were you about what to do?" The ratings were on a 5-point scale, ranging from 1 (not at all) to 5 (extremely conflicted).

**Self-control dilemma decision**. Participants who indicated they experienced a self-control dilemma were asked to what extent they resisted the temptation. The ratings were on a 5-point scale, ranging from 1 (not at all) to 5 (completely resisted).

**Post-decision emotions.** Participants were asked to rate the intensity of emotions they experienced after they resolved the self-control dilemma. The three self-conscious emotions (i.e., pride, guilt, regret) were on a 6-point scale, ranging from 0 (no emotion) to 5 (very intense emotion).

**Trait self-control**. We included a measure of trait self-control as a control variable since trait self-control has been consistently linked to self-control successes and failures, and by extension, is expected to play a role in one's capacity to resist temptations (Cobb-

Clark et al., 2022; Gillebaart & Kroese, 2020; Tangney et al., 2004). Thus, to investigate the unique influence of self-concept on self-control dilemma decisions, it is important to account for the role trait self-control plays. The Brief Self-Control Scale (BSCS; Tangney et al., 2004) is a commonly used 13-item self-report questionnaire. A sample item is "I am good at resisting temptation." Items are rated on a 5-point scale ranging from 1 (not at all like me) to 5 (very much like me).

# Results and Discussion

## Preliminary Analyses

Before performing hypothesis testing, composite scores were created for each domain of the DSSC scale, including the three sub-facets of the health domain: food, exercise, and well-being. CFA results for the DSSC measure were consistent with the results obtained in Studies 1 and 2 ($X^2$ = 1394.27, $p$ = .000, CFI = .86, TLI = .85, RMSEA = .09, and SRMR = .07). All factor loadings were significant and ranged from .51 to .93. Because we were also interested in the relationship between domain-specific self-concept, conflict, and self-control dilemma decisions (i.e., if participants exercised self-control or gave in to the temptation), we included trait self-control as a control variable in Study 3. As mentioned earlier, trait self-control may be implicated in the ability to exercise self-control and thus it was important to control its effects when assessing the role of self-concept. We found that trait self-control was not a significant predictor of self-control when domain-specific self-concept (i.e., self-concept in the health domain in this case) was entered into the model (for BSCS, $\beta$ = .11, $t$ = 1.25, $p$ = .21). However, DSSC_Health was

a significant predictor of self-control ($\beta$ = .20, $t$ = 2.26, $p$ = .03); thus, we excluded BSCS from further analysis.

Finally, in the preliminary analysis, we also confirmed the relationships between DSSC, goals, temptations, and conflict in self-control dilemmas. Specifically, we examined these relationships in the health domain since health-related self-control dilemmas were the ones used in subsequent analyses. It was important to confirm that domain-specific self-concept had significant relationships with these variables because, in Study 3, the influence of self-concept on outcomes of self-control dilemmas was assessed implicitly through the type of dilemma (i.e., whether a dilemma involved a goal and temptation in the same or different self-concept domains). DSSC_Health had a significant positive association with health goal [5] ($r$ = .17, $p$ = .03), and a significant negative association with temptation and conflict strength ($r$ = -.25, $p$ = .002, and $r$ = -.16, $p$ = .04, respectively). Given that these findings were consistent with our expectations, we proceeded with further analysis.

## Coding of Participant-Generated Answers

Participant-generated goals and temptations were coded into one of the four domains. Goal domains selected by participants were checked by the researcher to ensure they were assigned appropriately. Goals in the "other" category were coded by the researcher and assigned to one of the four domains. Temptations reported by participants were also coded by the researcher and assigned to one of the existing domain categories.

[5] In Study 3, the importance of a health goal was assessed with an average of two items: goal importance and goal commitment.

Finally, when goals and temptations were associated with the same self-concept domain, the self-control dilemma type was coded as "0", and when goals and temptations were associated with different self-concept domains, the self-control dilemma type was coded as "1". An example of a self-control dilemma in the same domain is: "*Goal:* Implement therapeutic intermittent fasting combined with a healthier diet; *Temptation*: Having the urge to snack before bedtime." An example of a self-control dilemma involving different domains is: "*Goal*: Gain weight/muscle mass; *Temptation*: Go out with friends instead of working out."

## Qualitative Analysis Results

Across the three data collection waves, we assessed the distribution of goals and temptations across domains and the extent to which self-control dilemmas involve one or more self-concept domains. In Wave 1, 82% of self-control dilemmas involved one self-concept domain, 16% multiple self-concept domains, and 2% could not be determined. Goals in the health domains (63%) were the most frequent ones, followed by achievement goals (19%), financial goals (18%), and social goals (3%). When temptations and goals were associated with different self-concept domains, 65% of temptations were in the social domain, 14% were in the financial domain, 12% in the health domain, and 8% in the achievement domain. The same trends were observed in Waves 2 and 3. In Wave 2, 84% of dilemmas were in the same domain, as were 81% in Wave 3. Consistent with Wave 1 findings, when multiple self-concept domains were involved, the majority of temptations were social (65% in Wave 2 and 70% in Wave 3). Finally, 53% of respondents in Wave 2 and 44% in Wave 3 reported experiencing self-control dilemmas since the last survey.

These findings are largely consistent with qualitative analysis results from the Pilot Study. In both studies, we found that self-control dilemmas associated with the same self-concept domain are more frequent than those associated with multiple domains. Another consistent finding was that social temptations are frequently experienced in everyday life. One area where the findings diverge between the two studies is the frequency of self-control dilemmas in the health domain. In the Pilot Study, it was financial and social domain dilemmas that were the most frequent. However, in this sample, health-related dilemmas were two to three times more frequent than dilemmas in other domains.

## Hypotheses Testing

Hypotheses 8, 10, and 11 involved testing new relationships not examined in Studies 1 and 2. Specifically, Hypothesis 8 involved the relationship between conflict strength and self-control, and Hypotheses 10 and 11 involved the relationships between self-control and self-conscious emotions. A multilevel modeling approach was used in order to address the dependency arising from the clustering of data in experience sampling. Analysis was performed in Mplus 6.1 (Muthén & Muthén, 1998-2010). At level 1, observed variables included conflict strength, self-control, and three self-conscious emotions (i.e., pride, guilt, and regret). All level 1 variables were continuous. From the self-control dilemmas in the same domain, we selected the health domain because it had the highest number of observations ($N = 155$). For comparison purposes, the achievement domain had 41 observations, the social domain had 7 observations, and the financial domain had 48 observations. Descriptives, correlations, and ICCs for the measures used to test the hypotheses are reported in Tables 32 and 33.

In Hypothesis 8, we proposed that conflict strength will be positively associated with self-control when a goal and a temptation are associated with the same self-concept domain (Hypothesis 8a) and that conflict strength will be negatively associated with self-control when a goal and a temptation are associated with different self-concept domains (Hypothesis 8b). The results indicated that in the same domain condition (i.e., when a goal and temptation are associated with the same self-concept domains), conflict strength was a significant predictor of self-control; however, the direction of the relationship was opposite of what we expected (Estimate = -0.40, $p = 0.001$). Thus, Hypothesis 8a was not supported. In the different domains condition (i.e., when a goal and temptation are associated with different self-concept domains), conflict strength did not predict self-control (Estimate = -0.03, $p = 0.93$). Thus, Hypothesis 8b was not supported. We note here that the significant relationship between conflict strength and self-control in Hypothesis 8a was negative, which is consistent with some prior research (Hofman et al., 2012a). However, there are other studies that found a positive relationship between conflict and self-control (Stillman et al., 2017). Overall, these inconsistencies in findings, including the present research, suggest that more work is needed to understand the relationship between conflict and self-control.

Hypothesis 10 involved the relationship between the outcome of the self-control dilemma (i.e., the extent to which participants demonstrated self-control by resisting the temptation) and the self-conscious emotions related to that outcome. Specifically, when a goal and temptation were associated with the same self-concept domain, we expected self-control to be positively associated with pride (Hypothesis 10a) and negatively associated

with guilt (Hypothesis 10b). The results were consistent with our expectations. Self-control was positively associated with pride (Estimate = 0.78, $p$ = .000) and negatively associated with guilt (Estimate = -0.81, $p$ = .000). Thus, Hypothesis 10 was supported.

Hypothesis 11 involved the relationship between self-control and self-conscious emotions when a goal and temptation were associated with different self-concept domains. We expected self-control to be positively associated with regret (Hypothesis 11a) and negatively associated with guilt (Hypothesis 11b). Results partially supported Hypothesis 11, as regret was not significantly associated with self-control (Estimate = 0.02, $p$ = .95) but guilt had a significant relationship with self-control (Estimate = -0.52, $p$ = .01). Although it was not hypothesized, we observed that pride was significantly associated with self-control in this condition (Estimate = 0.47, $p$ = 0.03). However, we urge caution when interpreting results for Hypothesis 11 because of the small number of observations. When a self-control dilemma involved different self-concepts, the total number of observations was 88 for regret and 86 for guilt, all of which came from 72 respondents. In comparison, there were between 418 and 427 observations from 264 respondents when a self-control dilemma involved the same self-concept domain.

These numbers also suggest that individual participants experienced more occurrences of self-control dilemmas in the same domain than in different domains. We suggest that this may be due to the nature of the self-control dilemmas we analyzed. Specifically, in the same domain condition, we analyzed only self-control dilemmas in the health domain and our qualitative data analysis revealed that most of those were related to food. Anecdotal evidence suggests that food-related temptations are a daily occurrence, as

we are surrounded by various unhealthy, yet tasty choices. Thus, it is reasonable to conclude that self-control dilemmas related to food would be common for those who are pursuing goals in this domain. On the other hand, our qualitative data also revealed that when multiple self-concept domains were involved, the majority of temptations were in the social domain. These types of temptations typically involve social gatherings or specific events involving other people, which are less likely to occur daily. As a result, we would expect to see fewer dilemmas involving social temptations during a short data collection period.

## Summary

The primary goal of Study 3 was to assess the relationship between self-control dilemma conflict, self-control dilemma decisions, and the associated emotions in two different conditions: one when the goal and temptation are associated with the same self-concept domain, and the other when they are associated with different self-concept domains. To access more immediate experiences and capture momentary self-conscious emotions, we collected data on multiple occasions, using an experience sampling approach. The strength of conflict significantly and negatively predicted self-control only when a goal and temptation were in the same self-concept domain. In terms of self-conscious emotions associated with self-control in both conditions, we found that people experienced pride when they resisted temptations and guilt when they did not. Although the expected relationship between self-control and regret was not significant in the different domain condition, we urge caution in interpreting these results because of the small number of observations when a self-control dilemma involved multiple self-concepts.

# Chapter 8
# General Discussion

Despite self-control dilemmas being inextricably linked to the notion of "self", the role "self" plays in the unfolding of such dilemmas has largely remained unexplored in research on self-control. The purpose of our current research was to address that gap by considering how the "self" might influence self-control processes. Across four studies, we explored the role self-concept plays in the unfolding of self-control dilemmas, focusing on how self-concept shapes the experience of conflict and triggers the self-conscious emotions associated with that conflict. Drawing from two disparate streams of research, one on "self" and the other on self-control, we proposed that self-concept, as an organizing and interpretive cognitive structure, is involved in the processing of goal- and temptation-relevant information and subsequent interpretation of a situation as conflicting to the person. Given that affect typically accompanies self-relevant information (Mischel & Shoda,1995), we also suggested that self-concept is implicated in the affective experience of the conflict by activating self-conscious emotions as the self-control dilemma unfolds. Starting with this premise, we further proposed that the effect of self-concept on self-control dilemmas is not a direct one but rather operates through the influence on the three key features of a self-control dilemma: goals, temptations, and conflict.

To explore the role of self-concept, we focused our investigation on the relationships between domain-specific self-concepts, goals, temptations, conflict, and self-conscious emotions, both in hypothetical and real-life self-control dilemmas. We leveraged both qualitative and quantitative data to understand better the type of self-control dilemmas

people experience and if and how self-concept domains are implicated. In particular, we explored potential differences in the processing of self-control dilemmas when a goal and temptation are in the same self-concept domain as opposed to different self-concept domains. Discussion of our findings is organized around these key areas.

## Domain-specific self-concept measure

Before we could investigate the relationships between self-concepts and different features of a self-control dilemma, it was necessary to develop a domain-specific self-concept measure. The existing literature on self-concept does not provide a single measure of the construct, although there are some global measures, such as Rosenberg's Self-Esteem scale (RSE; Rosenberg, 1965) that are sometimes used to assess self-concept. Regardless of the lively debate regarding equating self-esteem and self-concept, a global measure such as RSE would not work in our studies as we were interested in domain-specific self-concepts.

In developing our measure, we focused on four major life domains that commonly appear in self-control dilemmas: health, achievement, social, and financial. These four dimensions were supported by the results of EFA (Pilot Study) and CFA (Studies 1 to 3). Although model fit results from the CFAs were below the recommended thresholds, they were within the range found in other widely accepted multidimensional scales, such as IPIP-based measures (Cooper et al., 2010; Donnellan et al., 2006). Furthermore, we found significant, positive, and fairly high loadings of items on related factors, across four samples. The four scales of the DSSC measure (i.e., health, achievement, social, and financial domain scales) demonstrated good reliability across the four studies, with

coefficients consistently being between .86 and .95. We also found considerable convergent and discriminant validity evidence in the Pilot Study and Study 1, with most of the relationships between DSSC and other measures being as expected in terms of significance, direction, and magnitude. Finally, findings from Study 1 confirmed that the domain-specific self-concept is associated with goals and temptations in the corresponding domain, although the DSSC measure also captured some cross-domain relationships that we explored further in Study 2.

Overall, we concluded that the DSSC measure performed well psychometrically and thus we were comfortable using it in further analysis, with a few caveats. First, it is important to note that DSSC_Health (i.e., domain-specific self-concept in the health domain) consisted of three sub-scales: food-related, exercise-related, and related to well-being. Although all are aspects of health, we acknowledge that they could be somewhat independent of each other. For example, one could be very focused on fitness but not necessarily feel strongly about the food they eat. As a result, when the three scales are combined into a composite measure, high ratings on one sub-scale could be offset with low ratings on the other sub-scales, producing a neutral response that does not faithfully reflect reality. This could have further implications for using the measure to assess relationships with goals and temptations in the health domain. In our studies, we found somewhat contradictory evidence related to DSSC_Health. On one hand, all item loadings on the health factor were consistently high, and the reliability coefficients were between .92 and .93. Additionally, when assessing different models with CFA, splitting a health factor into two, three, or four factors based on sub-scales, did not result in a significantly better model

fit. On the other hand, when evaluating the relationships between DSSC_Health and goals in self-control dilemma scenarios, we found that some health goals were correlated with a specific facet of health self-concept but not with others. For example, when the health goal in one scenario was to get a decent night's sleep, that goal was correlated with the DSSC_wellbeing but not with DSSC_food or DSSC_exercise. Thus, we cautiously conclude that the DSSC_Health can be used to assess health self-concept but consideration must be given to the specific context in which the scale is used.

We note a few other considerations related to the two other DSSC scales. The achievement factor in DSSC was moderately correlated with the three other factors, suggesting that those who see themselves as achievers might manifest this perception across multiple domains. The implication of this finding for future research is that it might be difficult to tease out the influence of achievement self-concept from self-concepts in other domains. DSSC_Social included a wide range of social roles, which can also be problematic when people occupy some but not all roles. It is also possible that, as people go through different stages of life, some roles become more salient than others. For example, a college student might find being a friend particularly important just as moms and dads might find being a parent especially salient. Although we purposely made these self-concept domains fairly broad in this study to capture a wide range of goals and temptations, more narrow domains may offer better predictive power and be necessary in some cases.

## The types and nature of self-control dilemmas

The qualitative data from two studies (Pilot Study and Study 3) provided strong evidence that the majority of self-control dilemmas people experience involve goals and temptations that are in the same self-concept domain. An example of a dilemma in the same domain is a person who has a goal of eating a healthy and balanced meal but is tempted by specific unhealthy foods (e.g., snacks, sugary desserts). In contrast, an example of a self-control dilemma that involves multiple self-concepts is someone whose goal is to go to the gym being tempted to skip it to go out with friends. Overall, 73% of self-control dilemmas in the Pilot Study and 82% in Study 3 involved the same self-concept domain. However, the specific domain associated with the majority of self-control dilemmas differed between the two studies. In the Pilot Study, most of the dilemmas were associated with the financial and social domains, whereas in Study 3, most dilemmas were in the health domain. Although the differences in the average age of the samples (Pilot Study: $M_{(age)} = 42$; Study 3: $M_{(age)} = 35$) might suggest changes in focus at different life stages, we do not have enough information to draw definitive conclusions. However, one of the patterns that consistently emerged across the samples was that, when multiple self-concepts are involved, social temptations are most frequently experienced.

Finally, the large difference in frequency between self-control dilemmas in the same versus different domains raises some interesting questions about how people construe self-control dilemmas in the first place. Although this was not the focus of the present research, we offer some thoughts based on the results of our studies. First, people may perceive dilemmas in the same domain as more typical, or even think of them as "true"

self-control dilemmas. By their very nature, these types of dilemmas are located within the person and often involve a struggle to do something we don't want to do or to stop ourselves from doing something we shouldn't be doing. In contrast, self-control dilemmas that involve multiple self-concept domains may be seen more as a dilemma between two valuable goals. People may perceive these dilemmas more as goal conflict, or a goal prioritization issue. In this case, it is possible that any interference with the long-term goal may not be interpreted as a temptation at all but rather as a perfectly justifiable action, in that moment.

## Self-concepts, goals, temptations, and self-conscious emotions

The main premise of our research is that domain-specific self-concepts are associated with goals and temptations in the same domain. We assessed these relationships in Study 1, using DSSC, domain-specific goals measure (DS Goals), and domain-specific temptation measure (DSIS-T). Across all four domains, we found robust evidence that domain-specific self-concepts are positively correlated with the extent to which people identify with goals in the same domain and find these goals important. In terms of the relationship between domain-specific self-concept and susceptibility to temptations in the same domain, we found evidence of significant negative relationships in all domains except the social domain. The lack of a significant relationship between self-concept in the social domain and social temptations is interesting as social temptations were frequently reported by the respondents. We can offer two possible explanations. One is the possibility that the DSSC_Social scale was too broad in trying to capture a mixture of roles. As we alluded to earlier, it is reasonable to assume that some of those roles did not apply to some

of our participants, affecting the overall scores on the composite measure. The other possibility is that social temptations are complex and influenced by many factors, among which self-concept plays a diminished role. In other words, people may be tempted to give in to social temptations because of their hedonic value, or perhaps, external pressures such as social norms and expectations. Finally, we found several significant relationships between self-concepts and temptations in other domains suggesting that cross-domain relationships should also be considered when investigating the role of self-concept in self-control dilemmas.

In addition to its relationship with goals and temptations, we also proposed that self-concept would be implicated in the generation of self-conscious emotions in self-control dilemmas, although we expected that the intensity of self-conscious emotions would be related to the strength of conflict. Surprisingly, we did not find strong support for the relationship between the strength of conflict and the intensity of the emotions. In only a handful of scenarios, conflict strength predicted self-conscious emotions associated with giving in to temptation. However, we found more consistent support for the relationship between domain-specific self-concept and self-conscious emotions related to the goal. This pattern of results indirectly supports the notion that the self-concept activates self-conscious emotions in the presence of a dilemma, in particular regarding the goal that is being challenged.

## Self-control dilemmas involving the same self-concept domain

Using hypothetical scenarios, we further investigated the relationships between self-concept, goal importance, temptation strength, and conflict strength in self-control

dilemmas involving the same domain. As expected, we found that those who held strong and positive views of themselves in a specific domain attributed greater importance to goals and experienced weaker temptations in that same domain. Further, goal importance and temptation strength had a significant negative relationship, and that had implications for conflict strength. By weakening temptation strength, important goals also seemed to reduce conflict strength. These results are consistent with some of the previous research which found that stronger goals lead to weaker temptations (Milyavskaya et al., 2015). Taking this a step further, we also found support for the indirect effect of domain-specific self-concept on conflict strength through goal importance and temptation strength. Overall, these results provide indirect support for our view that when goals are associated with a particular self-concept, temptations interfering with that goal might be experienced as a violation of the self-concept associated with the goal. Thus, self-concept, in an effort to buffer against violations of how we see ourselves, may also change how we experience tempting stimuli.

Leveraging the experience sampling approach in Study 3, we investigated how people resolved self-control dilemmas and what were the emotional consequences of their decisions. Building on the premise that people would be particularly sensitive to the violations of their positive self-concepts, we expected that when self-control dilemmas involve the same self-concept, a stronger conflict would lead to stronger resistance, resulting in greater self-control. However, we found that conflict strength and self-control had a significant and negative relationship, contrary to our expectations. Finally, those who

exerted self-control reported feeling pride, whereas those who gave into temptations reported feeling guilt.

## Self-control dilemmas involving different self-concept domains

When self-control dilemmas involved multiple self-concept domains, our results painted a murkier picture. Although in most cases, we still found self-concept to be related to goal importance in the same domain, the relationship between temptation and self-concept in the temptation domain was less consistent. We also found weaker and/or inconsistent support for the relationship between temptation strength and conflict strength, and goal importance and conflict strength. However, the relationship between goal importance and temptation strength was significant and negative in all scenarios, which implies that goals and temptations might indeed go hand in hand, as suggested by some research (Fishbach et al., 2003; Fishbach & Shah, 2006). Furthermore, we found goal importance and temptation strength to interact in some of the scenarios, and that interaction was mostly consistent with our expectations.

In contrast with the same domain condition, conflict strength did not predict self-control when multiple domains were involved. Regarding self-conscious emotions, we found that self-control led to feelings of pride, and giving in to temptation led to feelings of guilt. Contrary to our expectations, regret did not have a significant relationship with self-control. However, these findings should be interpreted with caution, as the experience sampling approach in Study 3 yielded a small number of observations for dilemmas involving different self-concept domains. Finally, we compared the strength of conflict and its frequency between the same domain and different domain self-control dilemmas. On

average, we found that conflict was stronger and more frequent when self-control dilemmas involved the same domain, which was the opposite of what we proposed.

Taken together, we found stronger support for the relationships we proposed when the goal and temptation were associated with the same self-concept domain than when multiple self-concepts were involved. The evident role self-concept plays in self-control dilemmas in the same domain is largely consistent with our expectations: self-concept is implicated through its influence on goals, temptations, conflict, and self-conscious emotions, all of which are important aspects of self-control dilemmas. The role self-concept plays in self-control dilemmas when multiple self-concepts are involved is more difficult to discern. This could be because there are other factors at play we have not considered in this research or because we need a more sophisticated measurement approach to detect the influence of self-concept in a noisy environment. In either case, this remains an area requiring further investigation.

# Chapter 9
# Theorethical and Practical Implications

Self-concept has been largely unexplored in the context of self-control dilemmas, despite the central role "self" has in shaping self-control efforts. In this research, we attempted to integrate theoretical and empirical evidence from two disparate research streams, one on "self" and the other on self-control. For the most part, the findings from the four studies presented here support our view that self-concept is involved in self-control efforts. By bringing attention to the "self", we illuminated the importance of the personal context in which self-control dilemmas arise and are resolved, thus opening the doors for future research in this arena.

One of the important implications of our findings is that self-control dilemmas are very much context-dependent, the context, in this case, referring to personal configurations of various factors, including self-concept. We found consistent relationships within the same self-concept domain, but which domains were important varied from person to person. Even within the same domain, we detected nuances when it came to specific facets. For example, within the health domain, food, exercise, and general well-being self-concepts were each linked to very specific, corresponding self-control dilemmas but not the others. For empirical investigations, this implies that special attention should be paid to the domain in which self-control dilemmas are studied. When more than one self-concept domain was involved, the relationships between self-concept and self-control processes were not identical to those that were detected within the same domain, suggesting that different mechanisms might be at play. Should this finding turn out to be supported with

future evidence, theoretical work would need to account for the possibility that the self-control process may entail different mechanisms.

Goals and temptations in our research consistently demonstrated a strong correlation, thus emphasizing the interdependent nature of this relationship in the context of self-control dilemmas. A major implication of this finding is that to fully understand self-control dilemmas, it may be necessary to study goals and temptations in tandem instead of examining them separately as is often the case in current research. This may necessitate a more creative approach to assessing goal-temptation pairs, including possibly developing measures that reflect the tipping point when the subjective value of a goal exceeds that of a temptation and vice versa. Something similar has been theoretically proposed (Berkman et al., 2017b) but to our knowledge has not been empirically tested.

Finally, in terms of practical implications, the involvement of self-concept in self-control dilemmas opens up several interesting possibilities. First, self-concepts are generally believed to be malleable, as how we see ourselves is shaped by our experiences and feedback from the environment. Thus, by shaping one's self-concept, we could potentially facilitate self-control efforts. This has implications both for children and adults, across a variety of settings. For children and adolescents, whose self-concepts are not yet fully formed, the opportunities to induce and reinforce specific positive beliefs about themselves, at home or in school, may translate into greater self-control and pay dividends well into their adult lives. For adults, whose self-concepts are perhaps more fully formed, the opportunity lies in reinforcing existing positive self-beliefs and tying their goals to the domain-specific self-concepts. For example, when one's goal of completing their

dissertation is tied to their strong self-concept in the achievement domain, they may be more likely to persevere in that goal despite numerous temptations pulling them in different directions. Even organizations can benefit from the dynamic nature of self-concepts. Self-concepts can be primed, and organizations can leverage that to increase the salience of work-relevant self-concepts and bolster self-control behaviors aligned with organizational goals. Organizations that can tap into their employees' positive view of themselves, be that as hard workers, high achievers, or committed colleagues, can probably expect these workers to be more willing to exercise self-control to advance organizational objectives.

# Chapter 10
# Limitations and Future Directions

One of the limitations of the present study was that participants were recruited from Prolific, a crowdsourcing platform commonly used for conducting human participant research. Several recent studies provide support for the use of crowdsourcing samples in research (Casler et al., 2013; Peer et al., 2017; Peer et al., 2021) and to that we can add that we were impressed by the quality of responses in our studies. Nevertheless, we still must consider the fact that participants in our research were financially rewarded for completing as many studies as possible in the shortest amount of time. As a result, it is possible that when we asked participants about their self-control dilemmas, they offered the first thing that came to mind without giving it much thought. Similarly, in our daily surveys, participants may have reported the same temptation on all three occasions, as the quickest way to respond to the question. Thus, we wonder if the examples of self-control dilemmas in our experience-sampling study are a product of convenience more than a faithful representation of people's experiences. Given the complexity of self-control dilemmas, future studies may want to rely on a qualitative approach, which provides more opportunities to elicit detailed answers and probe into cognitive and affective processes that unfold in the background.

Another limitation of our studies is that the domains in our self-concept measures were fairly broad, potentially affecting the predictive power of the measure. Although we purposefully chose broad domains to capture a wide range of goals and temptations, our preliminary results, as we mentioned earlier, suggest that further differentiations may be

necessary for some domains, such as the health and social domains. From a research design perspective, simultaneously examining the focal relationships across all four domains was challenging both methodologically and analytically. In the future, focusing attention on one or two domains at a time would allow for an in-depth investigation involving more advanced statistical techniques to analyze the data.

One issue that we have not yet addressed is the working self-concept. The current study treated self-concept more as a trait-like quality, but the literature suggests that the salience and accessibility of self-concepts varies and that the momentary, on-line, activated self-concept (i.e., working self-concept; Markus & Wurf, 1987) is the one guiding and influencing our actions. A working self-concept is not only dynamic but also malleable and thus it could be a powerful driver of self-control efforts. Relatedly, working self-concept could be examined at the within-person level. In the present research, we examined all the self-concept relationships at the between-person level. While this was necessary to establish the involvement of self-concept in self-control dilemmas in the first place, both of these constructs reflect inherently within-person processes and thus it would be a logical next step to explore the relationship from that perspective.

Finally, teasing out the unique influence of self-concept from a host of other factors that influence self-control is a challenge and the extent to which we were able to accomplish that empirically is a fair question. Although not all of the findings were consistent with our expectations, several patterns of significant relationships were observed persistently enough to suggest we were at least partially successful in this endeavor. Most importantly, we feel confident in proposing that self-concept can contribute to our

understanding of how self-control dilemmas unfold. With that in mind, we offer two more recommendations for future research.

One recommendation is to explore implicit self-concept in future studies. Although in our study we focused only on explicit self-concept, there is a consensus among scholars, supported by ample research evidence, that human beings process information about themselves and their environment both consciously and unconsciously (Greenwald et al., 2002). The implicit self-concept represents associative representations of self that are outside of conscious awareness but are context-dependent and can be activated in specific situations, as a consequence of a particular external input or due to an activation of an associated concept (Deutsch & Strack, 2009; Hirschmuller et al., 2012). There is already some evidence that implicit processes are involved in self-control dilemmas, in particular, related to the automatic activation of goals (Fishbach et al., 2003). Thus, extending this line of research to implicit self-concepts could be a fruitful avenue to pursue.

Another interesting question that could be addressed in future research is how negative self-concept might influence self-control dilemmas. This is an important consideration as people can hold both positive and negative views of themselves. Does a negative self-concept lead to self-control failures? Does it increase the intensity of negative self-conscious emotions, such as guilt or shame? And, could a negative self-concept fuel the "dark side of self-control", when self-control is leveraged for the pursuit of unhealthy or dangerous goals? By and large, self-control is seen as a uniformly beneficial characteristic, but it is important to consider if there could be negative aspects to it, and if and to what extent self-concept plays a role.

# Chapter 11
# Conclusion

One of the overarching goals of the present research was to investigate whether self-concept plays a role in how self-control dilemmas unfold. To investigate the link between self-concept and self-control, we first examined the relationships between self-concept and three key features of a self-control dilemma: goal, temptation, and conflict. Then, we examined how self-concept generates self-conscious emotions associated with self-control dilemma outcomes. Our investigation combined surveys, hypothetical scenarios, and experience sampling data across four studies. In assessing self-concepts, goals, and temptations, we focused on four broad areas relevant to self-control dilemmas in daily life: health, achievement, social, and financial domains. We found that self-concept influences goal importance and temptation strength when both are in the same self-concept domain, and, through goals and temptations, indirectly shapes the experience of conflict in self-control dilemmas. We further found that the influence of self-concept extends to self-conscious emotions, which often accompany self-control successes and failures. When goals and temptations were associated with different self-concept domains, results were mixed, suggesting that this area could benefit from further research. Overall, findings from the present research suggest that self-concept plays an important role in self-control dilemmas and thus investigating its role further, including the role of working self-concepts and implicit self-concepts, could deepen our understanding of self-control in general.

# References


Abraham, C., & Sheeran, P. (2003). Acting on intentions: The role of anticipated regret. British Journal of social psychology, 42(4), 495-511.

Ainslie, G., & George, A. (2001). *Breakdown of will*. Cambridge University Press.

Ajzen, I. (1991). The theory of planned behavior. *Organizational behavior and human decision processes*, *50*(2), 179-211.

Andrade, F. C., & Hoyle, R. H. (2022). The Experience of Succeeding and Failing at Self-Control: A Qualitative Analysis. *Frontiers in psychology*, 13.

Angel, E., Craven, R., & Denson, N. (2012). The Nurses Self-Concept Instrument (NSCI): Assessment of psychometric properties for Australian domestic and international student nurses. *International journal of nursing studies*, *49*(7), 880-886.

Anić, P., & Tončić, M. (2013). Orientations to happiness, subjective well-being and life goals. *Psihologijske teme, 22*, 135–153.

Ashton, M. C., & Lee, K. (2007). Empirical, theoretical, and practical advantages of the HEXACO model of personality structure. Personality and Social Psychology Review, 11, 150–166. doi:10.1177/1088868 306294907

Aspinwall, L. G., & Taylor, S. E. (1997). A stitch in time: self-regulation and proactive coping. *Psychological bulletin*, *121*(3), 417.

Austin, J. T., & Vancouver, J. B. (1996). Goal constructs in psychology: Structure, process, and content. Psychological bulletin, 120(3), 338. https://doi.org/10.1037/00332909.120.3.338

Bagozzi, R. P., & Pieters, R. (1998). Goal-directed emotions. *Cognition & Emotion*, *12*(1), 1-26.

Ballard, T., Vancouver, J. B., & Neal, A. (2018). On the pursuit of multiple goals with different deadlines. *Journal of Applied Psychology*, *103*(11), 1242–1264. https://doi.org/10.1037/apl0000304

Berkman, E. T., Hutcherson, C. A., Livingston, J. L., Kahn, L. E., & Inzlicht, M. (2017). Self-control as value-based choice. *Current directions in psychological science*, *26*(5), 422-428.

Barrett, K. C. (1995). A functionalist approach to shame and guilt. In J. P. Tangney & K. W. Barsade, S. G. (2002). The ripple effect: Emotional contagion and its influence on group behavior. *Administrative science quarterly*, *47*(4), 644-675.

Barsade, S. G., & Gibson, D. E. (2007). Why does affect matter in organizations? *Academy of management perspectives*, *21*(1), 36-59.

Baumeister, R. F. (2014). Self-regulation, ego depletion, and inhibition. *Neuropsychologia*, *65*, 313-319.

Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource?. *Journal of personality and social psychology*, *74*(5), 1252.

Baumeister, R. F., Heatherton, T., & Tice, D. M. (1994a). Losing control: How and why people fail at self-regulation. *San Diego: Academic*.

Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1994b). Guilt: an interpersonal approach. *Psychological bulletin*, *115*(2), 243.

Baumeister, R. F., Stillwell, A. M., & Heatherton, T. F. (1995). Personal narratives about guilt: Role in action control and interpersonal relationships. *Basic and applied social psychology*, *17*(1-2), 173-198.

Baumeister, R. F., & Vohs, K. D. (2016). Strength Model of Self-Regulation as Limited Resource. In *Advances in Experimental Social Psychology* (Vol. 54, pp. 67–127). Elsevier. https://doi.org/10.1016/bs.aesp.2016.04.001

Brailovskaia, J., & Margraf, J. (2020). How to measure self-esteem with one item? Validation of the German single-item self-esteem scale (G-SISE). *Current Psychology*, *39*(6), 2192-2202.

Bechara, A., Damasio, H., & Damasio, A. R. (2000). Emotion, decision making and the orbitofrontal cortex. Cerebral cortex, 10(3), 295-307.

Becker, D., Jostmann, N. B., Hofmann, W., & Holland, R. W. (2019). Spoiling the pleasure of success: Emotional reactions to the experience of self-control conflict in the eating domain. *Emotion*, *19*(8), 1377.

Berkman, E. T., Hutcherson, C. A., Livingston, J. L., Kahn, L. E., & Inzlicht, M. (2017a). Self-control as value-based choice. *Current directions in psychological science*, *26*(5), 422-428.

Berkman, E. T., Livingston, J. L., & Kahn, L. E. (2017b). Finding the "self" in self-regulation: The identity-value model. *Psychological Inquiry*, *28*(2-3), 77-98.

Beran, M. J. (2002). Maintenance of self-imposed delay of gratification by four chimpanzees (Pan troglodytes) and an orangutan (Pongo pygmaeus). *The Journal of General Psychology*, *129*(1), 49-66.

Berrios, R., Totterdell, P., & Kellett, S. (2015). Investigating goal conflict as a source of mixed emotions. *Cognition and Emotion, 29*(4), 755-763.

Bower, G. H. (1981). Mood and memory. *American Psychologist, 36*, 129-148.

Brewer, M. B., & Gardner, W. (1996). Who is this" We"? Levels of collective identity and self representations. *Journal of personality and social psychology*, *71*(1), 83.

Butler, R. J., & Gasson, S. L. (2005). Self esteem/self concept scales for children and adolescents: A review. *Child and Adolescent mental health*, *10*(4), 190-201.

Buunk, B. P., Collins, R. L., Taylor, S. E., VanYperen, N. W., & Dakof, G. A. (1990). The affective consequences of social comparison: either direction has its ups and downs. *Journal of personality and social psychology*, *59*(6), 1238.

Campbell, J. D., Assanand, S., & Di Paula, A. (2000). Structural features of the self-concept and adjustment. In A. Tesser, R. B. Felson, & J. M. Suls (Eds.), *Psychological perspectives on self and identity.* (pp. 67–87). American Psychological Association. https://doi.org/10.1037/10357-003

Campbell, J. D., Trapnell, P. D., Heine, S. J., Katz, I. M., Lavallee, L. F., & Lehman, D. R. (1996). Self-concept clarity: Measurement, personality correlates, and cultural boundaries. *Journal of personality and social psychology*, *70*(1), 141.

Campos, J. J. (1995). Foreword. In J. P. Tangney & K. W. Fischer (Eds.), Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride (pp. ix–xi). New York: Guilford.

Carmon, Z., Wertenbroch, K., & Zeelenberg, M. (2003). Option attachment: When deliberating makes choosing feel like losing. *Journal of Consumer research*, *30*(1), 15-29.

Carnevale, P. J., & Isen, A. M. (1986). The influence of positive affect and visual access on the discovery of integrative solutions in bilateral negotiation. *Organizational behavior and human decision Processes*, *37*(1), 1-13.

Carter, E. C., Kofler, L. M., Forster, D. E., & McCullough, M. E. (2015). A series of meta-analytic tests of the depletion effect: Self-control does not seem to rely on a limited resource. *Journal of Experimental Psychology: General*, *144*(4), 796.

Carver, C. S. (2004). Self-regulation of action and affect. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 13–39). The Guilford Press.

Carver, C. S. (2006). Approach, avoidance, and the self-regulation of affect and action. *Motivation and emotion*, *30*(2), 105-110.

Carver, C. S., & Scheier, M. F. (2001). *On the self-regulation of behavior*. Cambridge University Press.

Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: A control-process view. *Psychological Review, 97*(1), 19–35. https://doi.org/10.1037/0033-295X.97.1.19

Carver, C. S., & Scheier, M. F. (1982). Control theory: A useful conceptual framework for personality–social, clinical, and health psychology. *Psychological Bulletin*, *92*(1), 111–135. https://doi.org/10.1037/0033-2909.92.1.111

Casler, K., Bickel, L., & Hackett, E. (2013). Separate but equal? A comparison of participants and data gathered via Amazon's MTurk, social media, and face-to-face behavioral testing. *Computers in human behavior*, *29*(6), 2156-2160.

Cheung, T. T. L., Gillebaart, M., Kroese, F., & de Ridder, D. (2014). Why are people with high self-control happier? The effect of trait self-control on happiness as mediated by regulatory focus. Frontiers in Psychology, 5, 722. http://dx.doi.org/10 .3389/fpsyg.2014.00722

Clore, G. L., & Huntsinger, J. R. (2007). How emotions inform judgment and regulate thought. *Trends in cognitive sciences*, *11*(9), 393-399.

Cobb-Clark, D. A., Dahmann, S. C., Kamhöfer, D. A., & Schildberg-Hörisch, H. (2022). The predictive power of self-control for life outcomes. *Journal of Economic Behavior & Organization*, *197*, 725-744.

Coelho do Vale, R., Pieters, R., & Zeelenberg, M. (2008). Flying under the radar: Perverse package size effects on consumption self-regulation. *Journal of consumer research*, *35*(3), 380-390.

Converse, P. D., Beverage, M. S., Vaghef, K., & Moore, L. S. (2018). Self-control over time: Implications for work, relationship, and well-being outcomes. *Journal of Research in Personality*, 73, 82-92. https://doi.org/10.1016/j.jrp.2017.11.002

Cooper, A. J., Smillie, L. D., & Corr, P. J. (2010). A confirmatory factor analysis of the Mini-IPIP five-factor model personality scale. *Personality and Individual Differences*, *48*(5), 688-691.

Cortina, J. M., Sheng, Z., Keener, S. K., Keeler, K. R., Grubb, L. K., Schmitt, N., ... & Banks, G. C. (2020). From alpha to omega and beyond! A look at the past, present, and (possible) future of psychometric soundness in the Journal of Applied Psychology. *Journal of Applied Psychology*, *105*(12), 1351.

Côté, J. E., & Levine, C. G. (2014). *Identity, formation, agency, and culture: A social psychological synthesis*. Psychology Press.

Craven, R. G., & Marsh, H. W. (2008). The centrality of the self-concept construct for psychological wellbeing and unlocking human potential: Implications for child and educational psychologists. *Educational and Child Psychology*, *25*(2), 104-118

Damasio, H., Grabowski, T., Frank, R., Galaburda, A. M., & Damasio, A. R. (1994). The return of Phineas Gage: clues about the brain from the skull of a famous patient. *Science*, *264*(5162), 1102-1105.

Davidson, R. J., Scherer, K. R., & Goldsmith, H. H. (2003). The role of affect in decision making. *Handbook of Affective Sciences*, *3*, 619-642.

de Ridder, D., Kroese, F., & Gillebaart, M. (2018). Whatever happened to self-control? A proposal for integrating notions from trait self-control studies into state self-control research. *Motivation Science*, *4*(1), 39–49. https://doi.org/10.1037/mot0000062

de Ridder, D. T. D., de Boer, B. J., Lugtig, P., Bakker, A. B., & van Hooft, E. A. J. (2011). Not doing bad things is not equivalent to doing the right thing: Distinguishing between inhibitory and initiatory self-control. *Personality and Individual Differences*, *50*(7), 1006–1011. https://doi.org/10.1016/j.paid.2011.01.015

De Ridder, D. T., Lensvelt-Mulders, G., Finkenauer, C., Stok, F. M., & Baumeister, R. F. (2012). Taking stock of self-control: A meta-analysis of how trait self-control relates to a wide range of behaviors. *Personality and Social Psychology Review*, *16*(1), 76-99.

DeWall, C. N., Baumeister, R. F., Stillman, T. F., & Gailliot, M. T. (2007). Violence restrained: Effects of self-regulation and its depletion on aggression. *Journal of Experimental social psychology*, *43*(1), 62-76.

Diamond, L. M., & Aspinwall, L. G. (2003). Emotion regulation across the life span: An integrative perspective emphasizing self-regulation, positive affect, and dyadic processes. Motivation and Emotion, 27(2), 125-156.

Diefendorff, J. M., & Chandler, M. M. (2011). Motivating employees. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology, Vol 3: Maintaining, expanding, and contracting the organization.* (pp. 65–135). American Psychological Association. https://doi.org/10.1037/12171-003

Dholakia, U. M., Gopinath, M., Bagozzi, R. P., & Nataraajan, R. (2006). The Role of Regulatory Focus in the Experience and Self-Control of Desire for Temptations. *Journal of Consumer Psychology*, *16*(2), 163–175. https://doi.org/10.1207/s15327663jcp1602_7

Donnellan, M. B., Oswald, F. L., Baird, B. M., & Lucas, R. E. (2006). The mini-IPIP scales: tiny-yet-effective measures of the Big Five factors of personality. *Psychological assessment*, *18*(2), 192.

Duckworth, A. L., & Carlson, S. M. (2013). Self-regulation and school success. In B.W. Sokol, F.M.E. Grouzet, & U. Müller (Eds.), *Self-regulation and autonomy: Social and developmental dimensions of human conduct*, (pp. 208-230). New York: Cambridge University Press.

Duckworth, A. L., Gendler, T. S., & Gross, J. J. (2016). Situational strategies for self-control. *Perspectives on Psychological Science*, *11*(1), 35-55.

Duckworth, A. L., Gendler, T. S., & Gross, J. J. (2014). Self-control in school-age children. *Educational Psychologist*, *49*(3), 199-217.

Duckworth, A. L., & Kern, M. L. (2011). A meta-analysis of the convergent validity of self-control measures. *Journal of research in personality*, *45*(3), 259-268.

Duckworth, A. L., Milkman, K. L., & Laibson, D. (2018). Beyond willpower: Strategies for reducing failures of self-control. *Psychological Science in the Public Interest*, *19*(3), 102-129.

Duckworth, A. L., Taxer, J. L., Eskreis-Winkler, L., Galla, B. M., & Gross, J. J. (2019). Self-control and academic achievement. *Annual review of psychology*, *70*, 373-399.

Deutsch, R., & Strack, F. (2006). Duality models in social psychology: From dual processes to interacting systems. *Psychological Inquiry*, *17*(3), 166-172.

Ekman, P. (1992). An argument for basic emotions. *Cognition & emotion*, *6*(3-4), 169-200.

Elfhag, K., & Morey, L. C. (2008). Personality traits and eating behavior in the obese: poor self-control in emotional and external eating but personality assets in restrained eating. *Eating behaviors*, *9*(3), 285-293.

Elliot, A. J. (2006). The hierarchical model of approach-avoidance motivation. *Motivation and emotion*, *30*(2), 111-116.

Elliot, A. J., & Fryer, J. W. (2008). The goal construct in psychology. *Handbook of motivation science*, *18*, 235-250.

Elliot, A. J., & Thrash, T. M. (2002). Approach-avoidance motivation in personality: approach and avoidance temperaments and goals. *Journal of personality and social psychology*, *82*(5), 804.

Erk, S., Kleczar, A., & Walter, H. (2007). Valence-specific regulation effects in a working memory task with emotional context. *Neuroimage*, *37*(2), 623-632.

Else-Quest, N. M., Higgins, A., Allison, C., & Morton, L. C. (2012). Gender differences in self-conscious emotional experience: a meta-analysis. *Psychological bulletin*, *138*(5), 947.

Eyal, T., & Fishbach, A. (2010). Do global and local systems feel different?. *Psychological Inquiry*, *21*(3), 213-215.

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*, 175-191.

Ferguson, M. J. (2007). On the automatic evaluation of end-states. *Journal of Personality and Social Psychology*, *92*(4), 596–611. https://doi.org/10.1037/0022-3514.92.4.596

Ferguson, M. J., & Porter, S. C. (2010). What is implicit about goal pursuit? In B. Gawronski & B. K. Payne (Eds.), *Handbook of implicit social cognition: Measurement, theory, and applications* (pp. 311–331). The Guilford Press.

Festinger, L. (1957). Social comparison theory. *Selective Exposure Theory*, *16*, 401.

Fishbach, A., Friedman, R. S., & Kruglanski, A. W. (2003). Leading us not into temptation: Momentary allurements elicit overriding goal activation. *Journal of Personality and Social Psychology, 84*(2), 296–309. https://doi.org/10.1037/0022-3514.84.2.296

Fishbach, A., & Labroo, A. A. (2007). Be better or be merry: how mood affects self-control. *Journal of personality and social psychology*, *93*(2), 158.

Fishbach, A., & Shah, J. Y. (2006). Self-control in action: Implicit dispositions toward goals and away from temptations. *Journal of Personality and Social Psychology*, *90*(5), 820–832. https://doi.org/10.1037/0022-3514.90.5.820

Fishbach, A., & Zhang, Y. (2008). Together or apart: When goals and temptations complement versus compete. *Journal of Personality and Social Psychology, 94*(4), 547–559. https://doi.org/10.1037/0022-3514.94.4.547

Fischer, J., Corcoran, K., & Springer, D. W. (2020). *Measures for clinical practice and research: A sourcebook: Couples, families, and children, Vol. 1*. Oxford University Press.

Forgas, J. P. (1995). Mood and judgment: the affect infusion model (AIM). *Psychological bulletin*, *117*(1), 39.

Forgas, J. P. (1994). The role of emotion in social judgments: An introductory review and an Affect Infusion Model (AIM). *European Journal of Social Psychology*, *24*(1), 1-24.

Frijda, N. H., Kuipers, P., & Ter Schure, E. (1989). Relations among emotion, appraisal, and emotional action readiness. *Journal of personality and social psychology*, *57*(2), 212.

Fujita, K. (2008). Seeing the forest beyond the trees: A construal-level approach to self-control. *Social and Personality Psychology Compass, 2*(3), 1475-1496. https://doi.org/10.1111/j.1751-9004.2008.00118.x

Fujita, K. (2011). On Conceptualizing Self-Control as More Than the Effortful Inhibition of Impulses. *Personality and Social Psychology Review*, *15*(4), 352–366. https://doi.org/10.1177/1088868311411165

Fujita, K., & Carnevale, J. J. (2012). Transcending temptation through abstraction: The role of construal level in self-control. *Current Directions in Psychological Science, 21*(4), 248-252. https://doi.org/10.1177/0963721412449169

Fujita, K., & Han, H. A. (2009). Moving beyond deliberative control of impulses: The effect of construal levels on evaluative associations in self-control conflicts. *Psychological Science, 20*(7), 799-804. https://doi.org/10.1111/j.1467-9280.2009.02372.x

Fujita, K., Trope, Y., Liberman, N., & Levin-Sagi, M. (2006). Construal levels and self-control. *Journal of Personality and Social Psychology, 90*(3), 351–367. https://doi.org/10.1037/0022-3514.90.3.351

Gabriel, A. S., Podsakoff, N. P., Beal, D. J., Scott, B. A., Sonnentag, S., Trougakos, J. P., & Butts, M. M. (2019). Experience sampling methods: A discussion of critical trends and considerations for scholarly advancement. *Organizational Research Methods*, *22*(4), 969-1006.

Galla, B. M., & Duckworth, A. L. (2015). More than resisting temptation: Beneficial habits mediate the relationship between self-control and positive life outcomes. *Journal of personality and social psychology*, *109*(3), 508.

Galla, B. M., Plummer, B. D., White, R. E., Meketon, D., D'Mello, S. K., & Duckworth, A. L. (2014). The Academic Diligence Task (ADT): Assessing individual differences in effort on tedious but important schoolwork. *Contemporary educational psychology*, *39*(4), 314-325. https://doi.org/10.1016/j.cedpsych.2014.08.001

Gawronski, B., & Bodenhausen, G. V. (2006). Associative and propositional processes in evaluation: an integrative review of implicit and explicit attitude change. *Psychological bulletin*, *132*(5), 692.

Gecas, V. (1982). The Self-Concept. *Annual Review of Sociology*, 1–33.

George, J. M., & Dane, E. (2016). Affect, emotion, and decision making. *Organizational Behavior and Human Decision Processes, 136*, 47-55.

Geyskens, K., Dewitte, S., Pandelaere, M., & Warlop, L. (2008). Tempt me just a little bit more: The effect of prior food temptation actionability on goal activation and consumption. *Journal of Consumer Research*, *35*(4), 600-610.

Gilbert, P. (1998). What is shame? Some core issues and controversies. In P. Gilbert & B. Andrews (Eds.), *Shame: Interpersonal behavior, psychopathology, and culture* (pp. 3–38). Oxford University Press.

Gillebaart, M. (2018). The 'Operational' Definition of Self-Control. *Frontiers in Psychology*, *9*, 1231. https://doi.org/10.3389/fpsyg.2018.01231

Gillebaart, M., & de Ridder, D. T. (2015). Effortless self-control: A novel perspective on response conflict strategies in trait self-control. *Social and Personality Psychology Compass*, *9*(2), 88-99.

Gillebaart, M., & Kroese, F. M. (2020). "Don't Mind If I Do": The Role of Behavioral Resistance in Self-Control's Effects on Behavior. *Frontiers in psychology*, *11*, 396.

Gilovich, T., & Medvec, V. H. (1995). The experience of regret: what, when, and why. *Psychological review*, *102*(2), 379.

Gilovich, T., Medvec, V. H., & Kahneman, D. (1998). Varieties of regret: A debate and partial resolution. *Psychological review*, *105*(3), 602.

Giner-Sorolla, R. (2001). Guilty pleasures and grim necessities: affective attitudes in dilemmas of self-control. *Journal of personality and social psychology*, *80*(2), 206.

Giuntoli, L., Condini, F., Ceccarini, F., Huta, V., & Vidotto, G. (2021). The different roles of hedonic and eudaimonic motives for activities in predicting functioning and well-being experiences. *Journal of Happiness Studies*, *22*, 1657-1671.

Gorges, J., & Grund, A. (2017). Aiming at a moving target: Theoretical and methodological considerations in the study of intraindividual goal conflict between personal goals. *Frontiers in psychology*, *8*, 2011.

Gray, J. A. (1990). Brain systems that mediate both emotion and cognition. *Cognition and Emotion, 4,* 269–288.

Gray, J. A. (1987a). Perspectives on anxiety and impulsivity: A commentary. *Journal of research in personality*, *21*(4), 493-509.

Gray, J. A. (1982). The neuropsychology of anxiety: An enquiry into the functions of the sepro-hippocampal system. New York: Oxford University Press.

Gray, J. A., & Hinde, R. (1987b). *The psychology of fear and stress* (Vol. 5). CUP Archive.

Gray-Little, B., Williams, V. S., & Hancock, T. D. (1997). An item response theory analysis of the Rosenberg Self-Esteem Scale. *Personality and social psychology bulletin*, *23*(5), 443-451.

Greenwald, A. G., Banaji, M. R., Rudman, L. A., Farnham, S. D., Nosek, B. A., & Mellott, D. S. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychological Review*, *109*(1), 3–25. https://doi.org/10.1037/0033-295X.109.1.3

Greenwald, A. G., & Breckler, S. J. (1986). Motivational facets of the self. *Handbook of motivation and cognition: Foundations of social behavior*, 145-164.

Greenwald, A. G., & Pratkanis, A. R. (1984). The self. In R. S. Wyer, Jr. & T. K. Srull (Eds.), *Handbook of social cognition,* Vol. 3, pp. 129–178). Lawrence Erlbaum Associates Publishers.

Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological inquiry*, *26*(1), 1-26.

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of general psychology*, *2*(3), 271-299.

Gross, J. J. (2014). Emotion regulation: Conceptual and empirical foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3–20). The Guilford Press.

Gu, S., Wang, F., Patel, N. P., Bourgeois, J. A., & Huang, J. H. (2019). A model for basic emotions using observations of behavior in Drosophila. *Frontiers in psychology*, 781.

Hagger, M. S., Wood, C., Stiff, C., & Chatzisarantis, N. L. (2010). Ego depletion and the strength model of self-control: a meta-analysis. *Psychological bulletin*, *136*(4), 495.

Hampson, S. E., Edmonds, G. W., & Goldberg, L. R. (2019). The Health Behavior Checklist: Factor structure in community samples and validity of a revised good health practices scale. *Journal of health psychology*, *24*(8), 1103-1109.

Handley, I. M., Lassiter, G. D., Nickell, E. F., & Herchenroeder, L. M. (2004). Affect and automatic mood maintenance. *Journal of Experimental Social Psychology*, *40*(1), 106-112.

Harter, S., Waters, P., & Whitesell, N. R. (1998). Relational self-worth: Differences in perceived worth as a person across interpersonal contexts among adolescents. *Child development*, *69*(3), 756-766.

Hayton, J. C., Allen, D. G., & Scarpello, V. (2004). Factor retention decisions in exploratory factor analysis: A tutorial on parallel analysis. *Organizational research methods*, *7*(2), 191-205.

Heatherton, T. F., & Wagner, D. D. (2011). Cognitive neuroscience of self-regulation failure. *Trends in Cognitive Sciences*, *15*(3), 132–139. https://doi.org/10.1016/j.tics.2010.12.005

Heider, F. (1958). The naive analysis of action. In F. Heider, *The psychology of interpersonal relations* (pp. 79–124). John Wiley & Sons Inc. https://doi.org/10.1037/10628-004

Hennecke, M., Czikmantori, T., & Brandstätter, V. (2019). Doing despite Disliking: Self–Regulatory Strategies in Everyday Aversive Activities. *European Journal of Personality*, *33*(1), 104–128. https://doi.org/10.1002/per.2182

Higgins, E. T. (1987). Self-discrepancy: a theory relating self and affect. *Psychological review*, *94*(3), 319.

Higgins, E. T. (1997). Beyond pleasure and pain. *American psychologist*, *52*(12), 1280.

Higgins, E. T., Friedman, R. S., Harlow, R. E., Idson, L. C., Ayduk, O. N., & Taylor, A. (2001). Achievement orientations from subjective histories of success: Promotion pride versus prevention pride. *European Journal of Social Psychology*, *31*(1), 3-23.

Hirschmüller, S., Egloff, B., Nestler, S., & Back, M. D. (2013). The dual lens model: A comprehensive framework for understanding self–other agreement of personality judgments at zero acquaintance. *Journal of Personality and Social Psychology*, *104*(2), 335–353. https://doi.org/10.1037/a0030383

Hofmann, W., Baumeister, R. F., Förster, G., & Vohs, K. D. (2012a). Everyday temptations: An experience sampling study of desire, conflict, and self-control. *Journal of Personality and Social Psychology*, *102*(6), 1318–1335. https://doi.org/10.1037/a0026545

Hofmann, W., & Fisher, R. R. (2012b). How guilt and pride shape subsequent self-control. *Social Psychological and Personality Science*, *3*(6), 682-690.

Hofmann, W., Friese, M., & Strack, F. (2009). Impulse and Self-Control From a Dual-Systems Perspective. *Perspectives on Psychological Science, 4*(2), 162–176. https://doi.org/10.1111/j.1745-6924.2009.01116.x

Hofmann, W., Luhmann, M., Fisher, R. R., Vohs, K. D., & Baumeister, R. F. (2014). Yes, but are they happy? Effects of trait self-control on affective well-being and life satisfaction. Journal of Personality, 82, 265–277. http://dx.doi.org/10 .1111/jopy.12050

Hofmann, W., Kotabe, H., & Luhmann, M. (2013). The spoiled pleasure of giving in to temptation. *Motivation and Emotion*, *37*(4), 733-742.

Hopwood, C. J., & Donnellan, M. B. (2010). How should the internal structure of personality inventories be evaluated?. *Personality and social psychology review*, *14*(3), 332-346.

Hornsey, M. J. (2008). Social identity theory and self-categorization theory: A historical review. *Social and personality psychology compass*, *2*(1), 204-222.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, *6*(1), 1-55.

Huntsinger, J. R., & Ray, C. (2016). A flexible influence of affective feelings on creative and analytic performance. *Emotion*, *16*(6), 826.

Huta, V. (2016). Eudaimonic and hedonic orientations: Theoretical considerations and research findings. *Handbook of eudaimonic well-being*, 215-231.

Huta, V. (2017). An overview of hedonic and eudaimonic well-being concepts. In L. Reinecke & M. B. Oliver (Eds.), *The Routledge handbook of media use and well-being: International perspectives on theory and research on positive media effects* (pp. 14–33). Routledge/Taylor & Francis Group.

Huta, V., & Ryan, R. M. (2010). Pursuing pleasure or virtue: The differential and overlapping well-being benefits of hedonic and eudaimonic motives. *Journal of happiness studies*, *11*, 735-762.

Huta, V., & Waterman, A. S. (2014). Eudaimonia and its distinction from hedonia: Developing a classification and terminology for understanding conceptual and operational definitions. *Journal of happiness studies*, *15*, 1425-1456.

Hynie, M., MacDonald, T. K., & Marques, S. (2006). Self-conscious emotions and self-regulation in the promotion of condom use. *Personality and Social Psychology Bulletin*, *32*(8), 1072-1084.

Inzlicht, M., Bartholow, B. D., & Hirsh, J. B. (2015). Emotional foundations of cognitive control. *Trends in cognitive sciences*, *19*(3), 126-132.

Inzlicht, M., Werner, K. M., Briskin, J. L., & Roberts, B. W. (2021). Integrating models of self-regulation. *Annual review of psychology, 72*, 319-345. https://doi.org/10.1146/annurev-psych-061020-105721

Imhoff, R., Schmidt, A. F., & Gerstenberg, F. (2014). Exploring the interplay of trait self–control and ego depletion: Empirical evidence for ironic effects. *European Journal of Personality*, *28*(5), 413-424.

Jack, R. E., Garrod, O. G., & Schyns, P. G. (2014). Dynamic facial expressions of emotion transmit an evolving hierarchy of signals over time. *Current biology*, *24*(2), 187-192.

James, W. (1890). Principles of psychology (Vols 1–2). New York: Holt.

Jiang, T., Wang, T., Poon, K. T., Gaer, W., & Wang, X. (2022). Low self-concept clarity inhibits self-control: The mediating effect of global self-continuity. *Personality and Social Psychology Bulletin*, 01461672221109664.

Kahneman, D. (2011). Thinking, fast and slow. New York: Farrar, Straus, and Giroux.

Kaplan, D. (2009). Structural equation modeling: Foundations and extensions (2nd ed.). Thousand Oaks, CA: Sage.

Kaplan, S., Bradley, J. C., Luchman, J. N., & Haynes, D. (2009). On the role of positive and negative affectivity in job performance: a meta-analytic investigation. *Journal of Applied psychology*, *94*(1), 162.

Karoly, P. (1993). Mechanisms of self-regulation: A systems view. *Annual review of psychology*, *44*(1), 23-52.

Katzir, M., Eyal, T., Meiran, N., & Kessler, Y. (2010). Imagined positive emotions and inhibitory control: The differentiated effect of pride versus happiness. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *36*(5), 1314.

Kedia, G., & Hilton, D. J. (2011). Hot as hell! The self-conscious nature of action regrets. *Journal of Experimental Social Psychology*, *47*(2), 490-493.

Keltner, D., & Buswell, B. N. (1997). Embarrassment: its distinct form and appeasement functions. *Psychological bulletin*, *122*(3), 250.

Keltner, D., Ekman, P., Gonzaga, G. C., & Beer, J. (2003). Facial expression of emotion. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of affective sciences* (pp. 415–432). Oxford University Press.

Keltner, D., & Lerner, J. S. (2010). Emotion. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (pp. 317–352). John Wiley & Sons, Inc., https://doi.org/10.1002/9780470561119.socpsy001009

Kihlstrom, J. F., & Cantor, N. (1984). Mental representations of the self. In *Advances in experimental social psychology* (Vol. 17, pp. 1-47). Academic Press.

Kinch, J. W. (1963). A formalized theory of the self-concept. *American Journal of Sociology*, *68*(4), 481-486.

Kivetz, R., & Keinan, A. (2006). Repenting hyperopia: An analysis of self-control regrets. *Journal of Consumer Research*, *33*(2), 273-282.

Koran, J. (2020). Indicators per factor in confirmatory factor analysis: More is not always better. *Structural Equation Modeling: A Multidisciplinary Journal*, *27*(5), 765-772.

Kotabe, H. P., & Hofmann, W. (2015). On integrating the components of self-control. *Perspectives on Psychological Science, 10*(5), 618-638.

Kotabe, H. P., Righetti, F., & Hofmann, W. (2019). How anticipated emotions guide self-control judgments. *Frontiers in psychology, 10*, 1614.

Kroese, F. M., Evers, C., & De Ridder, D. T. D. (2011). Tricky treats: Paradoxical effects of temptation strength on self-regulation processes. *European Journal of Social Psychology*, *41*(3), 281–288. https://doi.org/10.1002/ejsp.771

Kruglanski, A. W., Shah, J. Y., Fishbach, A., Friedman, R., Chun, W. Y., & Sleeth-Keppler, D. (2018). A theory of goal systems. In *The motivated mind* (pp. 207-250). Routledge.

Kuhl, J., & Kraska, K. (1989). Self-regulation and metamotivation: Computational mechanisms, development, and assessment. In R. Kanfer (Ed.) & P. L. Ackerman & R. Cudeck (Ed.), *Abilities, motivation, and methodology: The Minnesota Symposium on Learning and Individual Differences* (pp. 343–374). Lawrence Erlbaum Associates, Inc.

Kung, F. Y., & Scholer, A. A. (2021). Moving beyond two goals: An integrative review and framework for the study of multiple goals. *Personality and Social Psychology Review*, *25*(2), 130-158.

Landman, J. (1993). *Regret: The persistence of the possible*. Oxford University Press.

Lazarus, R. S. (1991). Cognition and motivation in emotion. *American psychologist*, *46*(4), 352.

Lerner, J. S., & Keltner, D. (2000). Beyond valence: Toward a model of emotion-specific influences on judgement and choice. *Cognition & emotion*, *14*(4), 473-493.

Lerner, J. S., & Keltner, D. (2001). Fear, anger, and risk. *Journal of personality and social psychology*, *81*(1), 146.

Lerner, J. S., Li, Y., Valdesolo, P., & Kassam, K. S. (2015). Emotion and decision making. *Annual review of psychology*, *66*(1).

Lewis, M. (2008). Self-conscious emotions: Embarrassment, pride, shame, and guilt. In M. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.), *Handbook of emotions* (pp. 742–756). The Guilford Press.

Li, J.-B., Bi, S.-S., Willems, Y. E., & Finkenauer, C. (2021). The Association Between School Discipline and Self-Control From Preschoolers to High School Students: A Three-Level Meta-Analysis. *Review of Educational Research*, *91*(1), 73–111. https://doi.org/10.3102/0034654320979160

Liberman, N., & Trope, Y. (1998). The role of feasibility and desirability considerations in near and distant future decisions: A test of temporal construal theory. *Journal of Personality and Social Psychology, 75*(1), 5–18. https://doi.org/10.1037/0022-3514.75.1.5

Lim, B. C., & Ployhart, R. E. (2006). Assessing the convergent and discriminant validity of Goldberg's International Personality Item Pool: A multitrait-multimethod examination. *Organizational Research Methods*, *9*(1), 29-54.

Linville, P. W. (1987). Self-complexity as a cognitive buffer against stress-related illness and depression. *Journal of personality and social psychology*, *52*(4), 663.

Little, B. R. (2020). How are you doing, really? Personal project pursuit and human flourishing. *Canadian Psychology/Psychologie canadienne*, *61*(2), 140.

Lodi-Smith, J., & DeMarree, K. G. (2017). Common Themes and Future Directions for Self-Concept Clarity Research. *Self-Concept Clarity: Perspectives on Assessment, Research, and Applications*, 243-249.

Loewenstein, G., & Lerner, J. S. (2003). The role of affect in decision making. In R. Davidson, H. Goldsmith, & K. Scherer (Ed.), Handbook of Affective Science (pp. 619-642). Oxford, Oxford University Press.

Loewenstein, G. F., Weber, E. U., Hsee, C. K., & Welch, N. (2001). Risk as feelings. *Psychological bulletin*, *127*(2), 267.

Lopez, R. B., Chen, P. H. A., Huckins, J. F., Hofmann, W., Kelley, W. M., & Heatherton, T. F. (2017). A balance of activity in brain control and reward systems predicts self-regulatory outcomes. *Social Cognitive and Affective Neuroscience, 12*(5), 832–838. https://doi.org/10.1093/scan/nsx004

Lord, R. G., Diefendorff, J. M., Schmidt, A. M., & Hall, R. J. (2010). Self-Regulation at Work. *Annual Review of Psychology*, *61*(1), 543–568. https://doi.org/10.1146/annurev.psych.093008.100314

Lord, R. G., & Levy, P. E. (1994). Moving from cognition to action: A control theory perspective. *Applied Psychology*, *43*(3), 335-367.

Loewenstein, G. (1996). Out of control: Visceral influences on behavior. *Organizational Behavior and Human Decision Process, 65*, 272–292.

MacInnis, D. J., & Patrick, V. M. (2006). Spotlight on affect: Affect and affective forecasting in impulse control. *Journal of Consumer Psychology, 16*(3), 224-231.

Manapat, P. D., Edwards, M. C., MacKinnon, D. P., Poldrack, R. A., & Marsch, L. A. (2021). A psychometric analysis of the Brief Self-Control Scale. *Assessment*, *28*(2), 395-412.

Mascolo, M. F., & Fischer, K. W. (1995). Developmental transformations in appraisals for pride, shame, and guilt. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 64–113). Guilford Press.

Markus, H., & Nurius, P. (1986). Possible selves. *American Psychologist, 41*(9), 954–969. https://doi.org/10.1037/0003-066X.41.9.954

Markus, H., & Wurf, E. (1987). The dynamic self-concept: A social psychological perspective. *Annual review of psychology*, *38*(1), 299-337.

Marsh, H. W., & Shavelson, R. (1985). Self-concept: Its multifaceted, hierarchical structure. *Educational psychologist*, *20*(3), 107-123.

Marsh, H. W., Richards, G. E., Johnson, S., Roche, L., & Tremayne, P. (1994). Physical Self-Description Questionnaire: Psychometric properties and a miiltitrait-meltimethod analysis of relations to existing instruments. *Journal of Sport and Exercise psychology*, *16*(3), 270-305.

McCallum, R., Rusbult, C., Hong, G. K., Walden, T. A., & Schopler, J. (1979). Effects of resource availability and importance of behavior on the experience of crowding. *Journal of personality and social psychology*, *37*(8), 1304.

McConnell, A. R. (2011). The Multiple Self-Aspects Framework: Self-Concept Representation and Its Implications. *Personality and Social Psychology Review*, *15*(1), 3–27. https://doi.org/10.1177/1088868310371101

McConnell, A. R., Rydell, R. J., & Leibold, J. M. (2002). Expectations of consistency about the self: Consequences for self-concept formation. *Journal of Experimental Social Psychology*, *38*(6), 569-585.

McGregor, I., & Little, B. R. (1998). Personal projects, happiness, and meaning: on doing well and being yourself. *Journal of personality and social psychology*, *74*(2), 494.

McRae, K., & Gross, J. J. (2020). Emotion regulation. *Emotion*, *20*(1), 1.

Mellers, B. A. (2000). Choice and the relative pleasure of consequences. *Psychological bulletin*, *126*(6), 910.

Mellers, B. A., & McGraw, A. P. (2001). Anticipated emotions as guides to choice. *Current directions in psychological science*, *10*(6), 210-214.

Mercer, S. (2012). Self-concept: Situating the Self. In S. Mercer, S. Ryan, & M. Williams (Eds.), *Psychology for Language Learning* (pp. 10–25). Palgrave Macmillan UK. https://doi.org/10.1057/9781137032829_2

Metcalfe, J., & Mischel, W. (1999). A hot/cool-system analysis of delay of gratification: dynamics of willpower. *Psychological Review, 106*, 3–19. https://doi.org/10.1037/0033-295X.106.1.3

Miller, G. A., Galanter, E., & Pribram, K. H. (1960). The unit of analysis. In G. A. Miller, E. Galanter, & K. H. Pribram, *Plans and the structure of behavior* (pp. 21–39). Henry Holt and Co. https://doi.org/10.1037/10039-002

Milyavskaya, M., Berkman, E. T., & De Ridder, D. T. (2019). The many faces of self-control: Tacit assumptions and recommendations to deal with them. *Motivation Science*, *5*(1), 79.

Milyavskaya, M., Inzlicht, M., Hope, N., & Koestner, R. (2015). Saying "no" to temptation: Want-to motivation improves self-regulation by reducing temptation rather than by increasing self-control. *Journal of Personality and Social Psychology*, *109*(4), 677–693. https://doi.org/10.1037/pspp0000045

Mischel, W. (1974). Processes in delay of gratification. In *Advances in experimental social psychology* (Vol. 7, pp. 249-292). Academic Press.

Mischel, W., Cantor, N., & Feldman, S. (1996). Principles of self-regulation: The nature of willpower and self-control. In E. T. Higgins & A. W. Kruglanski (Eds.), *Social psychology: Handbook of basic principles* (pp. 329–360). The Guilford Press.

Mischel, W., & Shoda, Y. (1995). A cognitive-affective system theory of personality: Reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological Review, 102*, 246–268. doi:10.1037/0033-295X.102.2.246

Mischel, W., Shoda, Y., & Peake, P. K. (1988). The nature of adolescent competencies predicted by preschool delay of gratification. *Journal of personality and social psychology*, *54*(4), 687.

Moffitt, T. E., Arseneault, L., Belsky, D., Dickson, N., Hancox, R. J., Harrington, H., … Caspi, A. (2011). A gradient of childhood self-control predicts health, wealth, and public safety. *Proceedings of the National Academy of Sciences of the United States of America*, *108*(7), 2693–8. https://doi.org/10.1073/pnas.1010076108

Moore, B. S., Clyburn, A., & Underwood, B. (1976). The role of affect in delay of gratification. *Child Development*, 273-276.

Morin, A. (2017). Toward a Glossary of Self-related Terms. *Frontiers in Psychology*, *8*. https://doi.org/10.3389/fpsyg.2017.00280

Mundfrom, D. J., Shaw, D. G., & Ke, T. L. (2005). Minimum sample size recommendations for conducting factor analyses. *International journal of testing*, *5*(2), 159-168.

Muthén, L. K., & Muthén, B. O. (1998-2011). *Mplus user's guide*. Sixth Edition. Los Angeles, CA: Muthén & Muthén.

Nakagawa, S. (2004). A farewell to Bonferroni: the problems of low statistical power and publication bias. *Behavioral ecology*, *15*(6), 1044-1045.

O'Mara, A. J., Marsh, H. W., Craven, R. G., & Debus, R. L. (2006). Do Self-Concept Interventions Make a Difference? A Synergistic Blend of Construct Validation and Meta-Analysis. *Educational Psychologist*, *41*(3), 181–206. https://doi.org/10.1207/s15326985ep4103_4

Osgood, C. E., & Tannenbaum, P. H. (1955). The principle of congruity in the prediction of attitude change. *Psychological Review, 62*(1), 42–55. https://doi.org/10.1037/h0048153

Oyserman, D. (2009). Identity-based motivation: Implications for action-readiness, procedural-readiness, and consumer behavior. *Journal of Consumer Psychology*, *19*(3), 250-260.

Oyserman, D., Elmore, K., & Smith, G. (2012). Self, self-concept, and identity. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 69–104). The Guilford Press.

Park, D., Yu, A., Metz, S. E., Tsukayama, E., Crum, A. J., & Duckworth, A. L. (2017). Beliefs about stress attenuate the relation among adverse life events, perceived distress, and self-control. *Child Development,* 1 -11. https://doi.org/10.1111/cdev.12946

Patrick, V. M., Chun, H. H., & MacInnis, D. J. (2009). Affective forecasting and self-control: Why anticipating pride wins over anticipating shame in a self-regulation context. *Journal of Consumer Psychology*, *19*(3), 537-545.

Pearce, K., Huta, V., & Voloaca, M. (2021). How eudaimonic and hedonic orientations map onto seeing beyond the 'me, now, and tangible'. *The Journal of Positive Psychology*, *16*(5), 610-621.

Peer, E., Brandimarte, L., Samat, S., & Acquisti, A. (2017). Beyond the Turk: Alternative platforms for crowdsourcing behavioral research. *Journal of experimental social psychology*, *70*, 153-163.

Peer, E., Rothschild, D., Gordon, A., Evernden, Z., & Damer, E. (2022). Data quality of platforms and panels for online behavioral research. *Behavior Research Methods*, 1-20.

Perry, J. L., Nicholls, A. R., Clough, P. J., & Crust, L. (2015). Assessing model fit: Caveats and recommendations for confirmatory factor analysis and exploratory structural equation modeling. *Measurement in physical education and exercise science*, *19*(1), 12-21.

Perugini, M., & Bagozzi, R. P. (2001). The role of desires and anticipated emotions in goal-directed behaviours: Broadening and deepening the theory of planned behaviour. British *Journal of Social Psychology, 40*(1), 79-98.

Phelps, E. A., Lempert, K. M., & Sokol-Hessner, P. (2014). Emotion and decision making: multiple modulatory neural circuits. *Annual review of neuroscience, 37*(1), 263-287.

Plant, E. A., Hyde, J. S., Keltner, D., & Devine, P. G. (2000). The gender stereotyping of emotions. *Psychology of Women Quarterly, 24*, 81–92. doi:10.1111/j.14716402.2000.tb01024.x

Preacher, K. J., & Hayes, A. F. (2008). *Assessing mediation in communication research* (pp. 13-54). London: The Sage sourcebook of advanced data analysis methods for communication research.

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate behavioral research*, *42*(1), 185-227.

Pronin, E. (2008). How we see ourselves and how we see others. *Science*, *320*(5880), 1177-1180.

Proulx, T., & Inzlicht, M. (2012). The five "A" s of meaning maintenance: Finding meaning in the theories of sense-making. *Psychological inquiry*, *23*(4), 317-335.

Quay, H. C. (1993). The psychobiology of undersocialized aggressive conduct disorder: A theoretical perspective. *Development and psychopathology*, *5*(1-2), 165-180.

Rachlin, H. (1997). Self and self-control. In J. G. Snodgrass & R. L. Thompson (Eds.), *The self across psychology: Self-recognition, self-awareness, and the self concept* (pp. 85–97). New York Academy of Sciences.

Racy, F. (2015). New directions in the controversial study of self-esteem: a review with suggestions for future research. *Behavioural Sciences Undergraduate Journal*, *2*(1), 42-57.

Raghunathan, R., & Trope, Y. (2002). Walking the tightrope between feeling good and being accurate: mood as a resource in processing persuasive messages. *Journal of personality and social psychology*, *83*(3), 510.

Rees, H. R., Fujita, K., Han, H. A., Sherman, J. W., & Sklar, A. Y. (2018). An examination of the processes by which construal level affects the implicit evaluation of goal relevant stimuli. *Motivation Science*, *4*(3), 251–261. https://doi.org/10.1037/mot0000089

Robins, R. W., Hendin, H. M., & Trzesniewski, K. H. (2001). Measuring global self-esteem: Construct validation of a single-item measure and the Rosenberg Self-Esteem Scale. *Personality and social psychology bulletin*, *27*(2), 151-161.

Rosenberg, M. (1989). Self-concept research: A historical overview. *Social forces*, *68*(1), 34-44.

Rosenberg, M. (1979). *Conceiving the Self*. NY: Basic.

Rosenberg, M. (1965). Rosenberg self-esteem scale. *Journal of Religion and Health*.

Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of statistical software*, *48*, 1-36.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78.

Sarver, T. (2008). Anticipating regret: Why fewer options may be better. *Econometrica*, *76*(2), 263-305.

Saunders, B., Milyavskaya, M., Etz, A., Randles, D., & Inzlicht, M. (2018). Reported self-control is not meaningfully associated with inhibition-related executive function: A Bayesian analysis. *Collabra: Psychology*, *4*(1).

Schaubroeck, J., Kim, Y. J., & Peng, A. C. (2012). The self-concept in organizational psychology: Clarifying and differentiating the constructs. In G. P. Hodgkinson & J. K. Ford (Eds.), *International review of industrial and organizational psychology 2012* (pp. 1–38). Wiley Blackwell.

Scheier, M. F., & Carver, C. S. (1988). A model of behavioral self-regulation: Translating intention into action. In *Advances in experimental social psychology* (Vol. 21, pp. 303-346). Academic Press.

Schoeller, F., Perlovsky, L., & Arseniev, D. (2018). Physics of mind: experimental confirmations of theoretical predictions. *Physics of life reviews*, *25*, 45-68.

Schmeichel, B. J., Harmon-Jones, C., & Harmon-Jones, E. (2010). Exercising self-control increases approach motivation. *Journal of personality and social psychology*, *99*(1), 162.

Schnabel, K., & Asendorpf, J. B. (2010). The self-concept: New insights from implicit measurement procedures. In B. Gawronski & B. K. Payne (Eds.), *Handbook of implicit social cognition: Measurement, theory, and applications* (pp. 408–425). The Guilford Press.

Schnabel, K., Banse, R., & Asendorpf, J. B. (2006). Assessment of implicit personality self-concept using the implicit association test (IAT): Concurrent assessment of anxiousness and angriness. *British Journal of Social Psychology*, *45*(2), 373–396. https://doi.org/10.1348/014466605X49159

Schmidt, A. M., & DeShon, R. P. (2007). What to do? The effects of discrepancies, incentives, and time on dynamic goal prioritization. *Journal of Applied Psychology*, *92*(4), 928–941. https://doi.org/10.1037/0021-9010.92.4.928

Schmidt, A. M., Dolis, C. M., & Tolli, A. P. (2009). A matter of time: Individual differences, contextual dynamics, and goal progress effects on multiple-goal self-regulation. *Journal of Applied Psychology, 94*(3), 692–709. https://doi.org/10.1037/a0015012

Schnell, A. K., Boeckle, M., Rivera, M., Clayton, N. S., & Hanlon, R. T. (2021). Cuttlefish exert self-control in a delay of gratification task. *Proceedings of the Royal Society B*, *288*(1946), 20203161.

Schoeller, F., Perlovsky, L., & Arseniev, D. (2018). Physics of mind: experimental confirmations of theoretical predictions. *Physics of life reviews*, *25*, 45-68.

Schoemann, A. M., Boulton, A. J., & Short, S. D. (2017). Determining power and sample size for simple and complex mediation models. *Social Psychological and Personality Science, 8*(4), 379–386. https://doi.org/10.1177/1948550617715068

Schwarz, N., & Clore, G. L. (2003). Mood as information: 20 years later. *Psychological inquiry*, *14*(3-4), 296-303.

Schwarz, N., & Clore, G. L. (2007). Feelings and phenomenal experiences. In A. W. Kruglanski & E. T. Higgins (Eds.), *Social psychology: Handbook of basic principles* (pp. 385–407). The Guilford Press.

Schwartz, S. J., Klimstra, T. A., Luyckx, K., Hale III, W. W., Frijns, T., Oosterwegel, A., ... & Meeus, W. H. (2011). Daily dynamics of personal identity and self–concept clarity. *European Journal of Personality*, *25*(5), 373-385.

Schwarz, J. C., & Pollack, P. R. (1977). Affect and delay of gratification. Journal of Research in Personality, 11, 147-164. doi:10.1016/0092-6566(77)90013-7

Shah, J. Y., & Kruglanski, A. W. (2008). The challenge of change in goal systems. *The handbook of motivation science*, 217-229.

Shiv, B., & Huber, J. (2000). The impact of anticipating satisfaction on consumer choice. *Journal of Consumer Research*, *27*(2), 202-216.

Sedikides, C. (1992). Changes in the valence of the self as a function of mood. *Review of personality and social psychology*, *14*(1), 271-31.

Shah, J. Y., & Kruglanski, A. W. (2002). Priming against your will: How accessible alternatives affect goal pursuit. *Journal of experimental social psychology*, *38*(4), 368-383.

Shah, J. Y., & Kruglanski, A. W. (2003). When opportunity knocks: bottom-up priming of goals by means and its effects on self-regulation. *Journal of personality and social psychology*, *84*(6), 1109.

Shavelson, R. J., Hubner, J. J., & Stanton, G. C. (1976). Self-Concept: Validation of Construct Interpretations. *Review of Educational Research*, *46*(3), 407–441. https://doi.org/10.3102/00346543046003407

Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology, 76*(3), 482–497. https://doi.org/10.1037/0022-3514.76.3.482

Shenhav, A., Botvinick, M. M., & Cohen, J. D. (2013). The Expected Value of Control: An Integrative Theory of Anterior Cingulate Cortex Function. *Neuron*, *79*(2), 217–240. https://doi.org/10.1016/j.neuron.2013.07.007

Snyder, C. R. (Ed.). (2000). *Handbook of hope: Theory, measures, and applications*. Academic press.

Spector, P. E., & Brannick, M. T. (2011). Methodological urban legends: The misuse of statistical control variables. *Organizational research methods*, *14*(2), 287-305.

Steimke, R., Stelzel, C., Gaschler, R., Rothkirch, M., Ludwig, V. U., Paschke, L. M., Trempler, I., Kathmann, N., Goschke, T., & Walter, H. (2016). Decomposing Self-Control: Individual Differences in Goal Pursuit Despite Interfering Aversion, Temptation, and Distraction. *Frontiers in Psychology*, *7*. https://doi.org/10.3389/fpsyg.2016.00382

Steel, P., & König, C. J. (2006). Integrating theories of motivation. *Academy of management review, 31*(4), 889-913. https://doi.org/10.5465/amr.2006.22527462

Stillman, P. E., Medvedev, D., & Ferguson, M. J. (2017). Resisting Temptation: Tracking How Self-Control Conflicts Are Successfully Resolved in Real Time. *Psychological Science*, *28*(9), 1240–1258. https://doi.org/10.1177/0956797617705386

Stipek, D. (1995). The development of pride and shame in toddlers. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 237–252). Guilford Press.

Strack, F., & Deutsch, R. (2004). Reflective and impulsive determinants of social behavior. *Personality and social psychology review, 8*(3), 220-247.

Stroud, S., & Tappolet, C. (Eds.). (2003). *Weakness of will and practical irrationality*. Clarendon Press.

Sympson, S. C. (1999). *Validation of the Domain Specific Hope Scale: Exploring hope in life domains*. University of Kansas.

Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2013). *Using multivariate statistics* (Vol. 6, pp. 497-516). Boston, MA: Pearson.

Tangney, J. P. (1994). The mixed legacy of the superego: Adaptive and maladaptive aspects of shame and guilt. In J. M. Masling & R. F. Bornstein (Eds.), *Empirical perspectives on object relations theory* (pp. 1–28). American Psychological Association. https://doi.org/10.1037/11100-001

Tangney, J. P. (1995). Shame and guilt in interpersonal relationships. In J. P. Tangney & K. W. Fischer (Eds.), *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride* (pp. 114–139). Guilford Press.

Tangney, J. P. (1999). The self-conscious emotions: Shame, guilt, embarrassment and pride. In T. Dalgleish & M. J. Power (Eds.), *Handbook of cognition and emotion* (pp. 541–568). John Wiley & Sons Ltd https://doi.org/10.1002/0470013494.ch26

Tangney, J. P. (Ed.). (2012). Self-conscious emotions. In M. R. Leary & J. P. Tangney (Eds.), *Handbook of self and identity* (pp. 446–478). The Guilford Press.

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*(2), 271-324.

Tangney, J. P., & Dearing, R. L. (2003). *Shame and guilt*. Guilford Press.

Tangney, J. P., & Fischer, K. W. (Eds.). (1995). *Self-conscious emotions: The psychology of shame, guilt, embarrassment, and pride.* Guilford Press.

Tanji, J., & Hoshi, E. (2008). Role of the lateral prefrontal cortex in executive behavioral control. *Physiological reviews*, *88*(1), 37-57.

Thaler, R. H., & Shefrin, H. M. (1981). An Economic Theory of Self-Control. *Journal of Political Economy, 89*(2), 392–406. https://doi.org/10.1086/260971

Torelli, C. J., & Kaikati, A. M. (2009). Values as predictors of judgments and behaviors: The role of abstract and concrete mindsets. *Journal of Personality and Social Psychology, 96*(1), 231–247. https://doi.org/10.1037/a0013836

Tracy, J. L., & Robins, R. W. (2007). Self-conscious emotions: Where self and emotion meet. In C. Sedikides & S. J. Spencer (Eds.), *The self* (pp. 187–209). Psychology Press.

Tracy, J. L., & Robins, R. W. (2004). " Putting the Self Into Self-Conscious Emotions: A Theoretical Model". *Psychological inquiry*, *15*(2), 103-125. https://doi.org/10.1207/s15327965pli1502_01

Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological review*, *96*(3), 506.

Trope, Y., & Fishbach, A. (2000). Counteractive self-control in overcoming temptation. *Journal of Personality and Social Psychology*, *79*(4), 493–506. https://doi.org/10.1037/00223514.79.4.493

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review*, *117*(2), 440-463

Trope, Y., & Liberman, N. (2003). Temporal construal. *Psychological review*, *110*(3), 403.

Trope, Y., Liberman, N., & Wakslak, C. (2007). Construal levels and psychological distance: Effects on representation, prediction, evaluation, and behavior. *Journal of consumer psychology*, *17*(2), 83-95.

Trope, Y., & Pomerantz, E. M. (1998). Resolving conflicts among self-evaluative motives: Positive experiences as a resource for overcoming defensiveness. *Motivation and Emotion*, *22*(1), 53-72.

Tsukayama, E., Duckworth, A. L., & Kim, B. (2012). Resisting Everything except Temptation: Evidence and an Explanation for Domain–specific Impulsivity. *European Journal of Personality*, *26*(3), 318–334. https://doi.org/10.1002/per.841

Vallacher, R. R., & Wegner, D. M. (1987). What do people think they're doing? Action identification and human behavior. *Psychological Review, 94*(1), 3- 15. https://doi.org/10.1037/0033-295X.94.1.3

Vancouver, J. B., & Day, D. V. (2005). Industrial and organisation research on self-regulation: From constructs to applications. *Applied Psychology*, *54*(2), 155-185.

Van Dillen, L. F., Papies, E. K., & Hofmann, W. (2013). Turning a blind eye to temptation: how cognitive load can facilitate self-regulation. *Journal of Personality and Social Psychology*, *104*(3), 427.

van der Weiden, A., Benjamins, J., Gillebaart, M., Ybema, J. F., & de Ridder, D. (2020). How to Form Good Habits? A Longitudinal Field Study on the Role of Self-Control in Habit Formation. *Frontiers in Psychology*, *11*, 560. https://doi.org/10.3389/fpsyg.2020.00560

Veilleux, J. C., Hill, M. A., Skinner, K. D., Pollert, G. A., Spero, K. D., & Baker, D. E. (2018). Self-control failure scenarios in daily life: Developing a taxonomy of goals and temptations. *Motivation and Emotion*, *42*, 653-670.

Vickers Jr, R. R., Conway, T. L., & Hervig, L. K. (1990). Demonstration of replicable dimensions of health behaviors. *Preventive medicine*, *19*(4), 377-401.

Vohs, K. D., Finkenauer, C., & Baumeister, R. F. (2011). The sum of friends' and lovers' self-control scores predicts relationship quality. *Social Psychological and Personality Science*, *2*(2), 138-145.

Vohs, K. D., Mead, N. L., & Goode, M. R. (2008). Merely activating the concept of money changes personal and interpersonal behavior. *Current Directions in Psychological Science*, *17*(3), 208-212.

Wagner, D. D., & Heatherton, T. F. (2011). Giving in to temptation: The emerging cognitive neuroscience of self-regulatory failure. In K. D. Vohs & R. F. Baumeister (Eds.), *Handbook of self-regulation: Research, theory, and applications* (pp. 41–63). The Guilford Press.

Weiner, B. (1985). An attributional theory of achievement motivation and emotion. *Psychological review*, *92*(4), 548.

Werner, K. M., & Milyavskaya, M. (2019). Motivation and self-regulation: The role of want-to motivation in the processes underlying self-regulation and self-control. *Social and Personality Psychology Compass, 13*(1), e12425.

Wertheim, E. H., & Schwarz, J. C. (1983). Depression, guilt, and self-management of pleasant and unpleasant events. *Journal of personality and social psychology*, *45*(4), 884.

Wilkowski, B. M., Fetterman, A., Lappi, S. K., Williamson, L. Z., Leki, E. F., Rivera, E., & Meier, B. P. (2020). Lexical derivation of the PINT taxonomy of goals: Prominence, inclusiveness, negativity prevention, and tradition. *Journal of Personality and Social Psychology*, *119*(5), 1153.

Williams, L. A., & DeSteno, D. (2008). Pride and perseverance: the motivational role of pride. *Journal of personality and social psychology*, *94*(6), 1007.

Williamson, L. Z., & Wilkowski, B. M. (2020). Nipping temptation in the bud: Examining strategic self-control in daily life. *Personality and social psychology bulletin*, *46*(6), 961-975.

Williams, R. L. and Workman, E. A. (1978). The development of a behavioral self-concept scale , 9, 680-Behavior Therapy, 681

Wilson, T. D., & Gilbert, D. T. (2003). Affective forecasting. In M. P. Zanna (Ed.), *Advances in experimental social psychology,* Vol. 35, pp. 345–411). Elsevier Academic Press. https://doi.org/10.1016/S0065-2601(03)01006-2

Xiao, J. J., Chen, C., & Chen, F. (2014). Consumer financial capability and financial satisfaction. *Social indicators research*, *118*, 415-432.

Yentes, R. D., & Wilhelm, F. (2018). careless: Procedures for computing indices of careless responding. *R package version*, *1*(3), 2018.

**Table 1. Pilot Study: Exploratory Factor Analysis Loadings – DSSC Measure**

| *Domain* | *Item* | *Fin* | *Health* | *Achv* | *Soc* | *h2* | *u2* | *com* |
|---|---|---|---|---|---|---|---|---|
| Health | A healthy eater | 0.12 | **0.66** | -0.05 | 0.12 | 0.52 | 0.48 | 1.2 |
| Health | Having an adequate weight | 0.03 | **0.74** | -0.02 | -0.03 | 0.55 | 0.45 | 1.0 |
| Health | Someone who maintains healthy weight | 0.09 | **0.82** | -0.11 | -0.03 | 0.64 | 0.36 | 1.1 |
| Health | Physically fit | -0.07 | **0.76** | 0.13 | -0.10 | 0.63 | 0.37 | 1.1 |
| Health | Physically attractive | -0.15 | **0.66** | 0.14 | 0.11 | 0.51 | 0.49 | 1.3 |
| Health | A healthy person | -0.02 | **0.85** | 0.04 | 0.04 | 0.76 | 0.24 | 1.0 |
| Health | A healthy-conscious person | 0.06 | **0.71** | -0.04 | 0.06 | 0.53 | 0.47 | 1.0 |
| Health | Having healthy habits | 0.07 | **0.78** | 0.11 | -0.02 | 0.75 | 0.25 | 1.1 |
| Achievement | A good student | 0.10 | -0.06 | **0.59** | -0.02 | 0.37 | 0.63 | 1.1 |
| Achievement | A good employee | 0.04 | -0.07 | **0.60** | 0.14 | 0.43 | 0.57 | 1.1 |
| Achievement | Successful in my job | 0.01 | -0.04 | **0.86** | -0.04 | 0.68 | 0.32 | 1.0 |
| Achievement | Good at what I do | 0.00 | 0.03 | **0.58** | 0.21 | 0.51 | 0.49 | 1.3 |
| Achievement | An accomplished person | 0.01 | 0.18 | **0.67** | 0.01 | 0.61 | 0.39 | 1.2 |
| Achievement | Productive person | 0.05 | 0.05 | **0.61** | 0.22 | 0.60 | 0.40 | 1.3 |
| Achievement | A high achiever | 0.05 | 0.17 | **0.68** | -0.10 | 0.58 | 0.42 | 1.2 |
| Achievement | Someone who accomplishes goals | 0.12 | 0.09 | **0.64** | 0.16 | 0.69 | 0.31 | 1.2 |
| Social | A good fried | -0.09 | 0.07 | -0.04 | **0.75** | 0.53 | 0.47 | 1.1 |
| Social | A good relationship partner | 0.06 | 0.17 | -0.10 | **0.69** | 0.50 | 0.50 | 1.2 |
| Social | A good parent | -0.01 | 0.03 | 0.13 | **0.49** | 0.31 | 0.69 | 1.1 |
| Social | A good son/daughter | 0.12 | -0.01 | 0.22 | **0.61** | 0.60 | 0.40 | 1.3 |
| Social | A good family member | -0.01 | 0.07 | 0.12 | **0.78** | 0.71 | 0.29 | 1.1 |
| Social | A friendly person | -0.12 | 0.02 | 0.08 | **0.52** | 0.29 | 0.71 | 1.2 |
| Social | Loyal to friends | 0.10 | -0.18 | -0.03 | **0.69** | 0.48 | 0.52 | 1.2 |
| Social | Loyal to family | 0.04 | -0.11 | 0.05 | **0.66** | 0.46 | 0.54 | 1.1 |
| Financial | A financially responsible person | **0.86** | -0.06 | 0.10 | 0.05 | 0.80 | 0.20 | 1.0 |
| Financial | Good with money | **0.84** | -0.01 | 0.07 | 0.08 | 0.79 | 0.21 | 1.0 |
| Financial | Careful with money | **0.90** | 0.07 | -0.09 | 0.08 | 0.84 | 0.16 | 1.1 |
| Financial | Cautious with money | **0.92** | -0.02 | -0.08 | 0.00 | 0.78 | 0.22 | 1.0 |
| Financial | Prudent with money | **0.92** | 0.02 | 0.00 | -0.08 | 0.83 | 0.17 | 1.0 |
| Financial | Impulsive with money (R) | **0.74** | 0.02 | 0.13 | -0.08 | 0.63 | 0.37 | 1.1 |
| Financial | Good at saving money | **0.72** | 0.11 | 0.12 | -0.09 | 0.64 | 0.36 | 1.1 |

*Note.* Factor loadings < .40 are bolded.

**Table 2. Pilot Study: Exploratory Factor Analysis Loadings - DS Goals Measure**

| *Domain* | *Item* | *Fin* | *Soc* | *Health* | *Ach* | *Drugs* | *h2* |
|---|---|---|---|---|---|---|---|
| Health | Eating health | 0.10 | 0.14 | **0.71** | 0.13 | -0.03 | 0.55 |
| Health | Achieving desired weight | 0.06 | 0.20 | **0.59** | -0.05 | 0.18 | 0.42 |
| Health | Exercising regularly | -0.11 | -0.01 | **0.77** | 0.12 | 0.04 | 0.62 |
| Health | Getting fit | -0.07 | 0.04 | **0.83** | 0.12 | 0.07 | 0.72 |
| Health | Being physically active | -0.05 | 0.13 | **0.79** | 0.18 | 0.10 | 0.68 |
| Health | Heaving healthy habits | 0.21 | 0.17 | **0.70** | 0.05 | 0.04 | 0.57 |
| Drugs | Controlling drinking | 0.21 | 0.10 | 0.14 | 0.04 | **0.59** | 0.42 |
| Drugs | Controlling smoking | 0.09 | 0.14 | 0.20 | 0.12 | **0.77** | 0.67 |
| Drugs | Controlling drugs | 0.07 | 0.17 | 0.01 | 0.16 | **0.78** | 0.67 |
| Achievement | Completing project | 0.05 | 0.25 | 0.06 | **0.57** | 0.10 | 0.40 |
| Achievement | Finishing school/certificate | -0.02 | 0.15 | 0.00 | **0.69** | 0.30 | 0.59 |
| Achievement | Passing exam/course | -0.04 | 0.14 | -0.03 | **0.69** | 0.37 | 0.64 |
| Achievement | Learning new skill | 0.05 | 0.19 | 0.17 | **0.59** | 0.02 | 0.42 |
| Achievement | Achieving something important | 0.21 | 0.21 | 0.16 | **0.67** | -0.11 | 0.57 |
| Achievement | Accomplishing a goal | 0.24 | 0.14 | 0.18 | **0.60** | 0.01 | 0.64 |
| Achievement | Improving specific skill | 0.30 | 0.31 | 0.12 | **0.65** | -0.11 | 0.64 |
| Social | Having more friends | -0.03 | **0.66** | 0.07 | 0.18 | 0.07 | 0.49 |
| Social | Having deeper friendships | 0.11 | **0.72** | 0.05 | 0.13 | -0.01 | 0.55 |
| Social | Socializing more | 0.08 | **0.68** | 0.03 | 0.24 | 0.06 | 0.53 |
| Social | Being a better friend | 0.21 | **0.73** | 0.16 | 0.14 | -0.06 | 0.62 |
| Social | Attending family events more | 0.18 | **0.50** | 0.11 | 0.20 | 0.15 | 0.36 |
| Social | Repairing a relationship | 0.01 | **0.57** | 0.03 | 0.13 | 0.14 | 0.37 |
| Social | Managing relationships better | 0.07 | **0.72** | 0.16 | 0.09 | 0.14 | 0.57 |
| Social | Minimizing conflict w/others | 0.19 | **0.43** | 0.08 | 0.13 | 0.08 | 0.25 |
| Social | Improving relationships | 0.20 | **0.81** | 0.14 | 0.11 | 0.11 | 0.74 |
| Financial | Making money | **0.58** | 0.09 | -0.06 | 0.05 | 0.05 | 0.35 |
| Financial | Saving money | **0.76** | 0.05 | 0.05 | 0.19 | -0.03 | 0.62 |
| Financial | Sticking to a budget | **0.78** | 0.15 | 0.00 | 0.15 | 0.15 | 0.67 |
| Financial | Spending money wisely | **0.83** | 0.06 | 0.10 | 0.17 | 0.00 | 0.74 |
| Financial | Buying only things I need | **0.64** | 0.04 | 0.05 | -0.01 | -0.04 | 0.42 |
| Financial | Saving money for a specific thing | **0.44** | 0.10 | 0.04 | 0.15 | 0.10 | 0.24 |
| Financial | Planning purchases | **0.77** | 0.11 | -0.01 | -0.03 | 0.12 | 0.62 |
| Financial | Controlling spending habits | **0.79** | 0.27 | 0.00 | -0.03 | 0.16 | 0.73 |

*Note.* Factor loadings < .40 are bolded.

**Table 3. Pilot Study: Descriptives, Correlations, and Reliabilities for DSSC and DS Goals Measures**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DSSC_Health | 3.17 | 1.00 | (.92) | | | | | | | | | | | | | |
| DSSC_Achieve | 3.90 | .78 | .49** | (.90) | | | | | | | | | | | | |
| DSSC_Social | 4.13 | .66 | .22** | .52** | (.87) | | | | | | | | | | | |
| DSSC_Financial | 3.51 | 1.10 | .40** | .47** | .28** | (.95) | | | | | | | | | | |
| DSGoal_H_1 | 2.97 | .70 | .60** | .31** | .13 | .23** | (.87) | | | | | | | | | |
| DSGoal_H_2 | 3.77 | .84 | .30** | .23** | .13 | .21** | .72** | (.81) | | | | | | | | |
| DSGoal_Drug_1 | 2.26 | 1.10 | .64 | .06 | -.33 | .03 | .20** | .18* | (.83) | | | | | | | |
| DSGoal_Drug_2 | 2.90 | 1.51 | .02** | .10 | .20 | -.00 | .15* | .21** | .85** | (.85) | | | | | | |
| DSGoal_A_1 | 2.75 | .81 | .22** | .30* | .19* | .29** | .24** | .25** | .32** | .23** | (.84) | | | | | |
| DSGoal_A_2 | 3.37 | 1.03 | .21** | .28** | .22** | .21** | .24** | .30** | .28** | .25** | .90** | (.83) | | | | |
| DSGoal_Soc_1 | 2.60 | .71 | .23** | .21** | .27** | .04 | .28** | .23** | .30** | .26** | .46** | .44** | (.88) | | | |
| DsGoal_Soc_2 | 3.15 | .92 | .23** | .17** | .23** | .02 | .25** | .31** | .31** | .31** | .46** | .49** | .88** | (.87) | | |
| DSGoals_Fin_1 | 3.33 | .59 | .02 | .26** | .28** | .22** | .08 | .12 | .24** | .21** | .26** | .23** | .31** | .24** | (.87) | |
| DSGoal_Fin_2 | 4.10 | .77 | -.01 | .21** | .27** | .17* | .08 | .19* | .25** | .25** | .27** | .31** | .26** | .31** | .88* | (.88) |

*Note.* Omegas are reported in parentheses. DSSC: Domain-specific self-concept. DSGoal Measure: Items measuring self-identification are denoted with '1'. Items measuring importance are denoted with '2'. H = items related to health goals. Drug = items related to controlling drug use and addictive behaviors; A = items related to achievement goals. Soc = items related to social goals. Fin = items related to financial goals.
*$p < .05$. **$p < .01$.

**Table 4. Pilot Study: Descriptives, Correlations, and Reliabilities for DSSC Measure and Related Constructs**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DSSC_Health | 3.17 | 1.00 | (.92) | | | | | | | | | | | | |
| DSSC_Ach | 3.90 | .78 | .49** | (.90) | | | | | | | | | | | |
| DSSC_Soc | 4.13 | .66 | .22** | .52** | (.87) | | | | | | | | | | |
| DSSC_Fin | 3.51 | 1.10 | .40** | .47** | .28** | (.95) | | | | | | | | | |
| Self Esteem | 2.84 | .70 | .55** | .66** | .48** | .40** | (.94) | | | | | | | | |
| Gen_Health | 3.32 | .76 | .58** | .46** | .27** | .53** | .50** | (.86) | | | | | | | |
| Hope_Social | 3.27 | .91 | .36** | .38** | .35** | .21** | .35** | .32** | (.91) | | | | | | |
| Hope_Acad | 3.90 | .92 | .24** | .67** | .41** | .39** | .49** | .35** | .35** | (.95) | | | | | |
| Hope_Rom | 3.19 | 1.05 | .36** | .37* | .36** | .11 | .30** | .17* | .35** | .33** | (.92) | | | | |
| Hope_Fam | 3.71 | 1.12 | .25** | .51** | .64** | .24** | .45** | .20* | .39** | .43** | .35** | (.95) | | | |
| Hope_Work | 3.98 | .82 | .28** | .67** | .43** | .37** | .48** | .29** | .42** | .65** | .33** | .51** | (.91) | | |
| Fin_Sat | 4.15 | 2.68 | .52** | .43** | .19* | .48** | .48** | .52** | .19* | .28** | .21** | .22** | .25** | - | |
| Fin_Capability | 5.36 | 1.67 | .36** | .52** | .31** | .71* | .42** | .43** | .22** | .41** | .23** | .28** | .45** | .46** | - |

*Note.* Omegas are reported in parentheses, except for Fin_Sat and Fin_Capability, which are single-item measures. DSSC = Domain-specific self-concept. Gen_Health: Good Health Practices Scale (Hampson et al, 2019). Hope = Domain Specific Hope Scale (Sympson, 1999).
*$p < .05$. **$p < .01$.

**Table 5. Pilot Study: Descriptives, Correlations, and Reliabilities for DS Goals Measure and Related Constructs**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DSGoal_H_1 | 2.97 | .70 | (.87) | | | | | | | | | | | | | |
| DSGoal_H_2 | 3.77 | .84 | .72** | (.81) | | | | | | | | | | | | |
| DSGoal_Drug_1 | 2.26 | 1.10 | .20** | .18** | (.83) | | | | | | | | | | | |
| DS_Goal_Drug_2 | 2.90 | 1.51 | .15* | .21** | .85 | (.85) | | | | | | | | | | |
| DSGoal_A_1 | 2.75 | .81 | .24** | .25** | .32* | .23** | (.84) | | | | | | | | | |
| DSGoal_A_2 | 3.37 | 1.03 | .24** | .30** | .28** | .25** | .90** | (.83) | | | | | | | | |
| DSGoal_Soc_1 | 2.60 | .71 | .28** | .23** | .30** | .26** | .46** | .44** | (.88) | | | | | | | |
| DsGoal_Soc_2 | 3.15 | .92 | .25** | .31** | .31** | .31** | .46** | .49** | .88** | (.87) | | | | | | |
| DSGoals_Fin_1 | 3.33 | .59 | .08 | .18 | .24** | .21** | .26** | .23** | .31** | .24** | (.87) | | | | | |
| DSGoal_Fin_2 | 4.10 | .77 | .08 | .19* | .24** | .25** | .27** | .31** | .26** | .31** | .88** | (.88) | | | | |
| Prominence | .45 | 1.31 | .08 | .18* | .23** | .20** | .20** | .16* | .32** | .33** | .22** | .20** | (.89) | | | |
| Inclusion | 1.37 | 1.28 | .11 | .09 | .17* | .16* | .24** | .16* | .38** | .35** | .15* | .81 | .24** | (.90) | | |
| Neg_Prevention | 2.06 | 1.42 | .07 | .13 | -.17* | -.07 | .04 | .09 | .01 | .08 | .05 | .16 | -.06 | -.01 | (.91) | |
| Tradition | .18 | 1.70 | -.04 | .02 | .14 | .16* | .19* | .17* | .18* | .18* | .16* | .16* | .40** | -.03 | .07 | (.87) |

*Note.* Omegas are reported in parentheses. DSGoal Measure: Items measuring self-identification are denoted with '1'. Items measuring importance are denoted with '2'. H = items related to health goals. Drug = items related to controlling drug use and addictive behaviors; A = items related to achievement goals. Soc = items related to social goals. Fin = items related to financial goals.
*$p < .05$. **$p < .01$.

**Table 6. Pilot Study: Frequencies and Percentages of Goals and Temptations Across Domains**

| | | Goals | | | | Temptations | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Primary Code | | Secondary Code | | Primary Code | | Secondary Code | |
| **Domain** | **Code** | **Count** | **%** | **Count** | **%** | **Count** | **%** | **Count** | **%** |
| *Drugs* | 3 | 1 | 0.7 | 9 | 7.3 | 8 | 5.8 | 0 | 0 |
| *Hedonic* | 4 | 0 | 0 | 0 | 0 | 2 | 1.46 | 21 | 15.33 |
| *Health* | 5 | 29 | 21.2 | 0 | 0 | 21 | 15.3 | 2 | 1.46 |
| *Achieve* | 6 | 25 | 18.2 | 1 | 0.7 | 20 | 14.6 | 0 | 0 |
| *Social* | 7 | 36 | 26.3 | 0 | 0 | 50 | 36.5 | 5 | 3.65 |
| *Financial* | 8 | 44 | 32.1 | 2 | 1.46 | 34 | 24.8 | 1 | 0.7 |
| *Other* | 9 | 2 | 1.5 | 0 | 0 | 2 | 1.4 | 1 | 0.7 |
| *None* | 0 | 69 | 33.47* | 194 | - | 69 | 33.47* | 176 | - |
| **Total** | | **206** | **100%** | **206** | **9.46%** | **206** | **100%** | **206** | **21.84%** |

*Note.* Percentages are calculated out of a valid number of cases ($N$=137). Percentages denoted with * are calculated out of the total number of cases ($N$=206).

**Table 7. Pilot Study: Frequenies and Percentages of Domain Pairings**

| **Domain Pairings** | **Codes** | **Count** | **Percentage** |
|---|---|---|---|
| *Health-Health* | 55 | 20 | 14.60 |
| *Health- Achievement* | 56 | 2 | 1.46 |
| *Health-Social* | 57 | 9 | 6.57 |
| *Health - Financial* | 58 | 0 | 0 |
| *Achievement- Achievement* | 66 | 15 | 10.95 |
| *Achievement - Health* | 65 | 0 | 0 |
| *Achievement - Social* | 67 | 8 | 5.84 |
| *Achievement - Financial* | 68 | 1 | 0.73 |
| *Social - Social* | 77 | 28 | 20.44 |
| *Social - Health* | 75 | 2 | 1.46 |
| *Social - Achievement* | 76 | 1 | 0.73 |
| *Social - Financial* | 78 | 2 | 1.46 |
| *Financial – Financial* | 88 | 32 | 23.36 |
| *Financial-Health* | 85 | 2 | 1.46 |
| *Financial- Achievement* | 86 | 2 | 1.46 |
| *Financial - Social* | 87 | 8 | 5.84 |
| *Drugs-Drugs* | 33 | 1 | 0.73 |
| *Achievement - Hedonic* | 64 | 1 | 0.73 |
| *Social - Hedonic* | 74 | 1 | 0.73 |
| *Other* | 99 | 2 | 1.46 |
| *No code assigned* | 0 | 69 | 33.50* |
| Total | | 206 | 100% |

*Note.* Percentages are calculated out of a valid number of cases ($N$=137). Percentages denoted with * are calculated out of the total number of cases ($N$=206).

**Table 8. Pilot Study: The Overall Distribution of Domain Pairings**

| **Domain Pairs** | **Count** | **Percentage** |
|---|---|---|
| *Same Domain* | 100 | 72.99% |
| *Different Domain* | 37 | 27.01% |
| Total | 137 | 100% |

**Table 9. Study 1: Confirmatory Factor Analysis Model Fit for DSSC**

| Model | $\chi^2$ | *df* | CFI | TLI | RMSEA (90% CI) | SRMR |
|---|---|---|---|---|---|---|
| Model 1: One Factor | 2376.67 | 434 | .41 | .37 | .18 (.17, .18) | .18 |
| **Model 2: Four Factors (Health, Achievement, Social, Financial Domains)** | **1021.77** | **428** | **.82** | **.80** | **.10 (.09, .10)** | **.08** |
| Model 3: Five Factors (Health – Wellbeing, Health – All Other, Achievement, Social, Financial) | 926.64 | 424 | .85 | .83 | .09 (.08, .10) | .08 |
| Model 4: Six Factors (Health – Food, Health – Exercise, Health – Wellbeing, Achievement, Social, Financial) | 889.223 | 413 | .86 | .84 | .09 (.08, .10) | .08 |

*Note.* $N = 158$. **The proposed model is bolded**. CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual. Results were obtained using lavaan and estimator = ML.

**Table 10. Study 1: Confirmatory Factor Analysis Loadings - DSSC Measure**

| *Domain* | *Item* | *Health* | *Achv* | *Soc* | *Fin* |
|---|---|---|---|---|---|
| Health | A healthy eater | 0.79 | | | |
| Health | Having an adequate weight | 0.83 | | | |
| Health | Someone who maintains healthy weight | 0.86 | | | |
| Health | Physically fit | 0.84 | | | |
| Health | Physically attractive | 0.47 | | | |
| Health | A healthy person | 0.82 | | | |
| Health | A healthy-conscious person | 0.71 | | | |
| Health | Having healthy habits | 0.77 | | | |
| Achievement | A good student | | 0.51 | | |
| Achievement | A good employee | | 0.60 | | |
| Achievement | Successful in my job | | 0.62 | | |
| Achievement | Good at what I do | | 0.70 | | |
| Achievement | An accomplished person | | 0.73 | | |
| Achievement | Productive person | | 0.81 | | |
| Achievement | A high achiever | | 0.73 | | |
| Achievement | Someone who accomplishes goals | | 0.81 | | |
| Social | A good fried | | | 0.59 | |
| Social | A good relationship partner | | | 0.61 | |
| Social | A good parent | | | 0.57 | |
| Social | A good son/daughter | | | 0.85 | |
| Social | A good family member | | | 0.84 | |
| Social | A friendly person | | | 0.57 | |
| Social | Loyal to friends | | | 0.52 | |
| Social | Loyal to family | | | 0.63 | |
| Financial | A financially responsible person | | | | 0.84 |
| Financial | Good with money | | | | 0.92 |
| Financial | Careful with money | | | | 0.96 |
| Financial | Cautious with money | | | | 0.93 |
| Financial | Prudent with money | | | | 0.85 |
| Financial | Impulsive with money (R) | | | | 0.68 |
| Financial | Good at saving money | | | | 0.80 |

## Table 11. Confirmatory Factor Analysis Model Fit for DS Goals

| Model | $\chi^2$ | *df* | CFI | TLI | RMSEA (90% CI) | SRMR |
|---|---|---|---|---|---|---|
| *Identification Responses* | | | | | | |
| Model 1: One Factor | 2062.18 | 495 | .35 | .30 | .15 (.14, .16) | .14 |
| **Model 2: Five Factors (Health, Drugs, Achievement, Social, Financial)** | **1087.94** | **485** | **.75** | **.73** | **.09 (.09, .10)** | **.09** |
| Model 3: Six Factors (Health – Food, Health – Exercise, Drugs, Achievement, Social, Financial) | 1025.56 | 480 | .77 | .75 | .09 (.08, .10) | .09 |
| *Importance Responses* | | | | | | |
| Model 1: One Factor | 2021.41 | 495 | .44 | .40 | .15 (.14, .16) | .13 |
| **Model 2: Five Factors (Health, Drugs, Achievement, Social, Financial)** | **1115.77** | **485** | **.77** | **.75** | **.10 (.09, .10)** | **.09** |
| Model 3: Six Factors (Health – Food, Health – Exercise, Drugs, Achievement, Social, Financial) | 1072.79 | 480 | .78 | .76 | .09 (.09, .10) | .08 |

*Note.* $N = 158$. **The proposed model is bolded**. CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual. Results were obtained using lavaan and estimator = ML.

**Table 12. Study 1: Confirmatory Factor Analysis Loadings - DS Goals Measure (Identification Responses)**

| *Domain* | *Item* | *Health* | *Drugs* | *Achv* | *Soc* | *Fin* |
|---|---|---|---|---|---|---|
| Health | Eating health | 0.65 | | | | |
| Health | Achieving desired weight | 0.48 | | | | |
| Health | Exercising regularly | 0.86 | | | | |
| Health | Getting fit | 0.86 | | | | |
| Health | Being physically active | 0.81 | | | | |
| Health | Heaving healthy habits | 0.67 | | | | |
| Drugs | Controlling drinking | | 0.68 | | | |
| Drugs | Controlling smoking | | 0.91 | | | |
| Drugs | Controlling drugs | | 0.91 | | | |
| Achievement | Completing project | | | 0.44 | | |
| Achievement | Finishing school/certificate | | | 0.47 | | |
| Achievement | Passing exam/course | | | 0.42 | | |
| Achievement | Learning new skill | | | 0.68 | | |
| Achievement | Achieving something important | | | 0.90 | | |
| Achievement | Accomplishing a goal | | | 0.85 | | |
| Achievement | Improving specific skill | | | 0.72 | | |
| Social | Having more friends | | | | 0.61 | |
| Social | Having deeper friendships | | | | 0.67 | |
| Social | Socializing more | | | | 0.70 | |
| Social | Being a better friend | | | | 0.75 | |
| Social | Attending family events more | | | | 0.54 | |
| Social | Repairing a relationship | | | | 0.53 | |
| Social | Managing relationships better | | | | 0.58 | |
| Social | Minimizing conflict w/others | | | | 0.48 | |
| Social | Improving relationships | | | | 0.73 | |
| Financial | Making money | | | | | 0.51 |
| Financial | Saving money | | | | | 0.70 |
| Financial | Sticking to a budget | | | | | 0.78 |
| Financial | Spending money wisely | | | | | 0.81 |
| Financial | Buying only things I need | | | | | 0.62 |
| Financial | Saving money for a purchase | | | | | 0.49 |
| Financial | Planning purchases | | | | | 0.61 |
| Financial | Controlling spending habits | | | | | 0.61 |

**Table 13. Study 1: Confirmatory Factor Analysis - DS Goals Measure (Importance Responses)**

| *Domain* | *Item* | *Health* | *Drugs* | *Achv* | *Soc* | *Fin* |
|---|---|---|---|---|---|---|
| Health | Eating health | 0.66 | | | | |
| Health | Achieving desired weight | 0.63 | | | | |
| Health | Exercising regularly | 0.86 | | | | |
| Health | Getting fit | 0.88 | | | | |
| Health | Being physically active | 0.85 | | | | |
| Health | Heaving healthy habits | 0.79 | | | | |
| Drugs | Controlling drinking | | 0.69 | | | |
| Drugs | Controlling smoking | | 0.84 | | | |
| Drugs | Controlling drugs | | 0.91 | | | |
| Achievement | Completing project | | | 0.42 | | |
| Achievement | Finishing school/certificate | | | 0.50 | | |
| Achievement | Passing exam/course | | | 0.46 | | |
| Achievement | Learning new skill | | | 0.73 | | |
| Achievement | Achieving something important | | | 0.90 | | |
| Achievement | Accomplishing a goal | | | 0.82 | | |
| Achievement | Improving specific skill | | | 0.77 | | |
| Social | Having more friends | | | | 0.58 | |
| Social | Having deeper friendships | | | | 0.66 | |
| Social | Socializing more | | | | 0.63 | |
| Social | Being a better friend | | | | 0.70 | |
| Social | Attending family events more | | | | 0.57 | |
| Social | Repairing a relationship | | | | 0.58 | |
| Social | Managing relationships better | | | | 0.71 | |
| Social | Minimizing conflict w/others | | | | 0.60 | |
| Social | Improving relationships | | | | 0.77 | |
| Financial | Making money | | | | | 0.52 |
| Financial | Saving money | | | | | 0.67 |
| Financial | Sticking to a budget | | | | | 0.79 |
| Financial | Spending money wisely | | | | | 0.81 |
| Financial | Buying only things I need | | | | | 0.74 |
| Financial | Saving money for a purchase | | | | | 0.57 |
| Financial | Planning purchases | | | | | 0.79 |
| Financial | Controlling spending habits | | | | | 0.73 |

**Table 14. Study 1: Descriptives, Correlations, and Reliabilities for DSSC, DS Goals, and Related Constructs**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. DSSC_Health | 3.35 | 1.00 | (.92) | | | | | | | | | | | | | | | | |
| 2. DSSC_Achv | 4.02 | .70 | .33** | (.88) | | | | | | | | | | | | | | | |
| 3. DSSC_Soc | 4.16 | .68 | .22** | .55** | (.86) | | | | | | | | | | | | | | |
| 4. DSSC_Fin | 3.53 | 1.08 | .31** | .42** | .33** | (.95) | | | | | | | | | | | | | |
| 5. DSGoal_H1 | 3.14 | .64 | .44** | .35** | .20* | .28** | (.87) | | | | | | | | | | | | |
| 6. DSGoal_H2 | 3.95 | .81 | .19* | .20* | .24** | .18* | .64** | (.89) | | | | | | | | | | | |
| 7. DSGoal_D1 | 2.20 | 1.12 | .01 | -.05 | -.13 | -.04 | .10 | .15 | (.87) | | | | | | | | | | |
| 8. DSGoal_D2 | 2.82 | 1.51 | .07 | .04 | -.02 | -.06 | .13 | .24** | .84** | (.87) | | | | | | | | | |
| 9. DSGoal_A1 | 2.85 | .67 | .07 | .18* | .03 | .11 | .23** | .26** | .30** | .31** | (.83) | | | | | | | | |
| 10 DSGoal_A2 | 3.50 | 1.02 | .07 | .20* | .08 | .06 | .22** | .34** | .27** | .35** | .93** | (.83) | | | | | | | |
| 11. DSGoal_S1 | 2.73 | .71 | .13 | .17* | .22** | .14 | .40** | .37** | .26** | .29** | .36** | .31** | (.84) | | | | | | |
| 12. DsGoal_S2 | 3.36 | .94 | .04 | .16* | .24** | .13 | .31** | .43** | .25** | .37** | .38** | .42** | .76** | (.85) | | | | | |
| 13. DSGoals_F1 | 3.40 | .53 | .16* | .37** | .44** | .29** | .44** | .38** | .06 | .10 | .24** | .22** | .33** | .35** | (.84) | | | | |
| 14. DSGoal_F2 | 4.23 | .75 | .08 | .35** | .40** | .18* | .36** | .49** | .15 | .22** | .25** | .33** | .36** | .46** | .79** | (.89) | | | |
| 15. BSCS | 3.28 | .73 | .51** | .41** | .32** | .57** | .29** | .16 | -.13 | -.10 | -.01 | -.06 | .02 | -.03 | .15 | .05 | (.86) | | |
| 16. HEMA-R (E) | 4.82 | 1.06 | .29** | .44** | .29** | .23** | .25** | .24** | -.01 | .09 | .26** | .27** | .24** | .24** | .28** | .28** | .25** | (.84) | |
| 17. HEMA-R (H) | 4.72 | 1.04 | -.01 | .06 | .09 | -.14 | .00 | .06 | .08 | .11 | .06 | .12 | .11 | .08 | .06 | .05 | .24** | -.33** | (.85) |

*Note.* Omegas are reported in parentheses. DSSC = Domain-Specific Self-Concept. DSGoal = Domain-Specific Goal Measure (Items measuring self-identification are denoted with '1'. Items measuring importance are denoted with '2'). BSCS = Brief Self-Control Scale. HEMA-R = Hedonic and Eudaimonic Motives for Activities - Revised ('E' denotes Eudaimonic sub-scale and 'H' denotes Hedonic sub-scale).
*$p < .05$. **$p < .01$.

**Table 15. Study 1: Descriptives, Correlations, and Reliabilities for DSSC, DSIS-T, and Related Constructs**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 .DSSC_Hlth | 3.35 | 1.00 | (.92) | | | | | | | | | | | | | | | | | | |
| 2. DSSC_Ach | 4.02 | .70 | .33** | (.88) | | | | | | | | | | | | | | | | | |
| 3. DSSC_Soc | 4.16 | .68 | .22** | .55** | (.86) | | | | | | | | | | | | | | | | |
| 4. DSSC_Fin | 3.53 | 1.08 | .31** | .42** | .33** | (.95) | | | | | | | | | | | | | | | |
| 5. DST_F1 | 3.35 | .91 | -.26** | .04 | ..05 | .05 | (.88) | | | | | | | | | | | | | | |
| 6. DST_F2 | 2.96 | .98 | -.22** | .05 | .08 | .01 | .17* | (.93) | | | | | | | | | | | | | |
| 7. DST_E1 | 2.66 | 1.33 | -.42** | -.19* | -.14 | -.14 | .40** | .16* | (.93) | | | | | | | | | | | | |
| 8. DST_E2 | 3.89 | .99 | -.10 | .16 | .09 | .03 | .26** | .50** | .08 | (.88) | | | | | | | | | | | |
| 9. DST_D1 | 1.82 | .84 | .00 | -.10 | -.17* | -.23** | .15 | -.08 | -.07 | -.00 | (.86) | | | | | | | | | | |
| 10. DST_D2 | 3.53 | .93 | .20 | .06 | .12 | .05 | -.02 | .53** | .01 | .36** | -.27** | (.87) | | | | | | | | | |
| 11. DST_W1 | 2.85 | 1.07 | -.26** | -.31** | -.18* | -.26** | .41** | .04 | .45** | .10 | .20* | -.12 | (.95) | | | | | | | | |
| 12. DST_W2 | 3.38 | .95 | -.00 | .19* | 23** | .03 | -.10 | .44** | -.01 | .32** | -.08 | .38** | -.10 | (.96) | | | | | | | |
| 13. DST_S1 | 2.14 | .74 | -.19* | -.09 | -.14 | -.17 | .31** | .08 | .21** | .09 | .38** | -.06 | .46** | -.13 | (.86) | | | | | | |
| 14. DST_S2 | 3.46 | .88 | .12 | .22** | .26** | .19* | .02 | .41** | -.00 | .36** | -.17* | .44** | -.20* | .60** | -.13 | (.89) | | | | | |
| 15. DST_M1 | 2.75 | 1.23 | -.10 | -.07 | -.68 | -.39** | -.37** | .11 | .26** | .09 | .28** | .04 | .50** | .01 | .51** | -.08 | (.96) | | | | |
| 16. DST_M2 | 3.32 | 1.04 | -.05 | .11 | .13 | -.07 | -.04 | .43** | -.06 | .39** | -.03 | .38** | -.00 | .60** | .12 | .54** | .20* | (.94) | | | |
| 17. BSCS | 3.28 | .73 | .51** | .41** | .32** | .57** | -.20* | -.04 | -.27** | .02 | -.29** | -.16* | -.57** | -.03 | -.38** | .24** | -.39** | -.11 | (.86) | | |
| 18. HEMA-R (E) | 4.82 | 1.06 | .29** | .44** | .29** | .23** | .03 | .02 | -.21* | .08 | -.18* | .15 | -.22** | .16* | -.08 | .28** | -.08 | .11 | .25** | (.84) | |
| 19. HEMA-R (H) | 4.72 | 1.04 | -.01 | .06 | .09 | -.14 | .35 | -.04 | .20 | .20* | .17* | -.07 | .38** | .04 | .21** | .00 | .36** | .14 | -.33** | .24** | (.85) |

*Note.* Omegas are reported in parentheses. DSSC = Domain-Specific Self-Concept. DST= Domain-Specific Temptation Scale (F = Food. E= Exercise. D = Drugs. W = Work. S = Social. M = Money.) BSCS = Brief Self-Control Scale. HEMA-R = Hedonic and Eudaimonic Motives for Activities - Revised ('E' denotes Eudaimonic sub-scale and 'H' denotes Hedonic sub-scale).
*$p < .05$. **$p < .01$.

**Table 16. Study 1: Regression Coefficients for DSSC Predicting DS Goals**

| Variables | Unstandardized coefficients | *SE* | Standardized coefficients | *t* | p-value |
|---|---|---|---|---|---|
| DV: DSGoals_H1 | | | | | |
| DSSC_Health | .28 | .05 | .44 | 6.09 | < .001 |
| DV: DSGoals_H2 | | | | | |
| DSSC_Health | .16 | .06 | .19 | 2.45 | .02 |
| DV: DSGoals_A1 | | | | | |
| DSSC_Achieve | .20 | .09 | .18 | 2.28 | .02 |
| DV: DSGoals_A2 | | | | | |
| DSSC_Achieve | .29 | .11 | .20 | 2.55 | .01 |
| DV: DSGoals_S1 | | | | | |
| DSSC_Social | .22 | .08 | .22 | 2.86 | .005 |
| DV: DSGoals_S2 | | | | | |
| DSSC_Social | .34 | .11 | .24 | 3.15 | .002 |
| DV: DSGoals_F1 | | | | | |
| DSSC_Fin | .14 | .04 | .29 | .3.65 | <.001 |
| DV: DSGoals_F2 | | | | | |
| DSSC_Fin | .12 | .06 | .18 | 2.21 | .03 |

*Note.* DSSC = Domain-Specific Self-Concept. DSGoal = Domain-Specific Goal Measure (Items measuring self-identification are denoted with '1'. Items measuring importance are denoted with '2'). H1, H2 = health goals. A1, A2 = achievement goals. S1, S2 = social goals. F1, F2 = financial goals.

*$p < .05$. **$p < .01$. *** $p < .001$.

**Table 17. Study 2: Descriptives, Correlations, and Reliabilities for DSSC in Health Domain, and Goal and Temptation in the Same Domain**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. DSSC_Health | 3.32 | 1.03 | (.93) | | | | | | | | |
| *Sub-Scales* | | | | | | | | | | | |
| 2. DSSC_HF | 3.41 | 1.14 | .93** | (.88) | | | | | | | |
| 3. DSSC_HE | 3.14 | 1.13 | .87** | .72** | (-) | | | | | | |
| 4. DSSC_HW | 3.36 | 1.12 | .93** | .77** | .73** | (.91) | | | | | |
| *Same Domain* | | | | | | | | | | | |
| 5. HHF_G | 3.61 | 0.96 | .41** | .33** | .30** | .47** | | | | | |
| 6. HHF_T | 3.20 | 1.18 | -.23** | -.20* | -.08 | -.31** | -.38** | | | | |
| 7. HHF_C | 2.81 | 1.11 | -.28** | -.30** | -.10 | -.32** | -.13 | .54** | | | |
| 8. HHEx_G | 3.50 | 1.08 | .34** | .25** | .36** | .35** | .49** | -.25** | -.09 | | |
| 9. HHEx_T | 3.33 | 1.15 | -.29** | -.18* | -.28** | -.34** | -.12 | .42** | .25** | -.36** | |
| 10. HHEx_C | 2.90 | 1.07 | -.14 | -.08 | -.15 | -.15 | .02 | .05 | .25** | .06 | .37** |

*Note.* Omegas are reported in parentheses, for scales with three or more items. DSSC_Health = Domain-Specific Self-Concept. Sub-scales: DSSC_HF = self-concept related to food. DSSC_HE = self-concept related to exercise. DSSC_HW = self-concept related to well-being. HHF = self-control dilemma scenario in the health domain related to food. HHEx = self-control dilemma scenario in the health domain related to exercise. G = goal importance. T = temptation strength. C = conflict strength.
*$p < .05$. **$p < .01$.

**Table 18. Study 2: Descriptives, Correlations, and Reliabilities for DSSC in Health Domain, and Goal, Temptation, and Conflict in Different Domains**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. DSSC_Health | 3.32 | 1.03 | (.93) | | | | | | | | | | |
| *Sub-Scales* | | | | | | | | | | | | | |
| 2. DSSC_HF | 3.41 | 1.14 | .93** | (.88) | | | | | | | | | |
| 3. DSSC_HE | 3.14 | 1.13 | .87** | .72** | (-) | | | | | | | | |
| 4. DSSC_HW | 3.36 | 1.12 | .93** | .77** | .73** | (.91) | | | | | | | |
| 5. DSSC_Ach | 3.96 | 0.85 | .39** | .33** | .37** | .37** | (.93) | | | | | | |
| 6. DSSC_Soc | 4.17 | 0.68 | .30** | .29** | .32** | .22** | .64** | (.87) | | | | | |
| *Other domains* | | | | | | | | | | | | | |
| 7. HA_G | 3.38 | 1.19 | .17* | .09 | .15 | .22** | .20* | .11 | | | | | |
| 8. HA_T | 3.49 | 1.22 | .04 | .06 | .04 | .01 | .19* | .04 | -.42** | | | | |
| 9. HA_C | 2.67 | 1.15 | .04 | .03 | .04 | .04 | .21* | .06 | .16* | .28** | | | |
| 10. HS_G | 3.18 | 1.27 | .12 | .02 | .10 | .18* | .23** | .14 | .25** | .07 | -.01 | | |
| 11. HS_T | 3.69 | 1.16 | -.25** | -.18* | -.21** | -.28** | -.08 | -.04 | -.16 | .26** | .07 | -.21* | |
| 12. HS_C | 2.55 | 1.30 | -.19* | -.23** | -.15 | -.14 | .13 | .03 | -.07 | .13 | .29** | .34** | .26** |

*Note.* Omegas are reported in parentheses, for scales with three or more items. DSSC_Health = Domain-Specific Self-Concept in Health Domain. Sub-scales: DSSC_HF = self-concept related to food. DSSC_HE = self-concept related to exercise. DSSC_HW = self-concept related to well-being. DSSC_Ach = Domain-Specific Self-Concept in Achievement Domain. DSSC_Soc = Domain-Specific Self-Concept in Health Domain. HA = self-control dilemma scenario in health and achievement domains. HS = self-control dilemma scenario in health and social domain. G = goal importance. T = temptation strength. C = conflict strength.
*$p < .05$. **$p < .01$.

**Table 19. Study 2: Descriptives, Correlations, and Reliabilities for DSSC, Conflict, and Self-Conscious Emotions in Health Domain**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Same domain* | | | | | | | | | | | | | |
| 1. DSSC_Health | 3.32 | 1.03 | (.93) | | | | | | | | | | |
| *Sub-scales* | | | | | | | | | | | | | |
| 2. DSSC_HF | 3.41 | 1.14 | .93** | (.88) | | | | | | | | | |
| 3. DSSC_HE | 3.14 | 1.13 | .87** | .72** | (-) | | | | | | | | |
| 4. DSSC_HW | 3.36 | 1.12 | .93** | .77** | .73** | (.91) | | | | | | | |
| 5. HHF_C | 2.81 | 1.11 | -.28** | -.30** | -.10 | -.32** | | | | | | | |
| 6. HHEx_C | 2.90 | 1.07 | -.14 | -.08 | -.15 | -.15 | .25** | | | | | | |
| 7. SCE_HFG | 2.50 | 1.51 | .03 | .01 | .06 | .02 | .08 | .12 | | | | | |
| 8. SCE_HFT | 2.97 | 1.55 | -.05 | -.05 | -.09 | -.02 | .13 | .11 | .28** | | | | |
| 9. SCE_HF_All | 2.73 | 1.22 | -.02 | -.03 | -.02 | -.00 | .13 | .14 | .79** | .81** | | | |
| 10. SCE_HEG | 2.50 | 1.51 | .03 | .01 | .06 | .02 | .08 | .12 | 1.00** | .28** | .79** | | |
| 11. SCE_HET | 2.87 | 1.25 | .03 | .04 | .03 | .03 | .13 | .17* | .80** | .52** | .82** | .80** | |
| 12. SCE_HE_All | 2.68 | 1.31 | .03 | .02 | .05 | .03 | .10 | .15 | .96** | .41** | .85** | .96** | .94** |

*Note.* Omegas are reported in parentheses, for scales with three or more items. DSSC_Health = Domain-Specific Self-Concept. Sub-scales: DSSC_HF = self-concept related to food. DSSC_HE = self-concept related to exercise. DSSC_HW = self-concept related to well-being. HHF = self-control dilemma scenario in the health domain related to food. HHEx = self-control dilemma scenario in the health domain related to exercise. SCE = Self-conscious emotions. G = goal importance. T = temptation strength. C = conflict strength.
*$p < .05$. **$p < .01$.

**Table 20. Study 2: Descriptives, Correlations, and Reliabilities for Conflict and Self-Conscious Emotions in Health and Other Domains**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. DSSC_Health | 3.32 | 1.03 | (.93) | | | | | | | | | | | | |
| *Sub-Scales* | | | | | | | | | | | | | | | |
| 2. DSSC_HF | 3.41 | 1.14 | .93** | (.88) | | | | | | | | | | | |
| 3. DSSC_HE | 3.14 | 1.13 | .87** | .72** | (-) | | | | | | | | | | |
| 4. DSSC_HW | 3.36 | 1.12 | .93** | .77** | .73** | (.91) | | | | | | | | | |
| *Other Domains* | | | | | | | | | | | | | | | |
| 5. DSSC_Ach | 3.96 | 0.85 | .39** | .33** | .37** | .37** | (.93) | | | | | | | | |
| 6. DSSC_Soc | 4.17 | 0.68 | .30** | .29** | .32** | .22** | .64** | (.87) | | | | | | | |
| 7. HA_C | 2.67 | 1.15 | .04 | .03 | .04 | .04 | .21* | .06 | | | | | | | |
| 8. HS_C | 2.55 | 1.30 | -.19* | -.23** | -.15 | -.14 | .13 | .03 | .29** | | | | | | |
| 9. SCE_HAG | 2.34 | 1.47 | .07 | .09 | .12 | .01 | .09 | .06 | .14 | .10 | | | | | |
| 10. SCE_HAT | 2.46 | 1.40 | .05 | .04 | .08 | .02 | .06 | .07 | .05 | -.11 | .54** | | | | |
| 11. SCE_HA_All | 2.40 | 1.29 | .07 | .08 | .12 | .02 | .07 | .07 | .08 | -.02 | .89** | .88** | | | |
| 12. SCE_HSG | 2.63 | 1.39 | .02 | -.01 | .01 | .05 | .12 | .00 | .18* | .07 | .42** | .54** | .54** | | |
| 13. SCE_HST | 2.23 | 1.55 | .05 | .01 | .09 | .06 | .14 | .13 | .02 | .09 | .53** | .57** | .63** | .44** | |
| 14. SCE_HS_All | 2.47 | 1.30 | .05 | .00 | .08 | .06 | .17* | .11 | .11 | .07 | .57** | .66** | .68** | .84** | .87** |

*Note.* Omegas are reported in parentheses, for scales with three or more items. DSSC_Health = Domain-Specific Self-Concept in the health domain. Sub-scales: DSSC_HF = self-concept related to food. DSSC_HE = self-concept related to exercise. DSSC_HW = self-concept related to well-being. DSSC_Ach = Domain-Specific Self-Concept in the achievement domain. DSSC_Soc = Domain-Specific Self-Concept in the social domain. HA = self-control dilemma scenario in the health and achievement domains. HS = self-control dilemma scenario in the health and social domains. SCE = Self-conscious emotions. G = goal importance. T = temptation strength. C = conflict strength.
*$p < .05$. **$p < .01$.

**Table 21. Study 2: Descriptives, Correlations, and Reliabilities in Achievement Domain, and Goals, Temptations, and Conflict in the Same and Different Domains**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Same Domain* | | | | | | | | | | | | | |
| 1. DSSC_Ach | 3.96 | 0.85 | (.93) | | | | | | | | | | |
| 2. AA_G | 3.75 | 0.90 | .25** | | | | | | | | | | |
| 3. AA_T | 3.13 | 1.16 | -.20* | -.32** | | | | | | | | | |
| 4. AA_C | 2.65 | 1.14 | -.11 | -.07 | .68** | | | | | | | | |
| *Other Domains* | | | | | | | | | | | | | |
| 5. DSSC_Health | 3.32 | 1.03 | .39** | .07 | -.09 | .05 | (.93) | | | | | | |
| 6. DSSC_Soc | 4.17 | 0.68 | .64** | .22** | -.18* | -.06 | .30** | (.87) | | | | | |
| 7. AH_G | 3.98 | 1.03 | .40** | .34** | -.15 | -.03 | .17* | .34** | | | | | |
| 8. AH_T | 2.27 | 1.15 | .11 | -.08 | .21* | .16 | .20* | -.06 | -.22** | | | | |
| 9. AH_C | 2.04 | 1.04 | .15 | .01 | .14 | .19* | .15 | .01 | -.06 | .80** | | | |
| 10. AS_G | 4.28 | 0.82 | .31** | .32** | -.03 | .02 | .11 | .20* | .56** | -.00 | -.02 | | |
| 11. AS_T | 2.72 | 1.29 | -.01 | -.08 | .29** | .20* | -.01 | .04 | -.07 | .17* | .16* | -.23** | |
| 12. AS_C | 2.70 | 1.30 | .03 | -.07 | .25** | .28** | .01 | .02 | -.11 | .16 | .15 | -.20* | .84** |

*Note.* Omegas are reported in parentheses. DSSC_Ach = Domain-Specific Self-Concept in Achievement Domain. DSSC_Health = Domain-Specific Self-Concept in Health Domain. DSSC_Soc = Domain-Specific Self-Concept in Health Domain. AA = self-control dilemma scenario in the achievement domain. AH = self-control dilemma scenario in achievement and health domains. AS = self-control dilemma scenario in achievement and social domains. G = goal importance. T = temptation strength. C = conflict strength.
*$p < .05$. **$p < .01$.

**Table 22. Study 2: Descriptives, Correlations, and Reliabilities for Conflict and Self-conscious Emotions in Achievement and Other Domains**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Same Domain* | | | | | | | | | | | | | | | | |
| 1. DSSC_Ach | 3.96 | 0.85 | (.93) | | | | | | | | | | | | | |
| 2. AA_C | 2.65 | 1.14 | -.11 | | | | | | | | | | | | | |
| 3. SCE_AAG | 2.37 | 1.47 | .23** | -.03 | | | | | | | | | | | | |
| 4. SCE_AAT | 2.73 | 1.52 | .12 | .03 | .35** | | | | | | | | | | | |
| 5. SCE_AA_All | 2.57 | 1.26 | .21* | .01 | .82** | .83** | | | | | | | | | | |
| *Other Domains* | | | | | | | | | | | | | | | | |
| 6. DSSC_Health | 3.32 | 1.03 | .39** | .05 | .06 | .05 | .07 | (.93) | | | | | | | | |
| 7. DSSC_Soc | 4.17 | 0.68 | .64** | -.06 | .29** | .16 | .25** | .30** | (.87) | | | | | | | |
| 8. AH_C | 2.04 | 1.04 | .15 | .19* | .02 | .02 | .02 | .15 | .01 | | | | | | | |
| 9. AS_C | 2.70 | 1.30 | .03 | .28** | -.01 | -.04 | -.05 | .01 | .02 | .15 | | | | | | |
| 10. SCE_AHG | 2.51 | 1.51 | .18* | .13 | .66** | .31** | .58** | .12 | .25** | .02 | .03 | | | | | |
| 11. SCE_AHT | 2.63 | 1.38 | .13 | -.04 | .34** | .56** | .53** | .10 | .17* | -.05 | -.00 | .42** | | | | |
| 12. SCE_AH_All | 2.60 | 1.28 | .19* | .05 | .59** | .46** | .62** | .15 | .25** | -.04 | .05 | .87** | .84** | | | |
| 13. SCE_ASG | 2.70 | 1.52 | .13 | .09 | .63** | .20* | .46** | -.02 | .20* | -.02 | .09 | .72** | .33** | .64** | | |
| 14. SCE_AST | 2.89 | 1.50 | .12 | .02 | .32** | .59** | .56** | .01 | .06 | .09 | -.16* | .42** | .56** | .56** | .37** | |
| 15. SCE_AS_All | 2.80 | 1.25 | .15 | .06 | .57** | .48** | .62** | -.00 | .16 | .04 | -.05 | .68** | .53** | .72** | .83** | .83** |

*Note.* Omegas are reported in parentheses, for scales with three or more items. DSSC_Ach = Domain-Specific Self-Concept in the achievement domain. DSSC_Health = Domain-Specific Self-Concept in the health domain. DSSC_Soc = Domain-Specific Self-Concept in the social domain. AH = self-control dilemma scenario in the achievement and health domains. AS = self-control dilemma scenario in the achievement and social domains. SCE = Self-conscious emotions. G = goal importance. T = temptation strength. C = conflict strength.
*$p < .05$. **$p < .01$.

**Table 23. Study 2: Descriptives, Correlations, and Reliabilities for DSSC in Social Domain, and Goals, Temptations, and Conflict in the Same and Different Domains**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Same Domain* | | | | | | | | | | | | | |
| 1. DSSC_Soc | 4.17 | 0.68 | (.87) | | | | | | | | | | |
| 2. SS_G | 2.99 | 1.28 | .33** | | | | | | | | | | |
| 3. SS_T | 3.33 | 1.36 | -.14 | -.63** | | | | | | | | | |
| 4. SS_C | 2.50 | 1.18 | -.10 | .09 | .27** | | | | | | | | |
| *Other Domains* | | | | | | | | | | | | | |
| 5. DSSC_Health | 3.32 | 1.03 | .30** | .32** | -.15 | -.00 | (.93) | | | | | | |
| 6. DSSC_Fin | 3.57 | 1.01 | .24** | .02 | .04 | -.08 | .46** | (.92) | | | | | |
| 7. SH_G | 4.50 | 0.75 | .15 | .15 | .08 | -.08 | .14 | .02 | | | | | |
| 8. SH_T | 1.70 | 0.89 | .03 | .08 | -.00 | .19* | .18* | .14 | -.39** | | | | |
| 9. SH_C | 1.65 | 0.93 | .00 | .02 | .00 | .13 | .12 | .08 | -.44** | .79** | | | |
| 10. SF_G | 4.45 | 0.91 | .22** | .22** | -.09 | .09 | -.03 | -.03 | .24** | -.07 | -.09 | | |
| 11. SF_T | 1.77 | 1.09 | -.07 | .02 | .04 | .02 | .02 | .08 | -.04 | .20* | .19* | -.46** | |
| 12. SF_C | 1.65 | 1.06 | .09 | .16 | -.09 | .06 | .04 | -.00 | -.13 | .31** | .42** | -.17* | .62** |

*Note.* Omegas are reported in parentheses, for scales with three or more items. DSSC_Soc = Domain-Specific Self-Concept in Social Domain. DSSC_Health = Domain-Specific Self-Concept in Health Domain. DSSC_Fin = Domain-Specific Self-Concept in Financial Domain. SS = self-control dilemma scenario in the social domain. SH = self-control dilemma scenario in social and health domains. SF = self-control dilemma scenario in social and financial domains. G = goal importance. T = temptation strength. C = conflict strength.
*$p < .05$. **$p < .01$.

**Table 24. Study 2: Descriptives, Correlations, and Reliabilities for Conflict and Self-conscious Emotions in Social and Other Domains**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Same Domain* | | | | | | | | | | | | | | | | |
| 1. DSSC_Soc | 4.17 | 0.68 | (.87) | | | | | | | | | | | | | |
| 2. SS_C | 2.50 | 1.18 | -.10 | | | | | | | | | | | | | |
| 3. SCE_SSG | 2.23 | 1.67 | .22** | -.18* | | | | | | | | | | | | |
| 4. SCE_SST | 2.71 | 1.73 | .15 | -.00 | .45** | | | | | | | | | | | |
| 5. SCE_SS_All | 2.53 | 1.57 | .19* | -.12 | .87** | .88** | | | | | | | | | | |
| *Other Domains* | | | | | | | | | | | | | | | | |
| 6. DSSC_Health | 3.32 | 1.03 | .30** | -.00 | .18* | .21** | .18* | (.93) | | | | | | | | |
| 7. DSSC_Fin | 3.57 | 1.01 | .24** | -.08 | .03 | .03 | .04 | .46** | (.92) | | | | | | | |
| 8. SH_C | 1.65 | 0.93 | .00 | .13 | .02 | .03 | .02 | .12 | .08 | | | | | | | |
| 9. SF_C | 1.65 | 1.06 | .09 | .06 | .14 | .13 | .16 | .04 | -.00 | .42** | | | | | | |
| 10. SCE_SHG | 2.46 | 1.84 | .15 | -.07 | .60** | .43** | .58** | .12 | -.04 | .12 | .02 | | | | | |
| 11. SCE_SHT | 4.00 | 1.52 | .10 | -.02 | .45** | .38** | .48** | -.05 | -.01 | -.21* | -.12 | .43** | | | | |
| 12. SCE_SH_All | 3.28 | 1.48 | .16* | -.06 | .63** | .45** | .61** | .08 | -.02 | -.06 | -.06 | .88** | .82** | | | |
| 13. SCE_SFG | 2.72 | 1.79 | .17* | .01 | .57** | .45** | .57** | .10 | .03 | .07 | .02 | .78** | .40** | .70** | | |
| 14. SCE_SFT | 4.34 | 1.60 | .08 | .03 | .35** | .41** | .45** | -.05 | .00 | -.13 | -.30** | .49** | .58** | .64** | .51** | |
| 15. SCE_SF_All | 3.57 | 1.51 | .15 | .01 | .54** | .45** | .57** | .03 | .04 | -.02 | -.15 | .73** | .54** | .75** | .89** | .86** |

*Note.* Omegas are reported in parentheses, for scales with three or more items. DSSC_Soc = Domain-Specific Self-Concept in the social domain. DSSC_Health = Domain-Specific Self-Concept in the health domain. DSSC_Fin = Domain-Specific Self-Concept in the financial domain. SH = self-control dilemma scenario in the social and health domains. SF = self-control dilemma scenario in the social and financial domains. SCE = Self-conscious emotions. G = goal importance. T = temptation strength. C = conflict strength.
*$p < .05$. **$p < .01$.

**Table 25. Study 2: Descriptives, Correlations, and Reliabilities for DSSC in Financial Domain, and Goals, Temptations, and Conflict in the Same and Different Domains**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Same Domain* | | | | | | | | | | | | | |
| 1. DSSC_Fin | 3.57 | 1.01 | (.92) | | | | | | | | | | |
| 2. FF_G | 3.86 | 0.90 | .18* | | | | | | | | | | |
| 3. FF_T | 3.54 | 1.05 | -.36** | -.17* | | | | | | | | | |
| 4. FF_C | 3.14 | 1.07 | -.16* | .06 | .54** | | | | | | | | |
| *Other Domains* | | | | | | | | | | | | | |
| 5. DSSC_Health | 3.32 | 1.03 | .46** | .31** | -.23** | -.04 | (.93) | | | | | | |
| 6. DSSC_Soc | 4.17 | 0.68 | .24** | .19* | .01 | .08 | .30** | (.87) | | | | | |
| 7. FH_G | 4.05 | 0.95 | .24** | .43** | -.05 | .01 | .20* | .07 | | | | | |
| 8. FH_T | 2.17 | 1.18 | -.15 | .08 | .31** | .23** | .07 | -.03 | -.36** | | | | |
| 9. FH_C | 2.09 | 1.14 | -.16 | .13 | .30** | .22** | -.04 | .00 | -.27** | .86** | | | |
| 10. FS_G | 3.86 | 0.96 | .21** | .42** | .02 | .14 | .32** | .11 | .53** | -.16* | -.08 | | |
| 11. FS_T | 3.19 | 1.16 | -.20* | -.06 | .26** | .24** | -.09 | .07 | -.08 | .24** | .22** | -.25** | |
| 12. FS_C | 2.90 | 1.16 | -.09 | .03 | .19* | .30** | -.02 | .05 | .05 | .20* | .31** | -.07 | .61** |

*Note.* Omegas are reported in parentheses, for scales with three or more items. DSSC_Fin = Domain-Specific Self-Concept in Financial Domain. DSSC_Health = Domain-Specific Self-Concept in Health Domain. DSSC_Soc = Domain-Specific Self-Concept in Social Domain. FF = self-control dilemma scenario in the financial domain. FH = self-control dilemma scenario in financial and health domains. FS = self-control dilemma scenario in financial and social domains. G = goal importance. T = temptation strength. C = conflict strength.
*$p < .05$. **$p < .01$.

**Table 26. Study 2: Descriptives, Correlations, and Reliabilities for Conflict and Self-conscious Emotions in Financial and Other Domains**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Same Domain* | | | | | | | | | | | | | | | | |
| 1. DSSC_Fin | 3.57 | 1.01 | (.92) | | | | | | | | | | | | | |
| 2. FF_C | 3.14 | 1.07 | -.16* | | | | | | | | | | | | | |
| 3. SCE_FFG | 2.56 | 1.41 | -.02 | .06 | | | | | | | | | | | | |
| 4. SCE_FFT | 2.39 | 1.30 | -.04 | .14 | .47** | | | | | | | | | | | |
| 5. SCE_FF_All | 2.50 | 1.21 | -.06 | .11 | .88** | .85** | | | | | | | | | | |
| *Other Domains* | | | | | | | | | | | | | | | | |
| 6. DSSC_Health | 3.32 | 1.03 | .46** | -.04 | .11 | .14 | .14 | (.93) | | | | | | | | |
| 7. DSSC_Soc | 4.17 | 0.68 | .24** | .08 | .16 | .09 | .15 | .30** | (.87) | | | | | | | |
| 8. FH_C | 2.09 | 1.14 | -.16 | .22** | .13 | .12 | .13 | -.04 | .00 | | | | | | | |
| 9. FS_C | 2.90 | 1.16 | -.09 | .30** | -.00 | .12 | .06 | -.02 | .05 | .31** | | | | | | |
| 10. SCE_FHG | 2.85 | 1.61 | -.08 | .03 | .62** | .31** | .57** | .09 | .12 | .08 | -.06 | | | | | |
| 11. SCE_FHT | 3.24 | 1.61 | .06 | .11 | .33** | .39** | .41** | .03 | -.02 | -.13 | .05 | .34** | | | | |
| 12. SCE_FH_All | 3.04 | 1.32 | -.02 | .10 | .58** | .42** | .60** | .07 | .06 | -.03 | .00 | .82** | .82** | | | |
| 13. SCE_FSG | 2.73 | 1.46 | .04 | .05 | .54** | .30** | .51** | .12 | .21** | -.02 | .07 | .57** | .26** | .50** | | |
| 14. SCE_FST | 2.62 | 1.36 | -.10 | .10 | .46** | .44** | .55** | .06 | -.06 | .08 | -.01 | .48** | .45** | .56** | .49** | |
| 15. SCE_FS_All | 2.68 | 1.22 | -.03 | .07 | .58** | .43** | .61** | .11 | .09 | .03 | .04 | .61** | .41** | .61** | .87** | .85** |

*Note.* Omegas are reported in parentheses, for scales with three or more items. DSSC_Fin = Domain-Specific Self-Concept in the financial domain. DSSC_Health = Domain-Specific Self-Concept in the health domain. DSSC_Soc = Domain-Specific Self-Concept in the social domain. FH = self-control dilemma scenario in the financial and health domains. FS = self-control dilemma scenario in the financial and social domains. SCE = Self-conscious emotions. G = goal importance. T = temptation strength. C = conflict strength.
*$p < .05$. **$p < .01$.

**Table 27. Study 2: Regression Coefficients for Self-control Dilemmas in the Same Domain (Hypothesis 5)**

| DV | IV | Estimate | SE | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| **HHF_C** | HHF_T | 0.53 | 0.07 | 0.40 | 0.66 | .000 |
| | HHF_G | 0.20 | 0.10 | 0.05 | 0.42 | .05† |
| | DSSC_Health | -0.24 | 0.08 | -0.40 | -0.08 | .00 |
| **HHF_T** | HHF_G | -0.42 | 0.09 | -0.58 | -0.22 | .000 |
| | DSSC_Health | -0.10 | 0.10 | -0.31 | 0.10 | .31 |
| **HHF_G** | DSSC_Health | 0.38 | 0.07 | 0.25 | 0.53 | .000 |
| **HHEx_C** | HHEx_T | 0.41 | 0.08 | 0.24 | 0.55 | .000 |
| | HHEx_G | 0.24 | 0.10 | 0.05 | 0.42 | .02† |
| | DSSC_Health | -0.10 | 0.10 | -0.28 | 0.10 | .31 |
| **HHEx_T** | HHEx_G | -0.32 | 0.08 | -0.46 | -0.15 | .000 |
| | DSSC_Health | -0.21 | 0.09 | -0.38 | -0.03 | .02† |
| **HHEx_G** | DSSC_Health | 0.36 | 0.09 | 0.19 | 0.54 | .000 |
| **AA_C** | AA_T | 0.72 | 0.07 | 0.58 | 0.85 | .000 |
| | AA_G | 0.20 | 0.09 | 0.03 | 0.38 | .02† |
| | DSSC_Ach | -0.00 | 0.08 | -0.15 | 0.17 | .98 |
| **AA_T** | AA_G | -0.37 | 0.11 | -0.58 | -0.15 | .001 |
| | DSSC_Ach | -0.18 | 0.12 | -0.40 | 0.05 | .12 |
| **AA_G** | DSSC_Ach | 0.26 | 0.08 | 0.09 | 0.43 | .002 |
| **SS_C** | SS_T | 0.49 | 0.08 | 0.33 | 0.65 | .000 |
| | SS_G | 0.47 | 0.00 | 0.30 | 0.65 | .000 |
| | DSSC_Soc | -0.33 | 0.13 | -0.60 | -0.10 | .01 |
| **SS_T** | SS_G | -0.69 | 0.06 | -0.83 | -0.56 | .000 |
| | DSSC_Soc | 0.15 | 0.13 | -0.09 | 0.43 | .08 |
| **SS_G** | DSSC_Soc | 0.61 | 0.14 | 0.32 | 0.90 | .000 |
| **FF_C** | FF_T | 0.58 | 0.08 | 0.43 | 0.73 | .000 |
| | FF_G | 0.18 | 0.09 | 0.01 | 0.36 | .04† |
| | DSSC_Fin | 0.02 | 0.09 | -0.15 | 0.19 | .80 |
| **FF_T** | FF_G | -0.14 | 0.09 | -0.32 | 0.05 | 0.14 |
| | DSSC_Fin | -0.36 | 0.08 | -0.52 | -0.18 | .000 |
| **FF_G** | DSSC_Fin | 0.16 | .08 | 0.01 | 0.31 | 0.04† |

*Note.* DSSC_Health = Domain-Specific Self-Concept in the health domain. DSSC_Ach = Domain-Specific Self-Concept in the achievement domain. DSSC_Soc = Domain-Specific Self-Concept in the social domain. DSSC_Fin = Domain-Specific Self-Concept in the financial domain. HHF = self-control dilemma scenario in the health domain related to food. HHex = self-control dilemma scenario in the health domain related to exercise. AA = self-control dilemma scenario in the achievement domain. SS = self-control dilemma scenario in the social domain. FF = self-control dilemma scenario in the financial domain. G = goal importance. T = temptation strength. C = conflict strength.

† = $p \geq .01$ and $\leq .05$

**Table 28. Study 2: Indirect Effects for Self-control Dilemmas in the Same Domain (Hypothesis 5)**

| Health Domain (Food Scenario) | | | | | |
|---|---|---|---|---|---|
| | Estimate | SE | *95% CI* | | *p* |
| DSSC_Health → HHF_G → HHF_C | 0.08 | 0.04 | 0.02 | 0.17 | .08 |
| DSSC_Health → HHF_T → HHF_C | -0.05 | 0.06 | -0.17 | 0.06 | .33 |
| DSSC_Health → HHF_T → HHF_G → HHF_C | -0.08 | 0.03 | -0.14 | -0.04 | .003 |
| Health Domain (Exercise Scenario) | | | | | |
| DSSC_Health → HHEx_G → HHEx_C | 0.09 | 0.04 | 0.02 | 0.18 | .05† |
| DSSC_Health → HHEx_T → HHEx_C | -0.08 | 0.04 | -0.17 | -0.01 | .03† |
| DSSC_Health → HHEx_G → HHEx_T → HHEx_C | -0.05 | 0.02 | -0.09 | -0.01 | .02 |
| Achievement Domain | | | | | |
| DSSC_Ach → AA_G → AA_C | 0.05 | 0.03 | 0.00 | 0.12 | .07 |
| DSSC_Ach → AA_T → AA_C | -0.13 | 0.08 | -0.28 | 0.04 | .13 |
| DSSC_Ach→ AA_G → AA_T → AA_C | -0.07 | 0.03 | -0.15 | -0.02 | .04† |
| Social Domain | | | | | |
| DSSC_Soc → SS_G → SS_C | 0.29 | 0.09 | 0.14 | 0.49 | .001 |
| DSSC_Soc → SS_T → SS_C | 0.07 | 0.07 | -0.04 | 0.23 | .29 |
| DSSC_Soc→ SS_G → SS_T → SS_C | -0.21 | 0.07 | -0.37 | -0.09 | .004 |
| Financial Domain | | | | | |
| DSSC_Fin → FF_G → FF_C | 0.03 | 0.02 | -0.00 | 0.08 | .17 |
| DSSC_Fin → FF_T → FF_C | -0.21 | 0.06 | -0.32 | -0.10 | .000 |
| DSSC_Soc→ FF_G → FF_T → FF_C | -0.01 | 0.01 | -0.04 | 0.00 | .25 |

*Note.* DSSC_Health = Domain-Specific Self-Concept in the health domain. DSSC_Ach = Domain-Specific Self-Concept in the achievement domain. DSSC_Soc = Domain-Specific Self-Concept in the social domain. DSSC_Fin = Domain-Specific Self-Concept in the financial domain. HHF = self-control dilemma scenario in the health domain related to food. HHex = self-control dilemma scenario in the health domain related to exercise. AA = self-control dilemma scenario in the achievement domain. SS = self-control dilemma scenario in the social domain. FF = self-control dilemma scenario in the financial domain. G = goal importance. T = temptation strength. C = conflict strength.

† = $p \geq .01$ and $\leq .05$

**Table 29. Study 2: Regression Coefficients for Self-control Dilemmas in Different Domains (Hypothesis 6)**

| DV | IV | Estimate | SE | 95% CI | | *p* |
|---|---|---|---|---|---|---|
| **HA_C** | HA_T | -0.78 | 0.23 | -1.22 | -0.34 | .001 |
| | HA_G | -0.86 | 0.21 | -1.26 | -0.46 | .000 |
| | HAGxHAT | 0.31 | 0.06 | 0.19 | 0.42 | .000 |
| | DSSC_Health | -0.06 | 0.09 | -0.23 | -0.14 | .51 |
| | DSSC_Ach | 0.19 | 0.11 | -0.02 | 0.41 | .08 |
| **HS_C** | HS_T | -0.32 | 0.19 | -0.72 | 0.06 | .10 |
| | HS_G | -0.37 | 0.23 | -0.84 | 0.06 | .10 |
| | HSGxHST | 0.20 | 0.06 | 0.08 | 0.33 | .001 |
| | DSSC_Health | -0.20 | .08 | -0.36 | -0.04 | .01 |
| | DSSC_Soc | 0.12 | 0.14 | -0.15 | 0.40 | .39 |
| **AH_C** | AH_T | -0.10 | 0.22 | -0.42 | 0.45 | .65 |
| | AH_G | -0.42 | 0.11 | -0.60 | -0.16 | .000 |
| | AHGxAHT | 0.21 | 0.05 | 0.08 | 0.28 | .000 |
| | DSSC_Ach | 0.09 | 0.06 | -0.02 | 0.19 | .09 |
| | DSSC_Health | -0.02 | 0.04 | -0.11 | 0.07 | .59 |
| **AS_C** | AS_T | 0.57 | 0.24 | 0.12 | 1.07 | .02† |
| | AS_G | -0.21 | 0.18 | -0.56 | 0.16 | .24 |
| | ASGxAST | 0.06 | 0.06 | -0.06 | 0.17 | .28 |
| | DSSC_Ach | 0.12 | 0.09 | -0.05 | 0.31 | .19 |
| | DSSC_Soc | -0.10 | 0.10 | -0.30 | 0.11 | .32 |
| **SH_C** | SH_T | 1.09 | 0.34 | 0.40 | 1.74 | .001 |
| | SH_G | -0.68 | 0.14 | -0.38 | 0.19 | .65 |
| | SHGxSHT | -0.08 | 0.08 | -0.22 | 0.09 | .33 |
| | DSSC_Soc | 0.03 | 0.06 | -0.12 | 0.13 | .97 |
| | DSSC_Health | 0.01 | 0.04 | -0.07 | 0.11 | .76 |
| **SF_C** | SF_T | 0.05 | 0.34 | -0.30 | 1.20 | .89 |
| | SF_G | -0.25 | 0.16 | -0.52 | 0.19 | .12 |
| | SFGxSFT | 0.15 | 0.08 | -0.09 | 0.24 | .06 |
| | DSSC_Soc | 0.20 | 0.08 | 0.30 | 0.35 | .01 |
| | DSSC_Fin | -0.10 | 0.08 | -0.27 | 0.05 | .20 |
| **FH_C** | FH_T | 0.77 | 0.13 | 0.50 | 0.96 | .000 |
| | FH_G | 0.03 | 0.08 | -0.14 | 0.16 | .73 |
| | FHGxFHT | 0.02 | 0.04 | -0.04 | 0.10 | .53 |
| | DSSC_Fin | 0.02 | 0.06 | -0.09 | 0.13 | .78 |
| | DSSC_Health | -0.13 | 0.07 | -0.26 | 0.00 | .05† |
| **FS_C** | FS_T | 0.20 | 0.37 | -0.58 | 0.81 | .60 |
| | FS_G | -0.27 | 0.26 | -0.84 | 0.20 | .31 |
| | FSGxFST | 0.11 | 0.09 | -0.05 | 0.30 | .22 |
| | DSSC_Fin | 0.02 | 0.09 | -0.16 | 0.20 | .87 |
| | DSSC_Soc | -0.01 | 0.10 | -0.21 | 0.18 | .92 |

*Note.* DSSC_Health = Domain-Specific Self-Concept in the health domain. DSSC_Ach = Domain-Specific Self-Concept in the achievement domain. DSSC_Soc = Domain-Specific Self-Concept in the social domain. DSSC_Fin = Domain-Specific Self-Concept in the financial domain. HA = self-control dilemma scenario in the health and achievement domains. HS = self-control dilemma scenario in the health and social domains. AH = self-control dilemma scenario in the achievement and health domains. AS = self-control dilemma scenario in the achievement and social domains. SH = self-control dilemma scenario in the social and health domains. SF = self-control dilemma scenario in the social and financial domains. FH = self-control dilemma scenario in the financial and domains. FS = self-control dilemma scenario in the financial and social domains. G = goal importance. T = temptation strength. C = conflict strength.

† = $p \geq .01$ and $\leq .05$

**Table 30. Study 2: Path Analysis Model Fit for Scenarios with Significant Interactions**

| Model | $\chi^2$ | *df* | CFI | TLI | RMSEA (90% CI) | SRMR |
|---|---|---|---|---|---|---|
| Model 6a: Scenario 6 [Health-Achievement] – No interaction ($N = 149$) | 3.049 | 1 | .97 | .75 | .12 (.12, .00) | .04 |
| Model 6b: Scenario 6 [Health-Achievement] – With interaction ($N = 148$) | 361.524 | 3 | .22 | -2.12 | .90 (.82, .98) | .49 |
| Model 7a: Scenario 6 [Health-Social] – No interaction ($N = 149$) | 1.091 | 1 | .98 | .85 | .08 (.00, .25) | .03 |
| Model 7b: Scenario 6 [Health-Social] – With interaction ($N = 149$) | 406.441 | 3 | .14 | -2.45 | .95 (.87, 1.03) | .27 |
| Model 7a: Scenario 6 [Achievement - Health] – No interaction ($N = 149$) | 0.065 | 1 | 1.00 | 1.04 | .00 (.00, .14) | .00 |
| Model 7b: Scenario 6 [Achievement - Health] – With interaction ($N = 148$) | 390.54 | 3 | .37 | -1.54 | .93 (.86, 1.01) | .23 |

*Note.* CFI = comparative fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual. Results were obtained using lavaan and estimator = ML.

**Table 31. Study 2: Significant Regression Coefficients for DSSC and Conflict Predicting Self-conscious Emotions (Hypothesis 9)**

| Variables | Unstandardized coefficients | *SE* | Standardized coefficients | *t* | p-value |
|---|---|---|---|---|---|
| DV: SCE_HET | | | | | |
| HHEx_C | .19 | .10 | .17 | 2.08 | .04 |
| DV: SCE_AA_All | | | | | |
| DSSC_Ach | .31 | .12 | .21 | 2.55 | .01 |
| DV: SCE_SS_All | | | | | |
| DSSC_Soc | .41 | .19 | .18 | 2.18 | .04 |
| DV: SCE_AH_All | | | | | |
| DSSC_Ach | .29 | .12 | .19 | 2.37 | .02 |
| DV: SCE_ASG | | | | | |
| DSSC_Soc | .45 | .18 | .20 | 2.46 | .02 |
| DV: SCE_SH_All | | | | | |
| DSSC_Soc | .36 | .18 | .16 | 2.01 | .05 |
| DV: SCE_FSG | | | | | |
| DSSC_Soc | .44 | .22 | .17 | 2.04 | .01 |

*Note.* DSSC = Domain-Specific Self-Concept. HHEx_C = conflict score in self-control dilemmas scenario related to exercise. H = health domain. A = achievement domain. S = social domain. F = financial domain. SCE = self-conscious emotions. G = related to selecting a goal. T = related to selecting a temptation. All = all self-conscious emotions combined.
*$p < .05$. **$p < .01$. ***$p < .001$.

**Table 32. Study 3: Descriptives, Correlations, and ICCs for Self-control Dilemmas Involving Same Domain**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|
| 1. Conflict | 2.98 | 0.99 | | | | | |
| 2. Self-control | 2.90 | 1.45 | -0.09** | (0.25) | | | |
| 3. Pride | 1.99 | 1.68 | -0.11** | 0.44** | (0.36) | | |
| 4. Guilt | 2.11 | 1.69 | 0.15** | -0.48** | -0.45** | (0.25) | |
| 5. Regret | 1.98 | 1.60 | 0.16** | -0.39** | -0.39** | 0.61** | (0.26) |

*Note.* Reported correlations are within-person. ICCs are reported in parentheses.
* $p < .05$. ** $p < .01$.

**Table 33. Study 3: Descriptives, Correlations, and ICCs for Self-control Dilemmas Involving Different Domains**

| Variable | *M* | *SD* | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|---|
| 1. Conflict | 3.25 | 1.10 | | | | | |
| 2. Self-control | 2.68 | 1.48 | -0.01 | (0.29) | | | |
| 3. Pride | 1.92 | 1.81 | 0.02* | 0.10** | (0.71) | | |
| 4. Guilt | 2.06 | 1.64 | 0.01 | -0.14** | -0.10** | (0.72) | |
| 5. Regret | 1.79 | 1.60 | 0.00 | 0.01 | -0.02 | 0.03* | (0.80) |

*Note.* Reported correlations are within-person. ICCs are reported in parentheses.
* $p < .05$. ** $p < .01$

# Appendix A. Supplemental Tables

**Table 34. Overview of Research Questions/ Hypothesis Results**

| Study | Research Question/Hypothesis | | Analysis | Findings |
|---|---|---|---|---|
| Pilot & Study 3 | RQ1 | What are common domain pairings of goals and temptations in everyday self-control dilemmas? | Qualitative | Dilemmas in health and financial domains are most prevalent. Social temptations are also common. |
| Pilot & Study 3 | RQ2 | How common are goal-temptation pairs in the same domain as opposed to different domains? | Qualitative | Goal-temptation pairs in the same domain are twice as frequent as dilemmas involving different domains. |
| Study 1 | RQ3 | What is the relationship between temptations and self-concepts not associated with the goal-domain? | Qualitative | There are some cross-domain relationships, especially involving social temptations. |
| Study 1 | H1 | Domain-specific self-concept will be positively associated with: | | |
| | H1a | (a) self-identification with goals in the same domain. | Bivariate Correlations, Regression | Supported |
| | H1b | (b) importance attributed to goals in the same domain. | Bivariate Correlations, Regression | Supported |
| Study 1 | H3 | Domain-specific self-concept will be: | | |
| Study 1 | H3a | (a) negatively associated with temptation strength in the same domain. | Bivariate Correlations, Regression | Supported |

| | | | | |
|---|---|---|---|---|
| Study 1 | H3b | (b) positively associated with how harmful temptations in that domain are perceived to be. | Bivariate Correlations, Regression | Partially supported; DSSC demonstrates less incremental validity when controls are included |
| Study 2 | H2 | In self-control dilemma scenarios, domain-specific self-concept will be positively associated with goal importance in the same domain. | Correlation | Supported |
| Study 2 | H4 | In self-control dilemma scenarios, domain-specific self-concept will be negatively associated with temptation strength in that same domain. | Correlation | Partially Supported; significant relationships in all domains except in social |
| Study 2 | H5 | When a goal and a temptation are associated with the same self-concept domain: | | |
| | H5a | (a) goal domain self-concept will be positively associated with goal importance. | Path Analysis, Indirect effects | Supported |
| | H5b | (b) goal domain self-concept will be negatively associated with temptation strength. | Path Analysis, Indirect effects | Partially supported (in Health and Financial domains) |
| | H5c | (c) goal importance will be negatively associated with temptation strength. | Path Analysis, Indirect effects | Partially supported; all except Financial |
| | H5d | (d) temptation strength will be positively associated with conflict strength. | Path Analysis, Indirect effects | Supported |
| | H5e | (e) goal importance and temptation strength will mediate the relationship between self-concept and strength of conflict. | Path Analysis, Indirect effects | Supported; however, in Financial domain, mediation only through temptation path, but not through goal |
| Study 2 | H6 | When a goal and a temptation are associated with different self-concept domains: | | |
| | H6a | (a) self-concept in the goal domain will be positively associated with goal importance. | Conditional Process Analysis | Partially supported (in 6 out of 8 scenarios) |

| | | | | |
|---|---|---|---|---|
| | H6b | (b) self-concept in the temptation domain will be positively associated with temptation strength. | Conditional Process Analysis | Partially supported (in 4 out of 8 scenarios) |
| | H6c | (c) goal importance will be positively associated with conflict. | Conditional Process Analysis | Partially supported (in 2 out of 8 scenarios) |
| | H6d | (d) temptation strength will be positively associated with conflict. | Conditional Process Analysis | Partially supported (in 4 out of 8) |
| | H6e | (e) goal importance will be negatively associated with temptation strength. | Conditional Process Analysis | Supported |
| | H6f | (f) temptation strength will moderate the relationship between goal importance and conflict. Specifically, when temptation is weak, goal importance will have a negative association with conflict strength, and when temptation is strong, goal importance will have a positive association with conflict strength. | Conditional Process Analysis | Partially supported |
| Study 2 | H7 | When a goal and a temptation are associated with different self-concept domains (as opposed to the same self-concept domain), (a) conflict strength will on average be higher and (b) stronger conflict will be more frequent. | Descriptives (mean & frequencies), Paired sample t-test | Not supported. Difference in conflict strength is significant between same and different domain scenarios but in the opposite direction |
| Study 3 | H8a | When a goal and a temptation are associated with the same self-concept domain, conflict strength will be positively associated with self-control. | Multilevel modeling | Not supported |
| Study 3 | H8b | When a goal and a temptation are associated with different self-concept domains, conflict strength will be negatively associated with self-control. | Multilevel modeling | Not supported |
| Study 2 | H9a | In self-control dilemmas, (a) conflict strength will be associated with self-conscious emotions. | Bivariate Correlations, Regression | Partially supported. In 4 scenarios, conflict negatively |

| | | | | |
|---|---|---|---|---|
| | | | | correlated with self-conscious emotions related to temptation |
| Study 2 | H9b | In self-control dilemmas, (b) self-concept will be associated with self-conscious emotions over and above conflict strength. | Bivariate Correlations, Regression | Partially supported. In 8 scenarios, DSSC was correlated with or predicted self-conscious emotions in goal condition |
| Study 3 | H10 | In self-control dilemmas, when a goal and a temptation are associated with the same self-concept domain: | | |
| | H10a | (a) self-control will be positively associated with pride. | Multilevel modeling | Supported |
| | H10b | (b) self-control will be negatively associated with guilt. | Multilevel modeling | Supported |
| Study 3 | H11 | When a goal and a temptation are associated with different self-concept domains: | | |
| Study 3 | H11a | (a) self-control will be positively associated with regret. | Multilevel modeling | Not supported |
| Study 3 | H11b | (b) self-control will be negatively associated with guilt. | Multilevel modeling | Supported |

**Table 35. Examples of CFA Results Across Common Measures (Study 1)**

| *Measures* | $X^2$ | *df* | *sig.* | *CFI* | *TLI* | *SRMR* | *RMSEA* |
|---|---|---|---|---|---|---|---|
| IPIP-FFM (Donnellan et al., 2006) | 2822.68 | 1165 | <.05 | 0.74 | - | - | 0.07 |
| Mini-IPIP (Donnellan et al., 2006) | 359.30 | 160 | <.05 | 0.88 | - | - | 0.07 |
| IPIP (Lin & Ployhart, 2006) | - | - | - | 0.83 | - | 0.07 | 0.12 |
| NEO-FFI (Lin & Ployhart, 2006) | - | - | - | 0.78 | - | 0.07 | 0.10 |
| Mini-IPIP (Cooper et al., 2010)) | 1323.12 | 160 | - | 0.82 | - | 0.06 | 0.07 |
| CICS (Perry et al., 2015) | 4063.6 | 657 | <.001 | 0.87 | 0.86 | 0.05 | 0.04 |
| MTQ48 (Perry et al., 2015) | 2683.1 | 1065 | <.001 | 0.80 | 0.79 | 0.05 | 0.05 |
| CSES (Perry et al., 2015) | 1375.8 | 296 | <.001 | 0.80 | 0.78 | 0.07 | 0.06 |
| SAM (Perry et al., 2015) | 1959.50 | 329 | <.001 | 0.85 | 0.83 | 0.07 | 0.06 |
| SEQ (Perry et al., 2015) | 1390.2 | 199 | <.001 | 0.91 | 0.90 | 0.06 | 0.06 |
| SMS-6 (Perry et al., 2015) | 766.3 | 237 | <.001 | 0.88 | 0.86 | 0.06 | 0.06 |

*Note:* CFI = comparative fit index; TLI = Tucker-Lewis index; SRMR = standardized root mean square residual; RMSEA = root mean square error of approximation; CICS = coping inventory for competitive sport; SAM = stress appraisal measure; MTQ48 = mental toughness questionnaire-48; SMS-6 = sport motivation scale-6; SEQ = sport emotion questionnaire; CSES = coping self-efficacy scale. Some indices are not reported in the original studies.

# Appendix B. Measures

***Measures used in hypothesis testing***

**Domain-specific self-concept measure**
*Instructions: Please rate the extent to which you agree with the following statements.*
*Rating scale: 1 (strongly disagree) to 5 (strongly agree)*

**Health Domain**
*Food/ Eating*
1. I see myself as a healthy eater
2. I see myself as having an adequate weight
3. I see myself as someone who maintains healthy weight

*Exercise*
4. I see myself as physically fit
5. I see myself as physically attractive

*Healthy life-style & habits*
6. I see myself as a healthy person
7. I see myself as a health-conscious person
8. I see myself as having healthy habits

**Achievement Domain**
9. I see myself as a good student
10. I see myself as a good employee
11. I see myself as successful in my job
12. I see myself as good at what I do
13. I see myself as an accomplished person
14. I see myself as a productive person
15. I see myself as a high achiever
16. I see myself as someone who accomplishes goals

**Social Domain**
17. I see myself as a good friend
18. I see myself as a good relationship partner
19. I see myself as a good parent
20. I see myself as a good son or daughter
21. I see myself as a good family member
22. I see myself as a friendly person
23. I see myself as loyal to friends
24. I see myself as loyal to family

**Financial Domain**
25. I see myself as a financially responsible person
26. I see myself as good with money
27. I see myself as careful with money
28. I see myself as cautious with money
29. I see myself as a prudent with money
30. I see myself as impulsive with money ®
31. I see myself as good at saving money

**Domain-specific goals measure**

*Instructions: How typical is this of you?*
*How important is this to you?*
*Rating scale: 1 (not at all like me/ not important at all) to 5 (very much like me/ extremely important)*

**Health Domain**

1. I am trying to eat healthy
2. I am trying to achieve my desired weight
3. I am trying to exercise regularly/ more frequently/
4. I am trying to get fit
5. I am trying to be physically active
6. I am trying to control how much I drink
7. I am trying to control how much I smoke
8. I am trying to control how much I use drugs
9. I am trying to have healthy habits

**Achievement Domain**

10. I am trying to complete a project related to work/school
11. I am trying to finish school/ get a degree/ certificate
12. I am trying to pass a course or an exam
13. I am trying to learn a new skill
14. I am trying to achieve something important to me
15. I am trying to accomplish a goal
16. I am trying to improve specific skills/ knowledge

**Social Domain**

17. I am trying to have more friends
18. I am trying to have deeper friendships
19. I am trying to socialize more
20. I am trying to be a better friend
21. I am trying to attend/participate in family events more
22. I am trying to repair a relationship/ friendship
23. I am trying to manage my relationships better
24. I am trying to minimize conflict with others
25. I am trying to improve my relationships with others

**Financial Domain**

26. I am trying to make money
27. I am trying to save money
28. I am trying to stick to the budget
29. I am trying to spend money wisely
30. I am trying to buy only things that I need
31. I am trying to save money for a specific thing
32. I am trying to plan my purchases
33. I am trying to control my spending habits

**Domain-Specific Impulsivity Scale – Temptation (DSIS-T; Tsukayama et al., 2012)**

*Instructions: On the following scale, how tempted would you be to do the following activities:*
*On the following scale, please rate how bad you think the following activities are:*

*Rating scale: 1 (note tempted at all/ not bad at all) to 5 (very tempted/ very bad)*

*Food*

1. Snacking on junk food
2. Eating snacks
3. Consuming more food than I should
4. Eating when I am not hungry
5. Eating chips and other salty snacks
6. Eating candy
7. Eating chocolate
8. Having dessert
9. Eating fried food

*Exercise*

10. Avoiding physical exercise
11. Remaining physically active
12. Avoiding working out
13. Being sedentary

*Drug*

14. Getting drunk
15. Binge drinking
16. Drinking hard liquor
17. Drinking beer
18. Drinking wine
19. Getting high on drugs
20. Smoking marijuana
21. Smoking cigarettes
22. Smoking cigars

*Work*

23. Putting off work that needs to get done
24. Procrastinating
25. Letting responsibilities pile up
26. Doing nothing when I have work to do
27. Wasting time
28. Delaying the start of the big project
29. Doing my work at the last minute
30. Getting distracted from my work
31. Quitting when I am frustrated
32. Giving up when I encounter problems
33. Quitting when I get bored
34. Stopping my work when I get tired

*Relationship*

35. Complaining about my problems
36. Gossiping
37. Telling another person's secrets
38. Losing my temper
39. Getting angry
40. Taking more than my fair share
41. Holding a grudge

42. Breaking promises
43. Speaking before thinking
44. Lying
45. Interrupting people when they are talking

*Finance*

46. Purchasing things when I don't really need them
47. Buying a lot of things
48. Buying things I hadn't planned to buy
49. Buying things on impulse
50. Spending a lot of money
51. Spending rather than saving money

**Goals**

*Instructions: Thinking about this goal, please answer the following*
*Rating scale: 1(not important/not committed at all) to 5 (extremely important/ committed)*

1. How important would/ is this to you?
2. How committed are you to working on this/ achieving this?

**Temptations**

*Instructions: Thinking about this temptation, please answer the following*
*Rating scale: 1(not at all) to 5 (extremely)*

1. How tempted would you be/ were you?

**Conflict**

*Instructions: If you faced this dilemma, please answer the following*
*Rating scale: 1(not at all) to 5 (extremely)*

1. How conflict were you about what to do?

**Emotions**

*Instructions: For each option, please rate how much you think you would feel the following emotions*
*Instructions: The extent you felt any of the following emotions about your decision*
*Rating scale: 1(not at all) to 5 (extremely)*

Self-conscious emotions: Pride, guilt, regret
Basic emotions (control variable): fear, anger, joy, sadness

**Self-control dilemma decision**

*Instructions: If you faced a dilemma, to what extent did you resist the temptation?*
Ratings: 1 (not at all) – 5 (completely resisted)

***Measures used to assess convergent and discriminant validity***

**Good Practices Checklist (Hampson et al., 2019)**
*Instructions: How typical is this of you?*
*Rating scale: 1 (not at all like me) to 5 (very much like me)*

1. I exercise to stay healthy
2. I eat a balanced diet
3. I take vitamins
4. I see a dentist for regular checkups
5. I watch my weight
6. I limit my intake of foods like coffee, sugar, and fats
7. I gather information on things that affect my heath
8. I watch for possible signs of major health problems
9. I take health food supplements
10. I see a doctor for regular checkups
11. I use dental floss regularly
12. I discuss health with friends, neighbors, and/ or relatives
13. I don't smoke
14. I brush my teeth regularly
15. I get shots to prevent illness
16. I get enough sleep

**Domain Specific Hope Scale (DSHS; Sympson, 1999)**
*Instructions: Rate the extent to which each item applies to you*
*Rating scale: 1 (definitely false) to 5 (definitely true)*

*Social relationships*

1. I can think of many ways to make friends
2. I actively pursue friendships
3. There are lots of ways to meet new people
4. I can think of many ways to be included in the groups that are important to me
5. I've been pretty successful where friendships are concerned
6. Even when someone seems unapproachable, I know I can ding a way to break the ice.
7. My past social experiences have prepared me to make friends in the future
8. When I meet someone I want to be friends with, I usually succeed

*Academics*

9. I can think of lots of ways to make good grades
10. I energetically pursue my school work
11. There are lots of ways to meet the challenges of any class
12. Even if the course is difficult, I know I can find a way to succeed
13. I've been pretty successful in school
14. I can think of lots of ways to do well in classes that are important to me
15. My past academic experiences have prepared me well for the future
16. I get the grades that I want in my classes
17. If you read this question, place X on the line

*Romantic relationships*

18. I can think of many ways to get to know someone I'm attracted to
19. When I am interested in someone romantically, I actively pursue him or her
20. There are lots of ways to convince someone to go out with me

21. I've been pretty successful in my romantic relationships
22. I can't think of many ways to get to know someone I'm attracted to
23. My past romantic relationships have prepared me well for future involvements
24. Even when someone does not seem interested, I know I can find a way to get their attention
25. I can usually get a date when I set my mind to it

*Family life*

26. I can think of lots of things I enjoy doing with my family
27. I energetically work on maintaining family relationships
28. I can think of many ways to include my family in things that are important to me
29. If you can read this question, select somewhat false
30. I have a pretty successful family life
31. Even when we disagree, I know my family can find a wat to solve our problems
32. I have the kind of relationships that I want with my family members
33. There are lots of ways to communicate my feelings to family members
34. My experiences with my family have prepared me for a family of my own

*Work*

35. I can think of many ways to find a job
36. I am an energetic worker
37. There are lots of ways to succeed at a job
38. Even if it's a lousy job, I can usually find something good about it
39. I have a good work record
40. My previous work experiences have helped me prepare for future success
41. I can always find a job if I set my mind to it
42. I can think of lots of wats to impress my boss if the job is important to me

*Leisure activities*

43. I can think of many satisfying things to do in my spare time
44. I energetically pursue my leisure time activities
45. If my planned leisure time activities fall through, I can find something else that I enjoy
46. I can think of lots of ways to make time for the activities that are important to me
47. Even if others don't think my activities are important, I still enjoy doing them
48. My experiences with hobbies and other leisure activities are important to my future
49. I have satisfying activities that I do on my leisure time
50. When I try to perform well in leisure activities, I usually succeed.

**Financial Satisfaction (Xiao et al., 2014)**

*Instruction: Please rate how satisfied are you with your current financial situation?*
*Rating scale: 1 (not at all satisfied) to 10 (extremely satisfied)*

1. Overall, I am satisfied with my current financial situation

**Perceived financial capability (Xiao et al., 2014)**

*Instructions: To what extent do you agree with the following statement?*
*Rating scale: 1 (strongly disagree) to 7 (strongly agree)*

1. I am good at dealing with day-to-day financial matters, such as checking accounts, credit and debit cards, and tracking expenses

**Rosenberg Self-esteem scale (RSE; Rosenberg, 1965)**
*Instructions: Please rate the extent to which you agree with the following statements.*
*Rating scale: 1 (strongly disagree) to 4 (strongly agree)*
**reverse coded items*

1. On the whole, I am satisfied with myself
2. At times, I think I am no good at all*
3. I feel I have a number of good qualities
4. I am able to do things as well as most people
5. I feel I do not have much to be proud of*
6. I certainly feel useless at times*
7. I feel that I am a person of worth
8. I wish I could have more respect for myself*
9. All in all, I am inclined to think I am a failure*
10. I take a positive attitude toward myself

**The PINT Goal-Contents Scale (Willkowski et al., 2020)**
*Instructions: Please indicate whether each word you see represents a goal of yours or not.*
*Rating scale: -4 (I have an extremely strong commitment to avoiding this), 0 (I have no commitment to this), 4 (I have an extremely strong commitment to this)*

*Prominence*: Championship, competition, control, glory, greatness, moneymaking perfection, popularity, power, privilege, sexiness.

*Inclusiveness*: Activism, comradery, diplomacy, diversity, empathy, equity, inclusion, interconnectedness, philanthropy, solidarity, transcendence.

*Negativity Prevention* (all items reversed): Abnormality, craziness, death, fighting, fatness, hypersensitivity, isolation, mediocrity, melancholy, pity, unemployment.

*Tradition*: Atheism (reversed), blessedness, conservatism, marriage, obedience, obligation, parenthood, patriotism, pureness, tradition.

### *Measures used to assess control variables*

**Brief Self-control scale (BSCS; Tangney et al., 2004)**
*Instructions: Please rate the extent to which the following statements describe you.*
*Rating scale: 1 (not at all like me) to 5 (very much like me)*
**reverse coded items*

1. I am good at resisting temptations
2. I have a hard time breaking bad habits*
3. I am lazy*
4. I say inappropriate things*
5. I do certain things that are bad for me, if they are fun*
6. I refuse things that are bad for me
7. I wish I had more self-discipline*
8. People would say that I have iron self-discipline
9. Pleasure and fun sometimes keep me from getting things done*
10. I have trouble concentrating*

11. I am able to work effectively toward long-term goals
12. Sometimes I can't stop myself from doing something, even if I know it's wrong*
13. I often act without thinking through all the alternatives*

**Hedonic and Eudaimonic Motives for Activities – Revised (HEMA-R; Huta & Ryan, 2010;2016)**
*Instructions: To what degree do you typically approach activities with each of these intentions, whether or not you actually achieve your aim?*
*Rating scale: 1 (not at all) to 7 (very much)*

1. Seeking relaxation
2. Seeking to develop a skill, learn, or gain insight into something
3. Seeking to do what you believe in
4. Seeking pleasure
5. Seeking to pursue excellence or a personal ideal
6. Seeking enjoyment
7. Seeking to take it easy
8. Seeking to use the best in yourself
9. Seeking fun
10. Seeking to contribute to others or the surrounding world

## Study 2: Self-control Dilemma Scenarios

**Instructions:**
On any given day, we face a wide range of choices, some of which might be very appealing to us at the moment, even if not necessarily beneficial in the long run. When these momentary temptations interfere with our long-term goals and values, we experience what is known as a self-control dilemma. In the following section, we will present you with examples of self-control dilemmas and ask you to evaluate these conflicting courses of action.

Because these are hypothetical scenarios, some choices may not be important or tempting to you. In other cases, the presented goals or temptations might closely resemble what you experienced. Your answers should be based on your past or present personal experiences, whenever possible. For example, if the goal we are asking about is to eat healthy, and you have never had such a goal, then you will probably rate this hypothetical goal as "Not important at all". However, if you previously had or currently have such a goal, you would rate how important that goal was or is to you now.

**Rating Scale:**

**Questions 1-3**
**1 = Not at all 2 = Somewhat 3 = Moderately 4 = Very 5 = Extremely**

**Question 4-5**
**0 = No emotion 1 = Barely any emotion 7 = Very intense emotion**

**Example of a hypothetical scenario and associated questions:**

While working on an important project, you are tempted to stop and do something fun instead (e.g., watch your favorite show, read a book, play a video game).

*Q1: How important to you would be to continue work on the project?*

*Q2: How tempted would you be to do something fun instead)*

*Q3: If you faced this dilemma, how conflicted do you think you would be?*

*Q4: If you would choose to continue working on the project, how do you anticipate feeling about it? Select all the emotions you think you would feel and rate their intensity by moving the slider from 1 (barely any emotion) to 7 (very intense emotion). If you do not think you would experience a certain emotion, leave the slider at zero.*

*Q5: If you would choose to do something fun instead, how do you anticipate feeling about it? Select all the emotions you think you would feel and rate their intensity by moving the slider from 1 (barely any emotion) to 7 (very intense emotion). If you do not think you would experience a certain emotion, leave the slider at zero.*

**Same Domain Self-Control Dilemmas (5)**

| | | **Scenario** |
|---|---|---|
| **1** | **Health** | Your goal is to exercise regularly, but you find yourself tempted to skip the exercise session. |
| **2** | | Your goal is to eat healthy, but you are tempted to order fast food/ takeout food. |
| **3** | **Achievement** | You are currently working on an important project, but you are tempted to stop and do something fun instead (e.g., watch your favorite show, read a book, play a video game). |
| **4** | **Social** | You are supposed to attend a family reunion, but you dread traveling and are tempted to find an excuse not to go. |
| **5** | **Financial** | Your goal is to save money, but you are tempted to purchase something you've been wanting for a while. |

**Different Domain Self-Control Dilemmas (8)**

| | | |
|---|---|---|
| **6** | **Health - Achievement** | You know you should get a decent night's sleep, but you are tempted to stay up late to finish a work project on time. |
| **7** | **Health - Social** | You are trying to lose weight, but, at a social gathering, you are tempted to eat a dessert baked by your friend because you don't want to hurt their feelings. |
| **8** | **Achievement - Health** | You know you should study for an exam, but you are tempted to go to the gym instead. |
| **9** | **Achievement – Social** | Your goal is to meet a tight deadline for a work/school project, but you are tempted to go out with friends instead. |
| **10** | **Social - Health** | You feel you should support your partner by accompanying them to an important appointment, but you are tempted to go for your usual morning run instead. |
| **11** | **Social - Financial** | You arranged to take your kids to the concert of their favorite singer, but you are tempted to sell the tickets and make a lot of money. |
| **12** | **Financial - Health** | You promised yourself you would stick to your budget but are tempted to buy expensive equipment to exercise at home. |
| **13** | **Financial - Social** | You want to be financially responsible, but you also want to buy an expensive gift for an important person in your life because you want to make them happy. |