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Abstract

Emotion regulation is crucial to navigating emotionally challenging situations, and the ways in which emotions are regulated has important implications for psychological, social and physical well-being. However, although the majority of emotion regulation episodes occur within social interactions, emotion regulation has typically been examined when individuals regulate their emotions in solitude. Moreover, research examining how emotion regulation shapes specific outcomes relevant to the context in which emotion regulation is enacted is rare. The two articles in this thesis advance the emotion regulation literature by (1) examining emotion regulation within important interpersonal contexts, (2) investigating the degree to which emotion regulation shapes important goal-relevant outcomes pivotal to the specific contexts examined, and (3) assessing how these outcomes extend across time and social interactions. Chapter Two examined whether emotional suppression during personal goal pursuit impedes goal strivings and progress. Two longitudinal studies demonstrated that greater use of emotional suppression increased depressed mood, reduced perceived support/closeness, and reduced goal effort, competence and success across time. Chapter Three examined the effects of a broader range of emotion regulation strategies on interpersonal goals by investigating how the use of three categories of emotion regulation during marital conflict shape conflict resolution and, in turn, parent-child responsiveness within a subsequent family activity. Greater disengagement and aversive cognitive perseveration predicted lower conflict resolution, and in turn, poorer parental responsiveness during the family activity. Greater adaptive engagement did not have independent positive effects beyond the effects of these maladaptive strategies. Taken together, the results and methods in the current thesis offers a valuable framework to extend understanding of emotion regulation processes.
To my parents
Acknowledgements

First and foremost, I would like to thank my supervisors who were instrumental in the completion of my PhD. Nickola, thank you for being a constant source of inspiration, and for always believing in me even when I didn’t believe in myself. I could not have done this without you. Annette, thank you for taking me under your wing so many years ago and igniting my passion for research. Your friendship, support and guidance will always be cherished. Thank you to my extended lab family in the ELLA and REACH research labs. In particular, I would like to thank Emily for being the best PhD buddy. Thanks to Caitlin, Chloe, Shanuki, Sweta, Valerie and Ying, for your friendship and encouragement throughout this journey. Thank you to all the ELLA volunteers who have helped with this research. I would also like to express my sincere gratitude to my family and friends, in particular my parents, Han Mia and Siew Yoong, for all the sacrifices that you have made. My deepest appreciation goes to Matt, who has been the only constant when life has thrown random curve balls. Thank you to Matt’s parents, Jane and David, for being my parents away from home. Thank you to my close friends, Jenny, Josie, Leo, Mandy and Cindy for keeping me humble and sane. I would also like to thank the Claude McCarthy Trust for their generous funding, and to all the research participants who have made this research possible. Finally, thanks to the University of Auckland professional staff including Andrea, Angela, Cara, Helen, Kamalini, Larissa, Meena, Michelle, Odette, Peter, Rajni, Sharon, Sue, and the heads of school during my PhD, Doug and Will.
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Chapter Two: Emotional Suppression During Goal Pursuit


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Chapter Three: Emotion Regulation during Relationship Conflict and Spillover Processes


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CHAPTER ONE: INTRODUCTION AND OVERVIEW OF STUDIES

Emotions powerfully influence our thoughts and behaviour in both functional and dysfunctional ways. Emotions can spur people into collective action, facilitate decision making, enhance memory, and foster social relationships (Goodwin, Jasper & Poletta, 2009; Schwarz, 2000; Talarico, Berntsen & Rubin, 2009). However, emotions can also have significant and damaging effects. Negative emotions can lead to poor decision-making, impair cognitive performance, and increase aggressive behaviour (Averill, 1983; Clore, Schwarz & Conway, 1994; McNulty & Hellmuth, 2008; Schwarz, 2000). Indeed, a wealth of research has demonstrated that the inability to manage or respond appropriately to emotions is associated with lower psychological, social and physical well-being (Campbell-Sills & Barlow, 2007; Eisenberg, Fabes, Guthrie & Reiser, 2000; Sapolsky, 2007). Thus, the ability to control or regulate one’s emotions plays a crucial role in people’s everyday functioning.

As emotions are deeply embedded in social situations (Campos, Walle, Dahl & Main, 2011), it is not surprising that most emotion regulation episodes also occur within social interactions (Gross, Richards & John, 2006). For example, when experiencing a stressful or upsetting day, people will often turn to close others to help regulate their emotions (Lazarus & Folkman, 1984; Zaki & Williams, 2013). The importance of assessing emotion regulation during interpersonal interactions is also evident from prior research demonstrating that the effects of emotion regulation are not confined to the individual, but also affect interpersonal outcomes including perceived support and closeness, and relationship evaluations (Gross & John, 2003; Srivastava, Tamir, McGonigal, John & Gross, 2009; Velotti et al., 2015). Further, research has also revealed that emotion regulation can affect interaction partners’ emotional experiences, behaviours, and relationship evaluations (Butler et al., 2003; Ben-Naim, Hirschberger, Ein-Dor & Mikulincer, 2013). Thus, examining emotion regulation during
social interactions is crucial to understanding how emotion regulation shapes important personal and interpersonal outcomes.

One reason emotion regulation has important implications for personal and interpersonal functioning is that it shapes the degree to which people can manage goal-directed behaviour during emotionally challenging situations (Gratz & Roemer, 2004). The ability to regulate one’s emotions should be particularly important during situations which often elicit strong negative emotions such as when one needs support or during relationship conflict. Although recent research has demonstrated that certain strategies (e.g., emotional suppression, cognitive reappraisal) predict different affective, cognitive and social consequences (Gross & John, 2003), no prior research has examined how emotion regulation affects individuals’ ability to achieve personal or interpersonal goals relevant to the specific context examined, or how these outcomes shape broader functioning or well-being.

This thesis aims to advance research in emotion regulation in these two important ways. The studies are the first to examine spontaneous emotion regulation within important social interactions, and they are the first to test how emotion regulation shapes central goal-relevant outcomes specific to that context. These aims are important because the use and goal-relevant outcomes associated with emotion regulation during social interactions are likely to have important implications for functioning over time and in other contexts. Although a wealth of research has revealed that emotion regulation predicts psychological, social, and physical well-being (e.g., Gross & John, 2003), prior research has not yet examined how the immediate outcomes of emotion regulation within specific contexts contribute to these long-term effects. One key reason emotion regulation should shape people’s well-being in general is because it determines how well people can achieve personal or interpersonal goals. Thus, the third aim of this thesis is to advance existing research by assessing how emotion regulation enacted during emotionally-challenging contexts shapes
important personal and interpersonal goals, and in turn, associated longitudinal and spillover
effects relevant to the given domain.

In the following sections, I elaborate on each of these three aims (also see summary in
Figure 1.1). First, I discuss the importance of assessing emotion regulation within
interpersonal contexts, review the established outcomes of a form of emotion regulation
especially relevant to interpersonal processes, and then briefly outline the approach taken in
this thesis to examine the naturally occurring use and associated outcomes of emotion
regulation during interpersonal contexts. Second, I provide an argument for why emotion
regulation is pivotal to shaping goal-relevant outcomes, and summarise how the current
studies offer novel examinations of the ways in which emotions regulation might shape
important personal and interpersonal goals. Finally, I consider how these goal-relevant
processes should lead to important longitudinal and spillover effects of emotion regulation.

**Emotion Regulation within Interpersonal Contexts**

Emotion regulation is principally conceived as an internal, within-person process that
modifies how individuals express and experience emotions. However, emotions often occur
in interpersonal contexts and emotion regulation involves interpersonal processes, such as
when people turn to others for support or help regulating their emotions (Lazarus & Folkman,
1984; Rimé, Philippot, Boca & Mesquita, 1992; Zaki & Williams, 2013). Indeed, 98% of
emotion regulation episodes occur within social interactions (Gross, Richards & John, 2006).
Moreover, some emotion regulation strategies are inherently interpersonal because they
involve inhibiting or concealing the external expressions of emotions from others, called
emotional suppression (Gross, 1998a; Gross & John, 2003). Emotional suppression does not
only affect how individuals cope with situations, but also affects interaction partners’
emotional reactions, behavioural responses, and relationship evaluations (Butler et al., 2003;
Ben-Naim et al., 2013). Thus, emotional suppression is interpersonal in its character
Figure 1.1 Summary of established outcomes in prior research and novel outcomes of emotion regulation within social interactions assessed in Chapter Two and Chapter Three.
(i.e., suppressing the expression of emotions from others) and its effects (i.e., has myriad personal and interpersonal consequences; see Figure 1.1), and thus should be examined within interpersonal contexts.

To illustrate the importance of examining emotional suppression in relationship interactions, in this section I briefly summarise the methodologies used in prior studies and the personal and interpersonal consequences prior research has examined (see Figure 1.1, *Established Outcomes in Prior Research*). First, emotional suppression has predominantly been investigated using experimental studies in which participants are instructed to inhibit or hide how they are feeling while engaging in a task that elicits emotions (e.g., watching a disgusting film clip). Studies using this paradigm have revealed that emotional suppression is effective at reducing the expression of emotion but does not reduce the subjective experience of negative affect (Dunn, Billotti, Murphy & Dalgleish, 2009; Goldin, McRae, Ramel & Gross, 2008; Gross & John, 1998) and increases physiological stress (Gross & Levenson, 1993). These studies have also shown that the cognitive effort and self-monitoring emotional suppression requires reduce memory of presented information as well as self-regulatory performance, suggesting that emotional suppression depletes cognitive resources (Gross, 2002; Richards & Gross, 2000). However, examining how individuals regulate their emotions while completing tasks in solitude means that these studies fail to capture the context in which emotional suppression is usually enacted—during interpersonal interactions. Accordingly, these studies do not inform how suppression affects interpersonal outcomes external to the self, such as interaction partners’ perceptions, experiences and responses.

Some more recent experimental studies have examined emotional suppression in social interactions by instructing one partner to suppress their emotions as romantic couples discuss emotionally relevant topics. These dyadic studies have revealed similar affective and cognitive consequences for the individual engaging in emotional suppression, such as
increased physiological arousal and reduced memory of the conversation (Ben-Naim et al., 2013; Peters, Overall & Jamieson, 2014; Richards, Butler & Gross, 2003). These dyadic studies have also shown that emotional suppression has negative social consequences, such as reduced responsiveness towards the partner as rated by independent observers (Peters et al., 2014). Suppressors also tend to be perceived by partners to be more hostile and withdrawn, and partners tend to experience increased physiological arousal and display more hostility towards individuals engaging in greater emotional suppression (Butler et al., 2007). Thus, experimental manipulations of emotional suppression reveal that this emotion regulation strategy has interpersonal effects on relationships and responses of interaction partners (see Figure 1.1, Established Outcomes in Prior Research).

Experimental studies are a powerful tool to test causal effects of emotional suppression but do not capture peoples’ spontaneous use of emotional suppression in their interactions with others, which is necessary for a complete understanding of the use and impact of emotion regulation. Experiments also do not assess how naturally occurring emotional suppression shapes personal and interpersonal outcomes during routine or day-to-day social interactions. Because experimental studies do not produce ongoing change in naturally-occurring emotional suppression and one instance of emotional suppression will not change outcomes across time, experimental paradigms are limited to assessing concurrent effects arising as people are enacting emotional suppression (e.g., reduced behavioural expressions; Gross & Levenson, 1993; Gross, 1998a) or outcomes assessed immediately after the enactment of emotional suppression (e.g., memory or rapport in subsequent interactions; Butler et al., 2003; Richards & Gross, 2006). Thus, the results from experimental studies are uninformative regarding how emotional suppression might affect personal and interpersonal outcomes as they change and develop over time.
Another valuable approach that has enabled researchers to address some of these limitations of experimental studies involves the assessment of general or habitual tendencies to suppress emotions. Gross and John (2003) developed a self-report measure that assesses individuals’ habitual tendencies to engage in emotional suppression (e.g., “I control my emotions by not expressing them”). Research using this tool has shown that a greater tendency to suppress emotional expressions is associated with experiencing less positive affect, more negative affect, and poorer memory (Gross & John, 2003; Richards & Gross, 2000). Longitudinal examinations have also illustrated that chronic use of suppression predicts increases in anxiety and depressed mood (Gross & John, 2003; Kashdan, Elhai & Breen, 2008). Concurrent and longitudinal studies also indicate that greater habitual emotional suppression shapes important interpersonal outcomes, such as perceiving lower closeness and support, and reducing relationship quality (Gross & John, 2003; Srivastava et al., 2009; Velotti et al., 2015).

However, assessments of chronic emotional suppression and general outcomes do not provide information regarding how emotional suppression shapes personal and interpersonal outcomes when suppression is enacted during social interactions. Thus, recent research has begun to examine the naturally occurring use of emotional suppression during social interactions. For example, daily experience sampling can assess how emotional suppression during daily social interaction predicts personal and interpersonal functioning on that day (e.g., Cameron & Overall, 2017; Impett et al., 2012). As with the experimental and self-report literature, these studies show that greater emotional suppression in daily life is associated with individuals experiencing increased personal costs, such as increased depressed mood that day as well as greater depression across time (Cameron & Overall, 2017). These studies also reveal important relationship outcomes, such as reduced closeness on days when emotional suppression is enacted as well as reduced relationship satisfaction over time.
(Cameron & Overall, 2017; Impett et al., 2012; Vater & Schröder-Abé, 2015). Moreover, interaction partners who think that individuals are suppressing more during daily life report greater negative affect and lower life satisfaction that day (Impett et al., 2012). In sum, the spontaneous use of emotional suppression during routine daily relationship interactions produce within-person changes in personal and interpersonal experiences that culminate to undermine outcomes across time (see Figure 1.1).

In the current studies, I extend the methods described above by examining emotional suppression as it naturally emerges in specific emotionally relevant interpersonal interactions, including when people discuss personal goals with their partner (Chapter Two) or when couples discuss areas of conflict in their relationship (Chapter Three). This method provides the advantage of examining how naturally occurring emotional suppression shapes both personal and interpersonal outcomes immediately and across time but does so by providing uniform contexts in which emotion regulation will likely be enacted and will have important consequences for personal and relationship development. Moreover, investigating couples’ naturalistic interactions allows examination of contextually relevant outcomes that go beyond the personal and interpersonal emotional and relational experiences focused on in prior research. Indeed, as I discuss in the next section, the degree to which people can regulate their emotions is likely to be particularly important in shaping specific goal-relevant outcomes particular to the emotionally challenging domain.

**Emotion Regulation and Goal-relevant Outcomes**

Emotion regulation is theorised to be pivotal in managing goal-directed behaviour and impulses during emotionally challenging situations (Gratz & Roemer, 2004), and thus should have important implications for people’s ability to achieve important personal and interpersonal goals (Gross, 2015). Some theorists proposed that emotions are adaptive and facilitate individuals’ actions to meet environmental demands (e.g., Barrett & Campos, 1987;
Plutchik, 1980). For example, positive emotions should lead to a continuation of current behaviour, whereas negative emotions are likely to motivate avoidance of a goal or formulation of a new plan of action (e.g., Oatley & Johnson-Laird, 1987). Thus, emotions act as an internal gauge for individuals to determine whether there is a discrepancy between their desired state and their current state, which helps people pursue their goals. However, there are times when people experience strong emotions which have to be managed for adaptive functioning. Therefore, it is important to examine how emotion regulation affects individuals’ ability to accomplish their goals in a given context.

Similarly, people’s behavioural and cognitive effort toward achieving their goals is a primary context for understanding emotions and emotion regulation. People inevitably encounter challenges as they work toward goals, which will often produce negative emotions, such as frustration, sadness or anxiety (Gollwitzer, Bayer & McCulloch, 2005). Moreover, the success of personal goals should largely be determined by how well those people can overcome negative emotions and persevere in the face of challenges (Baumeister, Schmeichel, Dewall & Vohs, 2007). One way in which individuals may often regulate negative emotions when encountering goal-relevant challenges is by engaging in emotional suppression. Although there has been no examination of how emotion regulation affects people’s ability to pursue goals, the broader literature on emotion regulation and self-regulation indicate that emotional suppression is likely to interfere with goal-related effort and progress. For example, experimental studies have revealed that the effort required to suppress emotions reduces cognitive capacity, as evidenced by poorer memory, and impairs self-regulation resources, as evidenced by lower persistence during a frustrating task (Muraven, Tice & Baumeister, 1998; Richards & Gross, 1999).

Although this prior research suggests that emotion regulation will have important effects on goal-relevant processes, no research has directly examined whether emotion
regulation shapes the degree to which people successfully achieve important goals (see Figure 1.1). My thesis addresses this gap in the literature in two ways. First, I examine how emotion regulation shapes people’s ability to pursue personal goals across time (Chapter Two; see Figure 1.1, Novel Goal-Relevant Outcomes Assessed in Current Studies). In particular, across two studies I investigate whether emotional suppression during personal goal pursuit shapes important personal and interpersonal outcomes. To offer validation for the novel assessment of examining emotional suppression in goal contexts, I test whether greater emotional suppression when encountering challenges while pursuing personal goals predicts established outcomes associated with emotional suppression, including greater depressed mood and lower perceived support and closeness (see Figure 1.1, Established Outcomes in Prior Research). To show the importance of emotional suppression on specific contextually relevant goal outcomes, I also test whether greater emotional suppression during goal pursuit reduces goal effort, goal competence and goal success across time (see Figure 1.1, Novel Goal-Relevant Outcomes Assessed in Current Studies). Finally, I examine how these outcome variables work together to explain the effects of emotional suppression to identify the underlying mechanism for these goal-relevant effects.

In Chapter Three, I expand my investigation of emotion regulation during goal-relevant contexts in two major ways. First, given that emotion regulation and interpersonal dynamics are intricately connected, I expand my focus on personal goals to relationship goals. In close relationships, people often have goals they would like to achieve. For example, couples often report wanting more intimacy or spending more time with one’s partner (Overall, Fletcher & Simpson, 2006; Storaasli & Markman, 1990). These shared goals require intimates to work together to meet and satisfy each other’s needs, but couples often experience conflicting needs, desires and goals which can give rise to conflict (Rusbult & Van Lange, 2003). Not surprisingly, negative emotions often arise during relationship
conflict, and individuals have to regulate their negative emotions to behave in constructive ways to sustain their relationship (Rusbult & Van Lange, 2003; Murray & Holmes, 2009). One crucial goal-relevant outcome in this context, which has important effects on relationship success versus deterioration, is conflict resolution. In particular, conflict resolution has been recognized as the central mechanism through which responses during conflict predict relationship development across time (Overall & McNulty, 2017). Despite the likely pivotal role of emotion regulation during relationship conflict, no research has examined how emotion regulation might facilitate or hinder conflict resolution.

Second, I expand the assessment of emotion regulation by examining three categories of emotion regulation strategies which underpin the most commonly assessed emotion regulation strategies: Disengagement, Aversive Cognitive Perseveration, and Adaptive Engagement (Naragon-Gainey, McMahon & Chacko, 2017). Disengagement captures attempts to avoid or shift focus from the emotionally relevant situation, such as emotional suppression. Aversive cognitive perseveration involves over-engagement with or difficulty disengaging from negative cognitions and emotions, such as rumination. Lastly, adaptive engagement involves constructive problem solving, and open expressions and acceptance of emotions, such as cognitive reappraisal. These three different types of emotion regulation strategies are likely to shape the degree to which couples can resolve conflict.

Although no research has specifically examined how different types of emotion regulation during conflict are associated with conflict resolution, the evidence reviewed above indicates that disengagement (e.g., emotional suppression) will interfere with various cognitive and interpersonal processes during social interactions that will likely hinder conflict resolution. Prior research also indicates that aversive cognitive perseveration is likely to hinder people’s ability to engage cognitively and socially during conflict, thus undermining conflict resolution. For example, excessive focus and exaggeration of negative emotions are
associated with less effective problem solving (Clore & Gasper, 2000; Watkins & Brown, 2002). On the other hand, adaptive engagement is likely to facilitate conflict resolution. Openly sharing feelings and opinions, and assessing causes and solutions with partners, predict more successful problem resolution immediately and across time (e.g., Drigotas, Whitney & Rusbult, 1995; Overall, Fletcher, Simpson & Sibley, 2009). Cognitive reappraisal, a form of adaptive engagement often contrasted to emotional suppression, has also been shown to predict better cognitive functioning during conflict (Richards et al., 2003).

In sum, Chapter Two presents two studies that provide the first investigation of whether emotional suppression during personal goal pursuit shapes specific goal outcomes. Chapter Three examines how emotional suppression and two additional types of emotion regulation during relationship conflict have unique, independent effects on conflict resolution, which is perhaps the most central goal-relevant outcome in that domain. These set of studies are the first to examine how emotion regulation enacted within social interactions shapes contextually relevant goal outcomes. Examining goal-relevant outcomes is important because the successful attainment of personal goals predicts greater well-being across time (Harris, Daniels & Briner, 2003; Sheldon, Kasser, Smith & Share, 2002). The important relationship goal of conflict resolution is also critical to relationship well-being across time (Overall & McNulty, 2017). Indeed, as I discuss in the next section, emotion regulation is pivotal not only because it shapes central outcomes within the domain it is enacted, but has important implications for functioning in other contexts.

**Longitudinal and Spillover Effects of Emotion Regulation**

The effects of emotion regulation are not just confined to specific social interactions. Thus examinations of emotion regulation need to consider how the use and outcomes associated with emotion regulation shape personal and interpersonal well-being over time. Indeed, the degree to which emotion regulation enhances or disrupts personal and
interpersonal goals should be critical in explaining why prior research has shown that emotion regulation predicts future psychological and physical health. The ability to effectively manage emotions during challenging situations predicts lower depressive symptoms, greater life satisfaction, greater relationship quality, and decreased risk of cardiovascular disease (Denollet, Nyklícek & Vingerhoets, 2008; Gross & John, 2003; Kubzansky, Park, Peterson, Vokonas & Sparrow, 2011). By contrast, emotion dysregulation has been implicated in a range of psychological and mood disorders, including depression, anxiety and borderline personality disorder (Aldao, Nolen-Hoeksema & Schweizer, 2010; Gross & Muñoz, 1995; Mennin, Heimberg, Turk & Fresco, 2005). Recognizing the importance of emotion regulation, researchers have started to identify which emotion regulation strategies are most adaptive. For example, chronic use of emotional suppression and rumination are associated with poorer psychological outcomes, whereas cognitive reappraisal and problem solving predict better psychological functioning (Aldao et al., 2010; Gross & John, 2003).

However, despite these longitudinal links, examination of the mechanisms underlying the association between emotion regulation and future well-being are rare. One critical reason emotion regulation should shape well-being is because it determines the degree to which people can achieve central goals within important life domains (e.g., work, relationships). The successful attainment of personal goals predicts greater well-being across time, whereas failure to make progress on personal goals undermines well-being across time (Harris, Daniels & Briner, 2003; Sheldon, Kasser, Smith & Share, 2002). Thus, one key reason emotional suppression should be linked to increases in depressive symptoms is likely to be the impeding effect emotional suppression has on the achievement of important personal goals. Although prior research has not directly examined whether emotion regulation shapes goal achievement, and in turn, well-being, research has demonstrated that emotional
suppression is detrimental to psychological well-being in challenging goal-relevant contexts. For example, employees who report greater emotional suppression experience greater burnout, and lower job and life satisfaction (Côté & Morgan, 2002; Zammuner & Galli, 2005), and greater emotional suppression when trying to cope with breast cancer reduces lower coping efficacy and emotional well-being over time (Cameron, Booth, Schlatter, Ziginskas & Harman, 2007).

Although longitudinal research is pivotal to examine how emotion regulation shapes goal-relevant outcomes and well-being, no prior research has assessed how emotion regulation within specific social interactions and contexts have longitudinal effects or whether the achievement or impediment of goal-relevant outcomes accounts for these longitudinal effects. I address these limitations in two longitudinal studies presented in Chapter Two. In Study 1, participants identified current, personal goals and reported on the degree to which they engage in emotional suppression while pursuing that goal every two weeks across a two-month period. In Study 2, participants were asked to discuss their personal goal with their romantic partners and reported on how much they engaged in emotional suppression during the discussion. In both studies, I included repeated measures of important goal-relevant outcomes, including depressed mood, perceived support/closeness, goal effort, competence and success. These longitudinal methods provided three extensions to the current literature that addressed how emotional suppression within specific contexts culminates to shape important outcomes over time. First, two studies offer the first test of whether emotional suppression during goal pursuit predicts the attainment of goals across time (see Figure 1.1, Novel Longitudinal and Spillover Outcomes Assessed in Current Studies). Second, both studies examine whether goal achievement explains why emotional suppression is associated with elevated depressed mood across time. Third, and revealing why longitudinal examination of multiple outcomes is important, I examine alternative ways
in which the outcomes of emotional suppression may be linked, such as whether increases in depressed mood arising from emotional suppression undermines goal achievement.

The important flow-on implications of how emotion regulation shapes central goal outcomes within specific interaction are not limited to changes in goals or psychological well-being. Instead, another way in which emotion regulation may impede or undermine personal and interpersonal functioning is by how the goal-relevant outcomes of emotion regulation spill over to subsequent interactions. For example, emotion regulation during conflict resolution should not only shape conflict resolution, but the degree to which conflict is resolved should affect couples’ experiences in subsequent interactions. As noted above, conflict resolution is a central mechanism which explains the link between communication behaviour during conflict and relationship quality over time (Overall & McNulty, 2017).

Another important context to assess the spillover effects of emotion regulation is within the family domain. Research examining how interparental conflict affects children has shown that poorer interparental conflict resolution predicts poorer child outcomes, including poorer well-being and health, greater behavioural problems, and poorer social functioning (Davies & Cummings, 1994; El-Sheikh & Harger, 2001; El-Sheikh et al., 2009; Troxel & Matthews, 2004). One primary reason interparental leads to these deleterious effects in children is that unresolved conflict spills over and undermines responsive parenting in family interactions (Kitzmann, 2000; Sturge-Apple, Gondoli, Bonds & Salem, 2003). Recent research has also revealed that it is not the mere presence of conflict that leads to spillover effects, but it is the degree to which conflict is resolved or ‘lingers’ that ultimately affects children (Bergman, Cummings & Warmuth, 2016).

Although emotion regulation has been theorised to have lasting effects beyond the context initially enacted, there has been no empirical research that has examined the spillover effects of emotion regulation. I aim to address this limitation in Chapter Three by assessing
how emotion regulation during marital conflict shapes conflict resolution (see Figure 1.1, *Novel Goal-Relevant Outcomes Assessed in Current Studies*), and assess the implications for functioning during a subsequent family activity. Specifically, I examine whether conflict resolution spills over to a subsequent triadic interaction to predict the degree to which parents can be responsive toward their child and quality of family experience (see Figure 1.1, *Novel Longitudinal and Spillover Outcomes Assessed in Current Studies*). By examining the spillover effects of emotion regulation, this study will provide the first test of whether goal-relevant outcomes in one context flow on to shape outcomes in another. In addition, the study will test whether the effects of emotion regulation are limited to outcomes within the context in which emotion regulation is enacted or whether it reverberates across subsequent interactions, which should be critical in explaining how emotion regulation affects psychological and emotional well-being over time.

**Summary**

Emotion regulation is crucial to navigating emotionally challenging situations and powerfully predicts psychological, social and physical well-being. However, there is a surprising dearth of research examining emotion regulation within the context emotion regulation is usually enacted—during interpersonal interactions. Examining emotion regulation during interpersonal interactions is central to understanding how emotion regulation shapes both personal *and* interpersonal outcomes. Moreover, the degree to which emotion regulation affects important personal and interpersonal outcomes is likely to be key in understanding how emotion regulation shapes functioning and well-being across time.

This thesis makes a novel contribution to the literature on emotion regulation by expanding research in these three ways by (see Figure 1.1): (1) examining emotion regulation within important interpersonal and goal-relevant contexts, (2) assessing the degree to which emotion regulation shapes personal and interpersonal outcomes established in prior research
as well as novel goal outcomes relevant to the specific context, and (3) assessing how those outcomes extend across time and social interactions.

In Chapter Two, I assess whether enacting emotional suppression when experiencing challenges during personal goal pursuit predicts actual goal progress and achievement across time. By incorporating longitudinal methods, I will also test whether goal achievement explains the link between emotion regulation and depressed mood. In Chapter Three, I expand my investigation of emotion regulation by assessing how emotion regulation may facilitate or impede a central goal during relationship conflict—conflict resolution. Chapter Three also offers an important contribution by examining whether the effects of emotion regulation are contained within the context initially enacted, or spills over to other important domains. Thus, the three studies presented in this thesis provide the first tests of whether emotion regulation enacted within important interpersonal interactions shapes goal-relevant outcomes, and whether these goal-relevant outcomes go on to shape personal and interpersonal functioning across time and interactions.
CHAPTER TWO: EMOTIONAL SUPPRESSION DURING GOAL PURSUIT

As outlined in Chapter One, emotion regulation plays a crucial role in navigating emotionally challenging situations and is associated with psychological, social and physical well-being. However, there has been scant examination of emotion regulation within the context it is usually enacted—during interpersonal interactions. Moreover, existing research on emotion regulation has yet to examine whether emotion regulation shapes the degree to which people can successfully achieve personal and interpersonal goals specific to the context emotion regulation has been enacted, which is likely to be pivotal in understanding how emotion regulation shapes well-being across time.

In this chapter, I address these limitations by investigating emotional suppression within an important domain which often involves interpersonal dynamics and is associated with psychological well-being—the pursuit of personal goals. In particular, people often discuss and draw upon support from close others when pursuing goals (Cutrona, 1996), how close others respond to goal pursuit powerfully impacts goal achievement (Feeney, 2004), and the degree to which individuals successfully achieve goals has an important impact on their well-being (Harris et al., 2003). Extending the prior literature on goal pursuit, support and emotional suppression, two studies examine whether the spontaneous use of suppressing emotions from intimate partners when experiencing challenges during goal pursuit concurrently and longitudinally predicts key outcomes of emotional suppression, including depressed mood, perceived support/closeness, goal effort, competence and success. I expected that greater use of emotional suppression while pursuing goals would be associated with greater depressed mood, lower perceived support/closeness and lower goal effort, competence and success. Moreover, extending prior research that has ignored the mechanisms underlying the association between emotion regulation and future well-being, I
also incorporate longitudinal models testing whether goal achievement explains the relationship between emotional suppression and depressed mood.
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Abstract

Prior research indicates that emotional suppression exacerbates distress and reduces cognitive performance and self-control. We extend this prior work in the current studies by examining whether emotional suppression in specific goal-relevant contexts impedes people’s goal strivings and progress. In Study 1, participants ($N = 146$) provided reports every two weeks across a 2-month period reporting the degree to which they engaged in emotional suppression during goal pursuit and reported important goal-related outcomes, including depressed mood, perceived support/closeness, goal effort, goal-related competence and goal success. In Study 2, participants reported on the degree to which they engaged in emotional suppression while discussing a personal goal with their romantic partner ($N = 100$ heterosexual couples) and reported on the same outcomes as in Study 1 prior to, immediately following, and then one month after couples’ discussions. In both studies, greater use of emotional suppression predicted increased depressed mood, reduced perceived support/closeness, and reduced goal effort, competence and success across time.

Corroborating individuals’ self-reports, participants who engaged in emotional suppression were also perceived by their partners to experience greater depressed mood and lower feelings of support and closeness, and be less competent with regard to their goal (Study 2). The effects of emotional suppression were robust when controlling for a range of alternative explanations. These goal hindering effects are likely one important reason emotional suppression is linked with poorer psychological and health outcomes and extend our understanding of the detrimental impact that emotional suppression can have in people’s everyday lives.
Emotional Suppression during Personal Goal Pursuit

Impedes Goal Strivings and Achievement

Suppressing the experience and/or expression of emotions is a common, but detrimental, way of managing emotions when facing challenging situations (Gross & Levenson, 1993). However, rather than aiding coping, emotional suppression tends to exacerbate distress, undermine support and lead to lower psychological and physical well-being (e.g., Gross & John, 2003; Srivastava, Tamir, McGonigal, John, & Gross, 2009; Gross, 1998b; Webb, Miles, & Sheeran, 2012). Emotional suppression also impairs cognitive performance and self-control (e.g., Muraven, Tice & Baumeister, 1998; Richards & Gross, 1999), which should hinder success when people need to enact effort and regulate their actions to achieve important goals. However, no research has examined whether the use of emotional suppression in specific goal-relevant contexts undermines people’s actual goal strivings and achievement. In two studies, we examine whether naturally-occurring emotional suppression during personal goal pursuit impacts important goal-relevant outcomes, including depressed mood, perceived support/closeness, goal effort, feelings of goal competence and goal success across time.

The Detrimental Outcomes of Emotional Suppression

Emotional suppression is an effortful form of emotion regulation that involves attempts to inhibit the external expression and/or internal experience of emotions (Dunn, Billotti, Murphy, & Dalgleish, 2009; Wegner, 1994). Unfortunately, emotional suppression is often not effective at alleviating distress. Experimental studies have found that participants  

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1 Although some of the prior research we draw upon uses the term expressive suppression, our measure of emotional suppression assessed both efforts to keep or hide emotions from others (which involves inhibiting the external expression of emotions) as well efforts to control or suppress emotions (which also involves inhibiting the internal experience of emotions). For this reason we use the term emotional suppression to more broadly capture the external and internal elements of emotional suppression.
instructed to suppress their emotions while watching emotion-eliciting stimuli (e.g., a disgusting film clip) are successful at reducing emotional displays, but do not always experience reductions in negative emotion (Gross & John, 1998, 2003; Dunn et al., 2009; Goldin, McRae, & Gross, 2008). Moreover, participants who engage in emotional suppression show increased levels of sympathetic activation (Gross & John, 1998, 2003; Gross & Thompson, 2007). Research examining the effects of general tendencies to suppress emotional expressions has also demonstrated that self-reported habitual emotional suppression is associated with greater negative emotion and longitudinal increases in anxiety and depressed mood (Gross & John, 2003; Kashdan, Elhai, & Breen, 2008; Wenzlaff & Luxton, 2003).

Emotional suppression also has detrimental effects on interpersonal outcomes. Experimentally induced emotional suppression during interpersonal interactions not only produces increased physiological threat responses in the agents of emotional suppression but also creates greater physiological threat responses in interaction partners (Butler et al., 2003; Peters, Overall, & Jamieson, 2014). Individuals who were told to suppress their expression of emotions while watching either an amusing or sad film clip were also judged more negatively by interaction partners; they were perceived to be more avoidant and anxious, and less extraverted and agreeable (Tackman & Srivastava, 2015). Self-reported habitual emotional suppression also predicts poorer perceptions of support, reductions in peer-reported closeness, and lower relationship quality in romantic relationships (Srivastava et al., 2009; Velotti et al., 2015). Finally, daily reports of own emotional suppression and perceived partners’ emotional suppression predict lower relationship quality reported by both partners (Impett et al., 2012; Impett, Le, Kogan, Oveis, & Keltner, 2014).

There is also growing evidence that emotional suppression interferes with goal-relevant activity. Experimental studies examining the effects of instructed emotional
suppression suggest that the effort required to suppress emotion and emotional expressions interfere with cognitive performance, such as lower accuracy in recording incoming information (Goldberg & Grandey, 2007) and poorer memory (Richards & Gross, 1999, 2000). Experimentally induced emotional suppression also impedes self-control, such as persistence during a frustrating task (Muraven et al., 1998). These kinds of performance-hindering effects should also undermine success across a range of contexts in which people need to enact effort and regulate their actions to achieve important goals. There has been no research, however, examining whether the spontaneous use of emotional suppression in specific goal-relevant contexts undermines people’s goal strivings and achievement.

**Emotional Suppression during Personal Goal Pursuit**

An important context in which people may engage in emotional suppression is when people are striving toward personal goals. A wealth of research has demonstrated that self-reported goal progress and goal achievement are associated with greater daily affective well-being as well as greater psychosocial well-being across time (Harris, Daniels, & Briner, 2003; Sheldon, Kasser, Smith, & Share, 2002). However, people often encounter challenges and difficulties when they are trying to achieve personal goals (Gollwitzer, Bayer, & McCulloch, 2005), and the way in which people deal with these challenges—and associated negative emotions—should determine goal-related well-being, persistence and success (Baumeister, Schmeichel, Dewall, & Vohs, 2007). As in other emotion-eliciting contexts, some people will deal with the negative emotions that arise when challenged during goal pursuits by engaging in emotional suppression. Given the evidence that experimentally induced and self-reported emotional suppression exacerbates distress, and reduces cognitive performance and regulatory resources, emotional suppression during goal pursuit is likely to impede goal-related effort and progress. Indeed, prior research has shown that targets of stereotype threat perform worse on academic tests—an important goal-directed activity—when they are
instructed to suppress anxiety or anxious thoughts (Schuster, Martiny, & Schmader, 2015; Johns, Inzlicht, & Schmader, 2008).

In the current research, we examine for the first time whether the spontaneous use of emotional suppression as people strive toward important personal goals affects important goal-related outcomes, including goal-related depressed mood, perceived support/closeness, and goal strivings and progress across time. Our investigation is novel because the effects of emotional suppression have been typically examined outside the specific context in which emotional suppression has been spontaneously enacted. For example, instructed emotional suppression in response to experimental stimuli cannot directly inform how the natural occurrence of emotional suppression during challenges in everyday life impacts on important contextually relevant outcomes, such as goal strivings and achievement. In addition, research examining self-reported tendencies to suppress emotions has revealed reliable associations with broad outcomes, such as greater depression and reduced closeness, but provide less information about the use of emotional suppression within specific contexts and the ensuing consequences for relevant outcomes within that life domain.

In contrast, we tested the degree to which people attempted to suppress their emotion within the specific context of their personal goal pursuits. We did this in Study 1 by obtaining reports every two weeks of the degree to which participants engaged in emotional suppression when working towards important personally identified goals and encountered goal stress, challenges and setbacks. In Study 2, we measured the degree to which participants suppressed their emotions during couples’ discussions of important personal goals. These methods are consistent with recent relationship research examining the naturally-occurring use of emotional suppression reported after discussing a sacrifice with their partner or making a sacrifice during daily life (e.g., Impett et al., 2012; Impett et al., 2014). Although these prior studies captured the use of emotional suppression within specific
relationship contexts, our research advances the existing literature by examining naturally-occurring emotional suppression in the important context of personal goal pursuits and assessing outcomes specific to goal strivings and progress that represent important markers of the effectiveness of emotion regulation, including effort, competence and success.

**Current Research**

Two studies investigated whether the spontaneous use of emotional suppression during goal pursuit impedes goal strivings and progress. Participants were asked to identify current, personal goals and report on the degree to which they suppressed their emotions while pursuing that goal every two weeks across a 2-month period (Study 1) and when discussing that goal with their romantic partner (Study 2). In both studies, we gathered repeated measures of important goal-related outcomes, including depressed mood, perceived support/closeness, goal effort, competence and success. We expected that greater emotional suppression would show the same effects as prior research assessing experimentally induced or habitual emotional suppression, including greater depressed mood and lower perceived support/closeness. Extending prior research, we also expected that emotional suppression during goal pursuit would undermine goal strivings and progress, including interfering with goal effort, reducing goal competence and undermining goal success across time.

In both studies, we ran analyses to rule out a variety of alternative explanations. In the primary analyses we controlled for goal stress to ensure that the effects of emotional suppression were not simply because participants who engaged in greater emotional suppression encountered greater goal-related challenges, negative emotions and stress. In additional analyses in both studies we also examined and controlled for the effects of cognitive reappraisal to show that the effects of emotional suppression were not due to the lack of more constructive emotion regulation strategies. In Study 2, we also gathered measures of habitual suppression and cognitive reappraisal and compared the predictive
utility of assessing emotional suppression as it occurs within specific goal-relevant contexts to that of the effects of habitual emotional regulation tendencies.

Finally, in both studies we conducted a series of additional analyses to examine three plausible theoretical models regarding how the outcome variables we assessed might work together to explain the effects of emotional suppression on other relevant outcome variables. First, it is possible that the effects of emotional suppression already established in prior research, such as greater depressed mood and lower support/closeness, might account for why emotional suppression reduces goal effort, competence and success (see Model 1, Figure 2.1). Indeed, greater depressed mood and lower perceived support are predictors of reduced goal efficacy and achievement (Willner, 1984; Lane, Whyte, Terry, & Nevill, 2005; Feeney, 2007; Overall, Fletcher, & Simpson, 2010). Second, however, it is also possible that emotional suppression leads to greater depressed mood and perceived support by interfering with goal strivings and progress (see Model 2, Figure 2.1). For example, lower goal efficacy and achievement are associated with poorer well-being (Harris, Daniels & Briner, 2003; Sheldon, Kasser, Smith, & Share, 2002) and more negative perceptions of competence are associated with lower perceived support (Black & Deci, 2000). Thus, poorer goal progress might account, at least in part, for the negative outcomes shown in prior research. Third, goal strivings and progress should also influence each other, such as lower competence undermining goal effort (Schunk, 1989), and lower effort reducing success (Yeo & Neal, 2004). Accordingly, goal effort and competence might explain or mediate the effects of emotional suppression on goal success, although the reverse associations may also emerge given that lower success could undermine competence and effort (Cervone, Artisitico, & Berry, 2006; see Model 3, Figure 2.1).
Figure 2.1. Theoretical models specifying different ways the outcome variables might fit together to explain (i.e., mediate) the effects of emotional suppression on other relevant outcome variables.
Study 1

Undergraduate psychology students who were in committed, romantic relationships first identified an important personal goal and then reported their use of emotional suppression and goal-related outcomes at 2-week intervals over the subsequent two months. We recruited participants who were in romantic relationships to allow us to assess both the personal (depressed mood, goal success) and interpersonal (perceived support/closeness) outcomes of emotional suppression. Using items adapted from existing self-report measures, participants were asked to report the degree to which they engaged in emotional suppression with regard to their goal. Participants also reported on their depressed mood and perceived support/closeness with regard to their goal as well as the degree to which they directed effort toward their goal, felt competent with regard to their goal, and experienced success in achieving their goal. We also assessed goal stress and the use of cognitive reappraisal to show that the effects of emotional suppression were not due to greater goal challenges and stress or the lack of more constructive emotion regulation strategies. Finally, we ran a series of additional analyses to examine the different models in Figure 2.1, which also provided tests of whether the effects of emotional suppression were due to other processes, such as whether the variables we consider as outcomes actually precede the use of emotional suppression.

Method

Participants

One hundred and forty six students (138 females) enrolled in an undergraduate psychology course at a large city-based university participated for partial fulfillment of a research requirement. Participants’ ages ranged from 18 to 55 ($M = 21.71$, $SD = 6.00$).

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2 Given the sampling procedure, it is not surprising that the sample included few men because of the predominance of female students enrolled in psychology courses. Despite the imbalance, we saw no cause, based on theory or prior research examining emotional suppression, to exclude male participants. In addition, very few gender differences emerged
Participants reported their relationship status as married (7.5%), cohabiting (16.4%), serious (42.5%), steady (30.1%), or casual (3.4%). Relationship length ranged from 1 month to 32 years ($M = 3.00$ years, $SD = 4.25$ years).

**Procedure**

On sign up for the study, participants completed an initial online questionnaire where they identified an important, ongoing personal goal. The personal goals identified focused on academic achievement (41.8%), fitness and health (24.7%), a variety of other types of self-improvement (15.1%), relationships with others (e.g., friends or family; 11%), finances (4.1%), and career/vocational advancement (3.4%).

Participants were subsequently emailed links to four online questionnaires at 2-week intervals across the following two months. Each questionnaire assessed a range of variables related to the personal goal participants originally identified, including emotional suppression with regard to goal-related challenges and setbacks, depressed mood with regard to the goal, feelings of perceived support/closeness with regard to how their partner responded in the context of their goal, and goal strivings and progress. Compliance was very good: Of the 146 participants, 116 (79.5%) completed all 5 questionnaires, 23 (15.8%) completed 4 questionnaires, and 7 (4.8%) completed 3 questionnaires. We included all participants in our analysis of lagged effects because our multi-level analytic strategy balances missing data by weighting the contribution of each participant's data to the overall effects according to the relative number of available data points (Raudenbush & Bryk, 2002).

**Measures Assessed Every Two Weeks**

Participants completed a range of measures regarding their goal at each assessment. Scores were constructed by averaging scale items. Descriptive statistics and average in Study 2, which included equal number of male and female participants. Nonetheless, removing male participants from the sample did not substantively alter the results.
reliabilities for each measure are shown in Table 2.1. The averages of the bivariate correlations across the variables at each time point are presented in Table 2.2.

**Emotional Suppression and Cognitive Reappraisal.** Five items assessed the degree to which participants tried to (1) suppress and/or hide their feelings and (2) change the way they thought about their goal when faced with challenges and setbacks. Items were derived from the most widely used self-report scale of emotional suppression and cognitive reappraisal (Gross & John, 2003). Three items assessed emotional suppression: “I tried to hide my thoughts and feelings from my partner”, “I kept my negative emotions to myself”, and “I tried to control or suppress any negative emotions”. Two items measured cognitive reappraisal: “I changed the way I thought about my goal to make myself feel better”, “I made myself think about my goal in a way that helped me stay calm” (1 = not at all, 7 = very).

**Goal Stress.** To ensure the effects of emotional suppression were not due to the stressful nature of participants’ goals or the degree to which participants’ goals were likely to produce negative emotional states, participants rated the degree to which they felt “stressed”, “worried” and “anxious” about their goal (1 = not at all, 7 = very).

**Depressed Mood.** To assess the emotional costs of emotional suppression, participants rated items shown to reliably detect changes in depressed mood (Cranford et al., 2006). Participants were asked to think about their goal, and rated how much they had felt “sad”, “hopeless”, and “discouraged” with regard to their goal (1 = not at all, 7 = very).

**Perceived Support/closeness.** To test the interpersonal costs of emotional suppression, participants were asked to think about how their partner thought, felt and behaved with regard to their goal in the last two weeks, and then rated the degree to which their partners’ responses made them feel: “close/intimate”, “understood/ validated”, “accepted/valueed”, “supported”, “helped”, and “comforted/reassured” (1 = not at all, 7 = very). Items were averaged to construct a measure of perceived support and closeness.
### Table 2.1. Descriptive Statistics and Reliabilities of Repeated Measures (Study 1)

<table>
<thead>
<tr>
<th></th>
<th>Week 2</th>
<th>Week 4</th>
<th>Week 6</th>
<th>Week 8</th>
<th>Average Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional suppression</td>
<td>3.64 (1.59)</td>
<td>3.48 (1.48)</td>
<td>3.59 (1.57)</td>
<td>3.37 (1.61)</td>
<td>.77</td>
</tr>
<tr>
<td>Goal Stress</td>
<td>3.98 (1.45)</td>
<td>3.87 (1.53)</td>
<td>3.85 (1.73)</td>
<td>3.96 (1.76)</td>
<td>.89</td>
</tr>
<tr>
<td>Depressed mood</td>
<td>2.58 (1.29)</td>
<td>2.59 (1.35)</td>
<td>2.56 (1.47)</td>
<td>2.48 (1.41)</td>
<td>.85</td>
</tr>
<tr>
<td>Perceived support/closeness</td>
<td>5.48 (1.38)</td>
<td>5.43 (1.32)</td>
<td>5.56 (1.45)</td>
<td>5.54 (1.51)</td>
<td>.95</td>
</tr>
<tr>
<td>Goal Effort</td>
<td>4.67 (1.43)</td>
<td>4.67 (1.31)</td>
<td>4.69 (1.53)</td>
<td>4.70 (1.53)</td>
<td>.84</td>
</tr>
<tr>
<td>Goal Competence</td>
<td>5.16 (1.12)</td>
<td>5.21 (1.16)</td>
<td>5.18 (1.27)</td>
<td>5.33 (1.16)</td>
<td>.88</td>
</tr>
<tr>
<td>Goal Success</td>
<td>4.01 (1.51)</td>
<td>4.17 (1.54)</td>
<td>4.32 (1.67)</td>
<td>4.27 (1.77)</td>
<td>.94</td>
</tr>
</tbody>
</table>
### Table 2.2. Correlations across Measures (Study 1)

<table>
<thead>
<tr>
<th></th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Emotional Suppression</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Cognitive Reappraisal</td>
<td>-.01</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Goal Stress</td>
<td>.23**</td>
<td>-.02</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Depressed Mood</td>
<td>.34**</td>
<td>.02</td>
<td>.65**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Perceived support/closeness</td>
<td>-.27**</td>
<td>-.08</td>
<td>-.21**</td>
<td>-.33**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Goal Effort</td>
<td>-.20**</td>
<td>-.09*</td>
<td>-.26**</td>
<td>-.42**</td>
<td>.21**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Goal Competence</td>
<td>-.33**</td>
<td>-.16**</td>
<td>-.56**</td>
<td>-.75**</td>
<td>.42**</td>
<td>.40**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>8. Goal Success</td>
<td>-.28**</td>
<td>-.16**</td>
<td>-.33**</td>
<td>-.49**</td>
<td>.27**</td>
<td>.70**</td>
<td>.59**</td>
<td>-</td>
</tr>
</tbody>
</table>

*Note.* Correlations presented represent averages of the correlations assessed at each time point.
Goal Strivings and Progress. The novel questions at the center of the current studies focused on the impact of emotional suppression on goal strivings and progress. We assessed three variables relevant to goal pursuit and the outcome of goal pursuit, including how much effort participants directed toward their goal, their feelings of competence with regard to their goal, and how much they were actually successful in achieving progress with their goal.

Goal Effort. Five items assessed goal effort: “I put a lot of effort into achieving this goal over the last two weeks”, “I tried very hard to achieve this goal over the last two weeks”; “I did not put much energy into this goal over the last two weeks” (reverse-coded); “I put off working toward this goal” (reverse-coded) and “I procrastinated with regard to this goal” (reverse-coded; 1 = not at all, 7 = very).

Goal Competence. To assess participants’ feelings of goal-related competence and efficacy, we adapted previously used items to assess competence (La Guardia, Ryan, Couchman, & Deci, 2000). Participants were asked to think about their goal, what they wanted to achieve, what they had done to achieve their goal, and how they would pursue their goal in the future. Participants then rated four items: “I feel…confident I can achieve my goal”, “…capable and effective”, “…like a competent person” and “…inadequate or incompetent” (reverse-coded; 1 = not at all, 7 = very).

Goal Success. Participants also rated three items assessing their actual goal progress and achievement, including “I have made great progress toward this goal”, “My attempts to achieve this goal have been successful”, and “I am satisfied with the progress I have made toward this goal” in the last two weeks (1 = strongly disagree, 7 = strongly agree).

Results

We first present primary analyses examining the effects of emotional suppression and distinguish those effects from cognitive reappraisal. We then present a series of additional
analyses to test the theoretically plausible models regarding how the outcome variables we assessed may influence and explain the effects of each other (see Figure 2.1).

**Primary Analyses: The Effects of Emotional Suppression**

Our primary analyses modeled lagged effects of emotional suppression on subsequent outcomes. To do this, we employed multilevel analyses using the MIXED procedure in SPSS 21 to test the degree to which emotional suppression at time $i$ predicted participants’ outcomes at time $i+1$ (i.e., two weeks later) controlling for the dependent variable at time $i$. Thus, our analyses examine whether emotional suppression predicts residual change in the dependent variable across each of the four measurement phases. Across all analyses we also included goal stress at time $i$ as an additional predictor to rule out the possibility that the effects of emotional suppression were simply due to the degree to which participants encountered challenges, negative emotions and stress with regard to their goal (and accordingly enacted greater emotional suppression). Analyses without this control revealed the same pattern and conclusions. All predictor variables were grand-mean centered.

Table 2.3 presents the results of the lagged effects of emotional suppression on all outcome variables. The first two effects presented at the top of Table 2.3 demonstrate that our measure of emotional suppression specific to participants’ goal strivings predicts important outcomes that have been linked with general self-reported habitual suppression in prior research. In particular, greater emotional suppression when dealing with goal challenges and setbacks was associated with increases in goal-related depressed mood and lower feelings of support/closeness. Thus, consistent with prior research, emotional suppression exacerbated goal-related negative emotions and undermined feelings of support/closeness in relationships.

The novel effects in the bottom half of Table 2.3 illustrate that goal-related emotional suppression also interferes with goal effort, felt competence and success. Greater emotional suppression at one time point was associated with participants reporting lower goal effort at
Table 2.3. The Lagged Effects of Emotional suppression on Goal-Relevant Outcomes (controlling for goal stress)

<table>
<thead>
<tr>
<th>Dependent Variables</th>
<th>B</th>
<th>t</th>
<th>95% CI</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Depressed mood</td>
<td>.08</td>
<td>2.25*</td>
<td>.010</td>
<td>.151</td>
</tr>
<tr>
<td>Perceived support/closeness</td>
<td>-.08</td>
<td>-2.30*</td>
<td>-.146</td>
<td>-.011</td>
</tr>
<tr>
<td>Goal Effort</td>
<td>-.14</td>
<td>-3.05**</td>
<td>-.235</td>
<td>-.050</td>
</tr>
<tr>
<td>Goal Competence</td>
<td>-.06</td>
<td>-2.27*</td>
<td>-.118</td>
<td>-.008</td>
</tr>
<tr>
<td>Goal Success</td>
<td>-.15</td>
<td>-3.11**</td>
<td>-.240</td>
<td>-.053</td>
</tr>
</tbody>
</table>

Note. All analyses predict the dependent variable at time $i+1$ from emotional suppression at time $i$ controlling for the dependent variable at time $i$. Approximate effect sizes ($r$) were computed using Rosenthal and Rosnow’s (2007) formula: $r = \sqrt{(t^2 / t^2 + df)}$. †$p < .10$. *$p < .05$. **$p < .01$. 


the next time point. Moreover, greater emotional suppression was associated with lower feelings of goal-related competence and goal success across time. These results provide the first evidence that emotional suppression undermines individuals’ confidence that they can achieve their goal and hinders goal achievement.

**Cognitive Reappraisal.** We compared the effects of emotional suppression to cognitive reappraisal to show that the effects were due to emotional suppression and not the failure to use more constructive emotion regulation strategies. We reran all the effects presented in Table 2.3, but replaced emotional suppression with cognitive reappraisal. Of the five effects calculated, none were significant \((t_s \text{ -.81 to .85, } p_s \text{ .40 to .95}).\) Accordingly, when including emotional suppression and cognitive reappraisal as simultaneous predictors, the effect of emotional suppression shown in Table 2.3 did not change \((t_s \text{ -3.18 to 2.37, } p_s \text{ .002 to .02}).\)

**Additional Analyses Examining Associations across Outcome Variables**

We ran a series of additional analyses to examine three plausible theoretical models regarding how the outcome variables we assessed might fit together to explain (i.e., mediate) the effects of emotional suppression on other relevant outcome variables (shown in Figure 2.1). To do this, we first tested whether each potential explanatory or mediating variable predicted residual change in the outcome across time. Thus, we specified a condition that to be a plausible mediator of the effects of emotional suppression, the potential mediator had to predict the relevant outcomes across time. In the cases this condition was met, we then ran analyses with both the potential mediator and emotional suppression predicting the outcome across time. This allowed us to examine whether the effect of emotional suppression was accounted for by the potential explanatory or mediator variable (i.e., the lagged effect of emotional suppression was substantively reduced) and whether significant indirect effects supported the potential mediator pathway. To test for indirect effects, we followed the
procedure recommended by MacKinnon, Fritz, Williams and Lockwood (2007). Given that the outcome variables are likely to reciprocally influence each other, and that we were running a large number of tests, we adopted a conservative *a priori* standard that evidence of mediation, and tests of indirect effects, would only be considered if the effect of emotional suppression was appreciably reduced to marginal or below statistical significance (*p* > .05).

Our first set of analyses examined whether depressed mood and perceived support/closeness might account for the lagged effects of emotional suppression on goal effort, competence and success (Model 1, Figure 2.1). We first tested whether depressed mood and perceived support/closeness predicted goal effort, competence and success across time. As shown on the left side of Table SM1.1 (see Supplemental Materials3), only one (out of 6 potential) lagged effects were significant: Lower perceived support/closeness was associated with reductions in competence. Moreover, in analyses including emotional suppression and perceived support/closeness as simultaneous predictors, the effect of emotional suppression was reduced (B = -.06, *p* = .05, *r* = .17) whereas perceived support/closeness remained significant (B = .10, *p* = .003, *r* = .28). The associated indirect effect also suggested that lower perceived support/closeness played a mediating role in the lagged effect of emotional suppression on competence (*Point Estimate* = -.01, 95% *CI* = -.022 to -.002).

Our second set of analyses examined whether the effects of emotional suppression on depressed mood and perceived support/closeness occurred because of poorer goal effort, competence and success (Model 2, Figure 2.1). The results are shown on the left side of Table SM1.2 (see Supplemental Materials). Lower goal effort, competence and success predicted greater depressed mood, but not lower perceived support/closeness. Nonetheless, adding emotional suppression as an additional predictor revealed that emotional suppression

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3 Please refer to Appendix 1 for Supplemental Materials.
continued to predict depressed mood when controlling for effort ($B = .08, p = .03, r = .18$) and success ($B = .07, p = .04, r = .16$). By contrast, when controlling for competence, the effect of emotional suppression was reduced ($B = .07, p = .06, r = .15$) whereas competence continued to predict depressed mood ($B = -.24, p < .001, r = .26$). The corresponding indirect effect also supported that reduced competence played a mediating role in the lagged effect of emotional suppression on depressed mood ($Point Estimate = .017, 95\% CI = .002 to .037$).

The third set of analyses examined the lagged relationships between goal effort, competence and success (Model 3, Figure 2.1). As shown in Table SM1.3, greater goal effort was associated with increased success, and greater effort and success was associated with increased competence. Nonetheless, above and beyond these links, emotional suppression remained a significant predictor of each outcome ($ts -3.12 to -2.1, ps = .002 to .037$).

Finally, our predictions focused on emotional suppression predicting these outcome variables. Our design in which all measures were assessed at each time point also allowed us to test the reverse associations; that is, whether the outcomes presented in Table 2.3 also predict the use of emotional suppression across time. The results are shown in Table SM1.4 (see Supplemental Materials, Appendix 1). Not surprisingly given that emotional suppression is a common way for people to attempt to down-regulate negative emotions, greater depressed mood, lower perceived support/closeness and lower goal competence and success predicted greater use of emotional suppression. Nonetheless, the analyses described above revealed that none of these reverse associations accounted for the effects of emotional suppression on each outcome across time. In particular, emotional suppression was a robust predictor of all outcomes when controlling for other lagged associations across variables, with only two exceptions in which the effect of emotional suppression dropped to marginal significance.
Discussion

In Study 1, participants were asked to identify a personal goal and reported on their goal strivings and progress every two weeks over a 2-month period. As predicted, higher emotional suppression while facing goal-related challenges and setbacks was related to negative goal-relevant outcomes at the next time point. Consistent with prior research, higher use of emotional suppression when participants encountered goal stress, challenges and setbacks predicted higher depressed mood as well as lower feelings of support/closeness with regard to their goal. The results also provided the first evidence that engaging in emotional suppression hinders personal goal strivings and progress. Individuals who reported greater use of emotional suppression subsequently reported lower goal effort, lower goal competence and lower success in achieving important personal goals over time. Our analyses ruled out the possibility that these goal-hindering effects of emotional suppression were due to differences in goal stress or lower cognitive reappraisal. Moreover, detailed additional analyses revealed that emotional suppression was a strong and robust predictor of all outcome variables independent of plausible alternatives. The two exceptions (out of seven control analyses) suggested that emotional suppression might undermine goal competence because of lower perceived support/closeness, and might predict depressed mood because of lower goal competence. We test the replicability of these patterns in Study 2.

Study 2

Study 2 extended Study 1 by examining how the spontaneous use of emotional suppression while discussing an important personal goal with romantic partners predicted goal-related outcomes (1) immediately following the discussion, and (2) assessed 1-month later. Our measures and analysis strategy continued to rule out that the effects were due to goal stress or cognitive reappraisal. In addition, individuals in Study 2 were also asked to report on habitual suppression and cognitive reappraisal so we could compare the predictive
utility of assessing emotional suppression as it occurs within specific goal-relevant contexts versus the effects of habitual emotional suppression, and ensure the effects were not simply due to less constructive emotion regulation tendencies (i.e., lower habitual cognitive reappraisal). The dyadic design of this study also offered a distinct advantage over many prior studies examining the outcomes of emotional suppression because we obtained measures of partners’ perceptions of individuals’ goal-related outcomes to corroborate individuals’ reports. In particular, we asked partners to report on their perceptions of the individual’s goal-related depressed mood, perceived support and closeness, and goal competence. Finally, as in Study 1, we ran a series of additional analyses to examine how the outcome variables influenced each other over time and therefore whether each outcome explained the effects of emotional suppression on other outcomes.

Method

Participants

One hundred heterosexual couples responded to email and notice board advertisements posted across a large university campus and associated organizations (e.g., health, employment). Participants’ ages ranged from 17 to 69 (\( M = 23.31, SD = 7.24 \)). Couples reported their relationship status as married (13%), cohabiting (35%), serious (48%) and steady (4%). Relationship length ranged from 9 months to 38 years (\( M = 3.28 \text{ years}, SD = 4.16 \text{ years} \)). Couples were paid NZ$90 for participating in the procedures described below.

Procedure

Participants were first asked to identify, and rank in order of importance, three current personal goals that were independent of their relationship. Participants understood that they would discuss one of these goals with their partner in the next phase of the discussion. The highest-ranked goal of each partner was selected for discussion. In cases where both partners identified the same goal, the next highest ranked goal was selected for discussion. This
procedure was to ensure that the goal was specific to each individual and not a shared goal in which goal strivings and progress were dependent on the partner. The types of goals identified were similar to those participants identified in Study 1, and consistent with other research examining the progress of self-identified goals across time (e.g., Overall et al., 2010), including academic achievement and studying (39.5%), improving fitness and health (22%), a variety of other types of self-improvement (9%), career/vocational advancement (11%), relationships with others (e.g., friends or family; 9%), and finances (9.5%).

After completing questionnaires assessing demographic information and habitual emotional suppression and cognitive reappraisal, participants were informed of the goals they would discuss and asked to report on their goal-related experiences (e.g., depressed mood and perceived support/closeness) and goal effort and competence over the past month. Then, after a brief ‘warm-up’ discussion, couples were video-recorded having two 7-minute discussions about each other’s personal goals. In one discussion, the couples discussed the female partner’s personal goal; in the second discussion, the couples discussed the male partner’s personal goal (order was counter-balanced across couples). The purpose of this study was to examine the effects of emotional suppression on the person discussing their own goal, and so the analyses below refer to the person whose goal was discussed as the ‘individual’ and their partner who could be supportive as the ‘partner’. Following each discussion, individuals reported on their emotional suppression during the discussion and goal-relevant outcomes, including depressed mood, perceived support/closeness, and goal competence. Partners also reported on their perceptions of individuals’ depressed mood, perceived support/closeness, and goal competence. Finally, one month after the initial session, participants were emailed a link to a follow-up questionnaire assessing goal-related outcomes. Out of 200 participants, only 9 participants (6 male, 3 female) did not complete the follow-up questionnaire.
Measures

Participants completed the same measures assessed in Study 1 with regard to the goal they discussed with their partner. Table 2.4 illustrates at which measurement occasion each outcome was assessed by providing descriptive statistics and reliabilities of measures for each measurement occasion. All scores were constructed by averaging scale items. Bivariate correlations of the all the variables are presented in Table 2.5.

**Habitual Emotional Suppression and Cognitive Reappraisal.** Prior to the discussion, participants completed the Emotion Regulation Questionnaire (Gross & John, 2003). Four items assessed general emotional suppression tendencies (e.g., “I keep my emotions to myself”), and four items assessed cognitive reappraisal tendencies (e.g., “I control my emotions by changing the way I think about the situation I’m in” 1 = strongly disagree, 7 = strongly agree).

**Emotional Suppression and Cognitive Reappraisal during the Discussion.** Immediately following individuals’ discussion about their own personal goal, participants rated the same five items from Study 1 to assess the degree to which they engaged in emotional suppression (e.g., “I kept my negative emotions to myself”) and cognitive reappraisal (“I changed the way I thought about my goal to make myself feel better”; 1 = strongly disagree, 7 = strongly agree) during the discussion with their partner.

**Goal stress.** To ensure the effects of emotional suppression were not due to the stressful nature of the goal, prior to the discussion participants rated the degree to which they felt “stressed”, “worried” and “anxious” about their goal (1 = not at all, 7 = very).

**Depressed mood.** The same items used in Study 1 to assess depressed mood with regard to their goal were assessed at each measurement occasion.

**Perceived Support/closeness.** The same items used in Study 1 were used to assess participants’ perceptions of support/closeness. Participants reported their perceived support
**Table 2.4. Descriptive Statistics and Reliabilities of Measures (Study 2)**

<table>
<thead>
<tr>
<th>Measure</th>
<th>Initial Pre-Discussion</th>
<th>Post-Discussion</th>
<th>1-month later</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
<td>Mean (SD)</td>
</tr>
<tr>
<td></td>
<td>Reliability</td>
<td>Reliability</td>
<td>Reliability</td>
</tr>
<tr>
<td>Habitual Suppression</td>
<td>3.34 (1.29)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>.75</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Habitual Cognitive Reappraisal</td>
<td>4.57 (1.15)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>.70</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Emotional suppression during Discussion</td>
<td>-</td>
<td>2.24 (1.45)</td>
<td>.88</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cognitive reappraisal during Discussion</td>
<td>-</td>
<td>3.14 (1.58)</td>
<td>.46</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Goal Stress</td>
<td>4.15 (1.68)</td>
<td>2.18 (1.26)</td>
<td>2.69 (1.53)</td>
</tr>
<tr>
<td></td>
<td>.88</td>
<td>.80</td>
<td>.86</td>
</tr>
<tr>
<td>Depressed Mood</td>
<td>2.69 (1.37)</td>
<td>2.18 (1.26)</td>
<td>2.69 (1.53)</td>
</tr>
<tr>
<td></td>
<td>.81</td>
<td>.80</td>
<td>.86</td>
</tr>
<tr>
<td>Perceived support/closeness</td>
<td>5.57 (1.05)</td>
<td>5.66 (1.14)</td>
<td>5.65 (1.19)</td>
</tr>
<tr>
<td></td>
<td>.88</td>
<td>.91</td>
<td>.93</td>
</tr>
<tr>
<td>Goal Effort</td>
<td>4.59 (1.37)</td>
<td>-</td>
<td>4.70 (1.44)</td>
</tr>
<tr>
<td></td>
<td>.84</td>
<td>-</td>
<td>.85</td>
</tr>
<tr>
<td>Goal Competence</td>
<td>4.94 (1.15)</td>
<td>5.40 (1.12)</td>
<td>5.05 (1.25)</td>
</tr>
<tr>
<td></td>
<td>.83</td>
<td>.88</td>
<td>.88</td>
</tr>
<tr>
<td>Goal Success</td>
<td>-</td>
<td>-</td>
<td>4.07 (1.63)</td>
</tr>
<tr>
<td></td>
<td>-</td>
<td>-</td>
<td>.95</td>
</tr>
<tr>
<td><strong>Partners’ Perceptions of Individuals:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressed mood</td>
<td>3.01 (1.40)</td>
<td>2.35 (1.31)</td>
<td>2.85 (1.52)</td>
</tr>
<tr>
<td></td>
<td>.80</td>
<td>.82</td>
<td>.85</td>
</tr>
<tr>
<td>Perceived support/closeness</td>
<td>5.34 (.97)</td>
<td>5.56 (.99)</td>
<td>5.69 (.97)</td>
</tr>
<tr>
<td></td>
<td>.89</td>
<td>.89</td>
<td>.90</td>
</tr>
<tr>
<td>Competence</td>
<td>5.07 (1.14)</td>
<td>5.42 (1.02)</td>
<td>5.09 (1.18)</td>
</tr>
<tr>
<td></td>
<td>.86</td>
<td>.86</td>
<td>.84</td>
</tr>
</tbody>
</table>

*Note.* Reliabilities represent average Cronbach Alphas (α) for all measures except the 2-item cognitive reappraisal during discussion scale, in which the correlation between the two items are presented. Dashes indicate the measure was not assessed at that measurement occasion.
Table 2.5. Correlations across Measures Assessed Pre-Discussion (below the diagonal) and Post-Discussion (above the diagonal; Study 2)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Emotional Suppression</td>
<td>.23**</td>
<td>.37**</td>
<td>.30**</td>
<td>.45**</td>
<td>-.34**</td>
<td>-.43**</td>
<td>.28**</td>
<td>-.11</td>
<td>-.29**</td>
<td></td>
</tr>
<tr>
<td>2. Cognitive Reappraisal</td>
<td>.06</td>
<td>.10</td>
<td>.19**</td>
<td>.16*</td>
<td>.02</td>
<td>-.15*</td>
<td>.11</td>
<td>.11</td>
<td>-.14</td>
<td></td>
</tr>
<tr>
<td>3. Goal Stress</td>
<td>-.04</td>
<td>-.08</td>
<td>.71**</td>
<td>.58**</td>
<td>-.28**</td>
<td>-.63**</td>
<td>.34**</td>
<td>-.09</td>
<td>-.31**</td>
<td></td>
</tr>
<tr>
<td>4. Depressed Mood</td>
<td>-.03</td>
<td>-.11</td>
<td>.56**</td>
<td>.69**</td>
<td>-.54**</td>
<td>-.69**</td>
<td>.48**</td>
<td>-.27**</td>
<td>-.40**</td>
<td></td>
</tr>
<tr>
<td>5. Perceived support/closeness</td>
<td>-.04</td>
<td>.20**</td>
<td>-.05</td>
<td>-.21**</td>
<td>.68**</td>
<td>.52**</td>
<td>-.36**</td>
<td>.34**</td>
<td>.27**</td>
<td></td>
</tr>
<tr>
<td>6. Goal Effort</td>
<td>.03</td>
<td>.13</td>
<td>-.04</td>
<td>-.22**</td>
<td>.11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Goal Competence</td>
<td>.06</td>
<td>.18*</td>
<td>-.50**</td>
<td>-.72**</td>
<td>.28**</td>
<td>.28**</td>
<td>.74**</td>
<td>-.48**</td>
<td>.26**</td>
<td>.46**</td>
</tr>
</tbody>
</table>

Partners’ Perceptions of Individuals:

<table>
<thead>
<tr>
<th></th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Depressed mood</td>
<td>-.13</td>
<td>-.05</td>
<td>.35**</td>
</tr>
<tr>
<td>9. Perceived support/closeness</td>
<td>.15*</td>
<td>.09</td>
<td>.06</td>
</tr>
<tr>
<td>10. Competence</td>
<td>.10</td>
<td>-.04</td>
<td>-.23**</td>
</tr>
</tbody>
</table>

*Note. The bottom half of the table presents correlations across initial measures assessed prior to couples’ discussions of personal goals. The upper half of the table presents correlations of the measures assessed immediately following couples’ discussions of personal goals. Thus, correlations with emotional suppression and cognitive reappraisal under the diagonal are for the measures of habitual tendencies assessed prior to couples’ discussions, and correlations with emotional suppression and cognitive reappraisal above the diagonal are for the measures of emotional suppression and cognitive reappraisal during the discussion. Correlations on the diagonal in bold represent the within-measure associations across pre- and post-discussion assessments. Goal success was only assessed at the 1-month follow up. *p < .05. **p < .01.
and closeness with regard to how their partner thought, felt and behaved with regard to their goal over the past month in the pre-discussion and 1-month follow-up assessment, and with regard to their partners’ responses in the discussion in the post-discussion assessment.

**Goal Strivings and Progress.** Participants also completed the same items used in Study 1 to assess goal effort (e.g., I put a lot of effort into achieving this goal over the past month”), goal competence (e.g., I feel … “confident I can achieve my goal”) and goal success (e.g., “I have made great progress toward this goal”). Given goal effort and success could not occur during or immediately following couples’ discussions, effort and success were only assessed at the 1-month follow-up period. Moreover, because we asked participants to generate a goal at the initial session, we only gathered ratings of goal success at the 1-month follow-up assessment.4

**Partners’ Perceptions.** At each measurement occasion, each partner was asked to think about the individual’s goal and report on their perceptions of the individual’s goal-related depressed mood, perceived support/closeness, and goal competence using the same items individuals rated (described above) but worded to the partner’s perspective of the individual (e.g., “my partner feels confident they can achieve their goal”).

**Results**

We first present primary analyses examining the effects of emotional suppression, which involve examining the impact of emotional suppression during couples’ discussions of personal goals on outcomes reported immediately post-discussion, and then examining whether the use of emotional suppression during couples’ goal discussions continued to predict outcomes and goal success 1-month later. As in Study 1, we also contrast the effects

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4 When initially identifying their goal at the first session, participants did report on how much progress they had already made on their goal (1 = not at all, 7 = very). The effect of emotional suppression on goal success across time shown in Table 6 remained significant when controlling for progress already made at the initial session (t = -2.62, p = .01).
of emotional suppression to cognitive reappraisal and, extending Study 1, we contrast the effects of emotional suppression during the discussion to habitual emotion suppression and cognitive reappraisal. In a second section, we report additional analyses examining how the outcome variables are associated across time and assess potential mediation pathways.

Primary Analyses: The Effects of Emotional Suppression

Across all analyses, we followed the guidelines by Kenny, Kashy and Cook (2006) to run dyadic regression models using the MIXED procedure in SPSS 21 that accounted for the dependencies that exist in dyadic data. To assess change in outcomes across the discussion and the 1-month follow-up period, all analyses controlled for the pre-discussion assessment of each outcome to assess residual change. As in Study 1, we also controlled for goal stress to rule out the possibility that the effects were due to individuals’ negative emotions and stress regarding their goal. Analyses without this control revealed the same pattern and conclusions. Each model included the main and interaction effects of gender to test whether any of the effects of emotional suppression differed across men and women. Only one gender difference emerged (out of 14 effects presented in Table 2.6) so we present the effects pooled across men and women, and note the gender difference in the text below.

Emotional Suppression and Post-Discussion Outcomes. The results from dyadic analyses testing the effects of individuals’ use of emotional suppression during couples’ discussions on post-discussion outcomes are presented on the left side of Table 2.6. The results replicated those of Study 1. Participants who reported greater use of emotional suppression while discussing an important personal goal with their romantic partner experienced greater post-discussion depressed mood and lower perceptions of support/closeness (controlling for initial levels of these variables prior to the discussion and goal stress). Individuals who used greater emotional suppression also reported feeling reduced goal-related competence following discussions of their goal. Finally, partners’
Table 2.6. The Effects of Post-Discussion Emotional Suppression on Personal, Interpersonal and Goal Strivings and Progress Post-Discussion and 1-month later (controlling for pre-discussion dependent measures and goal stress)

<table>
<thead>
<tr>
<th></th>
<th>Post-Discussion</th>
<th>1-month later</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( B )</td>
<td>( t )</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Depressed Mood</td>
<td>.21</td>
<td>4.64**</td>
</tr>
<tr>
<td>Perceived support/closeness</td>
<td>-.13</td>
<td>-3.11**</td>
</tr>
<tr>
<td>Goal Effort</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Goal Competence</td>
<td>-.18</td>
<td>-5.12**</td>
</tr>
<tr>
<td>Goal Success</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Partners’ Perceptions of Individuals:**

<table>
<thead>
<tr>
<th></th>
<th>Post-Discussion</th>
<th>1-month later</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( B )</td>
<td>( t )</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Depressed mood</td>
<td>.13</td>
<td>2.53*</td>
</tr>
<tr>
<td>Perceived support/closeness</td>
<td>-.09</td>
<td>-2.31*</td>
</tr>
<tr>
<td>Competence</td>
<td>-.14</td>
<td>-3.37**</td>
</tr>
</tbody>
</table>

Note. All analyses control for initial ratings of the dependent variable assessed prior to couples’ discussions, with the exception of goal success which was only assessed 1-month follow-up. Approximate effect sizes (\( r \)) were computed using Rosenthal and Rosnow’s (2007) formula: \( r = \sqrt{t^2 / (t^2 + df)} \). † \( p < .10 \). * \( p < .05 \). ** \( p < .01 \). Dashes indicate the measure was not assessed at that measurement occasion.
perceptions provided corroborating evidence of the negative outcomes associated with emotional suppression. Individuals who used greater emotional suppression during the discussion were perceived by their partner to be more depressed, feel less supported and close, and feel less competent after the discussion (controlling for concomitant perceptions prior to the discussion).

**Emotional Suppression and Outcomes One Month Later.** The right side of Table 2.6 presents results from dyadic models testing the effects of emotional suppression during the discussion on outcomes assessed 1-month later (controlling for initial levels of each outcome assessed prior to couples’ discussions and goal stress measured at the initial time point). Consistent with Study 1 and the post-discussion effects described above, greater emotional suppression predicted residual increases in goal-related depressed mood 1-month later. The effect for perceived support/closeness was also consistent but represented the one case in which the effect differed by gender ($t = 2.29$, $p = .02$). Greater use of emotional suppression was associated with reduced perceived support/closeness 1-month later for women ($B = -.20$, $p = .006$, $r = .29$) but not for men ($B = .05$, $p > .59$, $r = .06$).

The results assessing the impact on goal strivings and progress across the month also replicate and extend Study 1. The more individuals engaged in emotional suppression when discussing their personal goal with their partner, the more they reported reduced goal effort 1-month later (controlling for initial levels of effort and goal stress), the less they felt competent in achieving their goal, and the less goal success they reported across that month. Moreover, providing evidence that the negative effects of emotional suppression are not just in the minds of individuals who suppress their emotions, partners also perceived individuals who suppressed their emotions to be more depressed, feel less supported and close, and be less competent with regard to their goal 1-month later (controlling for initial perceptions).
Cognitive Reappraisal and Habitual Emotion Regulation Tendencies. We ran additional analyses contrasting the effects of emotional suppression during the discussion to cognitive reappraisal during to the discussion as well as habitual emotion regulation tendencies (both suppression and cognitive reappraisal) reported by participants.

Cognitive Reappraisal during the discussion. There was a positive association between emotional suppression and cognitive reappraisal during the discussion (see Table 2.5), which is consistent with recent research showing people often engage in both forms of emotion regulation when faced with stressful situations during daily life (Kivity & Huppert, 2016). To assess the effects of cognitive reappraisal on each outcome we reran all the models producing the effects shown in Table 2.6 but replaced emotional suppression with cognitive reappraisal during the discussion. Six of the 14 effects calculated were significant or marginally significant. Greater cognitive reappraisal during the discussion was associated with greater perceived support/closeness after the discussion (\(B = .08, p = .05, r = .14\)). However, greater cognitive reappraisal also predicted lower effort (\(B = -.11, p = .08, r = .13\)), competence (\(B = -.09, p = .08, r = .13\)) and success (\(B = -.16, p = .04, r = .15\)), and greater partner perceived depressed mood (\(B = .12, p = .04, r = .16\)), 1-month later. However, rerunning the models with emotional suppression and cognitive reappraisal as simultaneous predictors revealed that all of the significant effects of emotional suppression shown in Table 2.6 remained significant with the exception of the marginal effect on partner’s perceived support/closeness 1-month later. In contrast, the longitudinal effects of cognitive reappraisal were eliminated suggesting that these negative effects were due to the use of emotional suppression. The only two effects that emerged when controlling for emotional suppression was that greater cognitive reappraisal predicted greater perceived support/closeness and competence immediately after couples’ discussions (\(Bs = .13 \text{ and } .07, ps = .001 \text{ and } .05, rs = .24 \text{ and } .14 \text{ respectively}\)).
Habitual Suppression and Cognitive Reappraisal. Habitual suppression measured prior to couples’ goal discussions was associated with greater use of emotional suppression while discussing personal goals ($r = .23, p < .01$), although the modest size of this correlation indicates that general tendencies may not strongly predict the use of emotional suppression in any given context. Rerunning all the models assessing the effects of habitual emotional suppression in place of emotional suppression during the discussion revealed only one (out of 14) marginally significant effect: greater habitual suppression was associated with reduced goal-related competence following couples’ discussion ($B = -.07, p = .07, r = .13$). These results illustrate the value of assessing the engagement of emotional suppression as it occurs within specific contexts and show that the goal-impeding effects shown in Table 2.6 are due to the use of emotional suppression within specific goal-relevant contexts.

We also reran all the models producing the effects in Table 2.6, replacing emotional suppression during the discussion with habitual cognitive reappraisal tendencies. Of the 14 calculated, only two effects emerged: greater habitual cognitive reappraisal was associated with greater competence following the discussion ($B = .10, p = .04, r = .15$) and greater competence perceived by the partner 1-month later for women ($B = .11, p = .09, r = .13$). Nonetheless, rerunning the effects of emotional suppression during the discussion controlling for habitual cognitive reappraisal did not alter any of the effects of emotional suppression.

Additional Analyses Examining Associations across Outcome Variables

As in Study 1, we ran a series of additional analyses to examine three plausible theoretical models regarding how the outcome variables we assessed might fit together to explain (i.e., mediate) the effects of emotional suppression on other relevant outcome variables (see Figure 2.1). We followed the same analytic strategy in Study 1 by focusing on lagged effects to first test whether potential explanatory variables predicted outcome variables across time. These tests involved examining whether potential mediators assessed
post-discussion predicted outcomes 1-month later. We used post-discussion variables in these tests because those assessments correspond to when emotional suppression was assessed.\textsuperscript{5} However, not all outcome variables were assessed post-discussion because goal effort and success could not be assessed until 1-month later. We did have initial assessments of goal effort over the past month assessed prior to the discussion, so we used these initial measures for the analyses involving goal effort. As in Study 1, in the cases in which lagged effects of potential mediators on outcome variables emerged, we tested whether accounting for the longitudinal effects of the potential explanatory variable reduced the significant effects of emotional suppression and, when they did, calculated indirect effects.

Our first set of analyses examined whether depressed mood and perceived support/closeness accounted for the longitudinal effects of emotional suppression on goal effort, competence and success across time (see Model 1, Figure 2.1). Tests of whether depressed mood and perceived support/closeness could be mediators by predicting goal strivings and progress are shown in the right side of Table SM1.1. Unlike Study 1, greater depressed mood was associated with decreases in goal effort and success. Analyses including both as simultaneous predictors revealed that the effects of emotional suppression ($B = -.14$, $p = .05$, $r = .15$) and depressed mood ($B = -.17$, $p = .05$, $r = .15$) were equally reduced when predicting effort. When predicting success, however, the effect of emotional suppression was reduced ($B = -.15$, $p = .08$, $r = .13$) but depressed mood remained a significant predictor ($B = -.23$, $p = .03$, $r = .16$), and a significant indirect effect indicated that depressed mood mediated the effect of emotional suppression on reduced success ($Point Estimate = -.048$, 95% $CI = -.102$ to -.003). In addition, similar to Study 1, lower perceived support/closeness

\footnote{As outlined in the notes of Tables SM1.1 to SM1.3 (see Supplemental Materials in Appendix 1), the same pattern of results emerged using initial pre-discussion measures rather than post-discussion measures although the independent effects of emotional suppression were overall stronger.}
predicted reduced competence and success across time (see bottom right of Table SM1.1), but the effects of emotional suppression remained significant ($B_s = -0.12$ and $-0.18$, $ps = .02$ and .03, $rs = .17$ and .16, respectively), and (unlike Study 1) the effect of perceived support/closeness on competence was no longer significant ($B = 0.12$, $p = .11$, $r = .13$).

Our second set of analyses examined whether the effects of emotional suppression on depressed mood and perceived support/closeness occurred because of poorer goal effort and competence (Model 2, Figure 2.1). We could not examine goal success as a predictor/mediator because we only had 1-month assessment of success. Consistent with Study 1, lower goal competence, but not effort, predicted greater depressed mood across time (see Table SM1.2). Competence remained significant when including emotional suppression as a simultaneous predictor ($B = -0.39$, $p < .001$, $r = .26$), the effect of emotional suppression was reduced ($B = 0.12$, $p = .05$, $r = .15$), and the indirect effect indicated that competence mediated the effect of emotional suppression on depressed mood ($Point Estimate = .070$, 95% CI = .026 to .126).

The third set of analyses examined the lagged associations between goal effort, competence and success (Model 3, Figure 2.1). As in Study 1, goal effort predicted greater success across time, but controlling for this lagged effect did not reduce the effect of emotional suppression on success ($B = -0.26$, $p = .001$, $r = .24$). Unlike Study 1, however, goal competence predicted greater effort and success 1-month later. Models including both emotional suppression and competence as simultaneous predictors revealed that both were significant predictors of goal effort ($B = -0.15$, $p = .04$, $r = .16$ and $B = 0.24$, $p = .03$, $r = .17$, respectively), but only goal competence ($B = 0.32$, $p = .01$, $r = .19$) and not emotional suppression ($B = -0.16$, $p = .07$, $r = .14$) remained a significant predictor of success. A significant indirect effect also supported that competence played a mediating role between emotional suppression and goal success ($Point Estimate = -0.058$, 95% CI = -.117 to -.011).
Finally, to examine whether any of our outcome variables preceded the use of emotional suppression, we examined (a) whether pre-discussion levels of all variables predicted the use of emotional suppression in the discussion, and then (b) whether any of these associations accounted for the lagged effects of emotional suppression. As shown in Table SM1.4 (see Supplemental Materials, Appendix 1), greater depressed mood, lower perceived support/closeness and lower goal competence predicted greater use of emotional suppression during goal discussions. Nonetheless, all of the significant effects in Table 2.6 remained significant when controlling for initial levels of any of these pre-discussion variables.

Discussion

In Study 2, we assessed whether the spontaneous use of emotional suppression while discussing an important personal goal with romantic partners was related to goal-related outcomes (1) immediately following the discussion and (2) assessed 1-month later. Consistent with the findings of Study 1, greater use of emotional suppression predicted residual increases in goal-related depressed mood immediately post-discussion and across the next month. Greater emotional suppression was also associated with lower perceptions of support/closeness by partners post-discussion and, for women, 1-month later. Finally, the use of emotional suppression when discussing personal goals with partners was associated with lower goal effort, lower goal competence and lower goal success across time.

Our dyadic design provided support that these outcomes were not simply occurring in the minds of people who engaged in emotional suppression by showing that partners’ perceptions corroborated individuals’ reports. Partners perceived individuals who engaged in greater emotional suppression to be higher in depressed mood, feel less supported and close, and have lower goal competence immediately following couples’ discussion as well as 1-
month later (controlling for partners’ initial perceptions). These partner effects illustrate that the detrimental outcomes of emotional suppression are evident to close others.

Finally, the primary and additional analyses ruled out the possibility that the detrimental effects of emotional suppression were due to differences in goal stress or lower cognitive reappraisal. The effects of emotional suppression when discussing personal goals were also not due to habitual suppression, which demonstrates the value of assessing the specific use of emotional suppression enacted within important contexts. Finally, detailed additional analyses revealed that the effects of emotional suppression were robust when accounting for the possibility that the outcome variables were driving emotional suppression rather than vice versa. However, in four of eight control analyses, emotional suppression was reduced to marginal significance, providing some evidence that reduced goal competence and greater depressed mood might account, at least in part, for why emotional suppression reduces goal success across time.

**General Discussion**

The results of the current studies add to the existing literature by examining whether spontaneous use of emotional suppression in the context of personal goal pursuit affects important goal-relevant outcomes across time. In Study 1, participants reported on the degree to which they suppressed their emotions while pursuing an important personal goal every two weeks across a 2-month period. In Study 2, participants reported the use of emotional suppression while discussing an ongoing goal with their partner. Both studies assessed the impact of emotional suppression on goal-relevant outcomes across time. Figure 2.2 summarizes the results and reveals the effects of emotional suppression were very similar across studies. Consistent with prior research, greater emotional suppression was associated with greater depressed mood and lower perceived support/closeness. Advancing prior research, greater emotional suppression also predicted reduced goal effort, lower goal
Figure 2.2 Approximate Effect Sizes of Emotional Suppression across Studies

Note. Study 1 effect sizes represent lagged effects of emotional suppression on outcomes across subsequent two week periods across a semester. Study 2 (PD) effect sizes represent effects of emotional suppression during discussions of personal goals on post-discussion outcomes. Study 2 (1M) effect sizes represent effects of emotional suppression during discussions of personal goals on outcomes 1-month later. In Study 2, goal effort and success could not be measured until 1-month later.
competence and less successful goal achievement across time. In Study 2, reports by individuals’ partners also corroborated these effects; individuals who engaged in greater emotional suppression during couples’ discussions were perceived by their partners to suffer greater depressed mood, feel less supported/close and be less competent with regard to their goal. Below, we detail how these findings make an important contribution to understanding the detrimental outcomes of emotional suppression as well as the role of emotion regulation during personal goal pursuit.

**Emotional Suppression during Personal Goal Pursuit**

The current studies are the first to examine the use of emotional suppression during the pursuit of personal goals—a significant domain that is relevant to people’s everyday lives and will often involve emotion-eliciting challenges that need to be effectively managed in order for goal pursuit to be successful (Baumeister et al., 2007; Emmons, 2003). Although a wide body of research has shown the detrimental effects of emotional suppression on psychological well-being and health outcomes (e.g., Gross & John, 2003; Petrie, Booth, & Pennebaker, 1998), this study is the first to demonstrate that emotional suppression can hinder goal strivings and undermine actual goal achievement across time. People dedicate a significant amount of time and resources to attain personal goals (Klinger, 1998). Indeed, the goals identified by participants in the current studies were those that are ongoing, take considerable effort and focus, and have important consequences for people’s lives (e.g., academic achievement, health and fitness). When people make progress and achieve these important goals, they are happier and healthier; in contrast, lack of goal progress and achievement undermines well-being across time (Harris et al., 2003; Sheldon et al., 2002). Thus, the goal hindering effects demonstrated in the current studies are likely one important reason emotional suppression is tied to poorer psychological and health outcomes.
Our results also illustrate the validity and importance of assessing emotional suppression within specific contexts and mapping the use of emotional suppression to contextually relevant outcomes. Our measure of emotional suppression specific to goal strivings and challenges was significantly associated with habitual suppression (Study 2) and replicated established effects shown with self-reported habitual suppression, including predicting greater depressed mood and reduced perceived support/closeness (e.g., Gross & John, 2003; Kashdan et al., 2008). However, the assessments of participants’ spontaneous use of emotional suppression when pursuing goals had much stronger effects on goal-related outcomes immediately and over time compared to the measure of habitual suppression (Study 2). This does not negate the importance of assessing general tendencies to suppress emotions, but does highlight that the effects of general suppression tendencies on context-specific outcomes should be (in large part) the result of enacting emotional suppression within that context, and thus be mediated by the specific use of emotional suppression within a given domain.

Our context-specific measure of emotional suppression assessed emotional suppression in the context of goal pursuit as well as emotional suppression in the context of romantic relationships. Consistent with prior research showing emotional suppression can undermine interpersonal connections (e.g., Butler et al., 2003; Impett et al., 2012; Peters et al., 2014; Velotti et al., 2015), emotional suppression during personal goal pursuit and discussions of personal goals was associated with reduced perceived support/closeness. Assessing emotional suppression within relationships also allowed us to gather information on the outcomes of emotional suppression as seen by romantic partners, which corroborated the effects of increased depressed mood, lower perceived support/closeness and reduced competence reported by individuals who engaged in emotional suppression. Importantly, the presence and effects of emotional suppression are likely to be prominent in romantic
relationships because people will often discuss personal challenges and goals with their partners, who are the most salient and impactful source of support (Cutrona, 1996; Feeney, 2004). Nonetheless, emotional suppression in the context of other social relationships are also likely to have similar effects, particularly with regard to the novel outcomes on goal strivings and progress we examined, which deserves attention in future investigations.

We also conducted extensive additional analyses to assess how the various outcomes we assessed fit together to help explain why emotional suppression undermines goal strivings and achievement (see Figure 2.1). The overall pattern of results demonstrated that emotional suppression was a robust predictor of all outcome variables independent of plausible alternatives. Out of 32 tests, potential mediators had significant lagged effects on outcomes in 15 cases, and when accounting for these lagged effects, emotional suppression was reduced to marginal significance only six times. Nonetheless, these additional analyses did offer some evidence regarding why emotional suppression had detrimental effects during goal pursuit. The most consistent evidence across studies placed goal competence and depressed mood as potential mediators of goal success. Thus, emotional suppression may interfere with goal pursuit and achievement because this emotion regulation strategy impedes the necessary problem solving and approach orientation needed to generate efficacy and competence in overcoming goal-related challenges and exacerbates depressed mood.

Strengths, Caveats and Directions for Future Research

These studies advance the literature in multiple ways. Rather than relying on experimental manipulations or self-reported habitual suppression, we assessed the impact of naturally-occurring emotional suppression in a novel, important context—during the pursuit of personal goals. This allowed us to examine how emotional suppression is associated with contextually relevant outcomes, and represents the first test of how emotional suppression interferes with personally-driven goal-relevant activity across time. Nonetheless, the data
were correlational in nature which prevents any causal conclusions. Both studies did, however, involve longitudinal designs to assess the degree to which emotional suppression predicted residual changes in outcomes, which strengthen the basis of our conclusions.

Moreover, we went beyond prior investigations by ruling out alternative explanations. The effects of emotional suppression did not simply arise because participants who engaged in emotional suppression encountered more goal-relevant stress or because participants failed to engage other, more constructive emotion regulation strategies, such as cognitive reappraisal. Our extensive additional analyses also provided good evidence that the effects of emotional suppression were not the result of reverse associations. Nonetheless, it will also be valuable for future research to use experimental paradigms, which could be combined with the advantages of tracking actual goal achievement by assessing whether experimental interventions designed to reduce emotional suppression reduce depressed mood, enhance goal competence and thus promote goal strivings and success.

Our measures of emotional suppression relied on participants’ self-reports of the degree to which they tried to suppress their emotions. By collecting partners’ perceptions in Study 2 we demonstrated that the effects were not just in the minds of individuals who engaged in emotional suppression; participants’ partners also perceived individuals who reported engaging in emotional suppression to have increased depressed mood, feel less supported and close, and be less competent with regard to their goal. Future examinations would also benefit from additional indicators of emotional suppression, such as partners’ perceptions and/or observers’ ratings of the use of emotional suppression (e.g., Gross & Levenson, 1997; Impett et al., 2013; Butler et al., 2003; Butler, Lee & Gross, 2007). These measures may be particularly relevant to how emotional suppression affects partners given that the degree to which emotional suppression is obvious to partners/observers should signal to partners that the suppressor is unwilling to disclose and be intimate and might lack trust in
them (Impett et al., 2014; Righetti et al., 2015). On the other hand, individuals who engage in high levels of emotional suppression may be successful at inhibiting the outward expression of emotions, and thus reduce the degree to which emotional suppression can be detected or perceived by interaction partners and observers. Thus, other within-person indicators, such as discrepancies between the experience or expression of emotions and physiological assessments (e.g., Mauss, Levenson, McCarter, Wilhelm, & Gross, 2005; Egloff, Schmukle, Burns, & Schwerdtfeger, 2006), might offer an important way to assess the effects of spontaneous emotional suppression across time. Triangulating across different types of assessment to provide converging evidence would be a fruitful approach for future research.

Finally, future research is also needed to identify the intermediary mechanisms underpinning why emotional suppression undermines goal-directed activity and goal achievement. Although the pattern arising from our additional analyses provided evidence that emotional suppression intensifies negative emotions and may undermine effective problem solving that builds competence, these explanations require further examination. Moreover, the general pattern across studies suggested that these links only partially accounted for the rather sweeping effects of emotional suppression. Additional mechanisms that we did not measure in the current studies are also likely to play an important role. For example, experimental evidence has shown that emotional suppression interferes with cognitive performance and memory, and undermines persistence when faced with a difficult task (Goldberg & Grandey, 2007; Richards & Gross, 2000; Muraven et al., 1998). Although these prior studies did not examine the particular ways emotional suppression leads to these cognitive and behavioral effects, it is likely that effortful emotional suppression reduces cognitive capacity and self-regulation resources. Thus, the attention and focus required to inhibit the experience or expression of emotion means that less effort can be directed toward achieving personal goals and managing the challenges that arise.
The taxing nature of emotional suppression will also make it difficult to manage potentially stressful interpersonal interactions (Pronk & Righetti, 2015), and so emotional suppression may also interfere with how individuals elicit support from others (e.g., Srivastava et al., 2009). The current results did reveal that emotional suppression reduced perceived support/closeness, and this was corroborated by partners’ perceptions. However, we found little evidence that perceived support/closeness was responsible for the detrimental effects of emotional suppression on goal effort, competence and success (with only one suggestion in Study 1 that lower perceived support/closeness might mediate the links between emotional suppression and goal competence). Nonetheless, the impact of emotional suppression on the elicitation and receipt of support may occur outside of conscious awareness and be tied to the type of support needed rather than the level of support actually received. For example, research is increasingly demonstrating that it is not the presence of emotional and tangible support that aids recipient coping and goal achievement, but whether that support matches the particular needs of the situation and the recipient (Girme, Overall, & Simpson, 2013; 2015; Cutrona & Suhr, 1992; Cutrona, Shaffer, Wesner & Gardner, 2007). Thus, rather than focusing on simple levels of support received, future research should examine the more nuanced prediction that emotional suppression might fail to elicit the particular types of support recipients need for the particular challenges they are facing.

**Conclusion**

The current studies extend our understanding of the impact emotional suppression can have as people encounter goal-relevant challenges in their everyday lives. By assessing the spontaneous use of emotional suppression during personal goal pursuits, the results indicate that emotional suppression not only exacerbates negative emotions and undermines perceived support/closeness, but also interferes with goal-directed activity and achievement—an important and significant marker of the effectiveness versus maladaptive nature of emotion
regulation strategies. The current studies provided the first evidence that naturally-occurring emotional suppression during personal goal pursuit undermines actual goal strivings (lower goal-related effort), reduces feelings of goal-related competence, and forestalls actual goal achievement across time. These goal-hindering effects are likely one important reason emotional suppression is linked with poorer psychological and health outcomes.
CHAPTER CONCLUSION

These studies support that emotion regulation importantly contributes to the degree to which people can successfully achieve immediate and long-term personal and interpersonal goals. In particular, the two studies reported in Chapter Two represent the first to examine the spontaneous use of emotional suppression during personal goal pursuit, and to test whether emotional suppression predicts goal strivings and success across time. Consistent with prior research examining experimentally induced and self-reported habitual suppression, the results indicate that greater use of emotional suppression predicted increases in depressed mood and reduced perceived support/closeness. More uniquely, these studies provide the first demonstration that the spontaneous use of emotional suppression while facing goal-related challenges reduced goal strivings and achievement (goal effort, competence and success across time). In the next chapter, I further examine the extent to which emotion regulation during interpersonal interactions shapes contextually relevant personal and interpersonal goals by examining how a broader range of emotion regulation strategies during interpersonal conflict predict conflict resolution and, in turn, spills over to future social interactions.
CHAPTER THREE: EMOTION REGULATION DURING RELATIONSHIP
CONFLICT AND SPILLOVER PROCESSES

The studies in Chapter Two focused on emotional regulation and personal goal outcomes. However, emotion regulation can also shape the degree to which people manage and achieve interpersonal goals. For example, romantic couples often encounter situations in which they need to overcome emotionally imbued destructive impulses in order to support the goal of maintaining their relationship (e.g., Rusbult & Van Lange, 2003; Murray & Holmes, 2009). Thus, the ability to regulate emotions should have important implications for interpersonal goals during situations in which couples need to manage negative emotions and overcome challenges within the relationship, such as when couples encounter conflict. In Chapter Three, I expand my focus on emotion regulation and goal-directed outcomes by examining how emotion regulation during couples’ conflict interaction is associated with a key goal-relevant outcome in this context—conflict resolution (Overall & McNulty, 2017).

The studies in Chapter Two also focused on emotional suppression as a specific type of emotion regulation that should shape goal outcomes. In Chapter Three, I broaden this focus to assess the outcomes associated with three categories of emotion regulation strategies which underpin the most commonly assessed emotion regulation strategies: Disengagement, Aversive Cognitive Perseveration, and Adaptive Engagement (Naragon-Gainey et al., 2017). Moreover, I expand my prior studies and extant research, to develop and integrate both observational and self-report measures of emotion regulation. Thus, the study provides the first test of whether different types of emotion regulation can be reliably observed during social interactions, and whether self-report and observational assessment are correlated and/or produce the same pattern of effects.

Another important aim of this chapter is to examine the flow-on effects of emotion regulation from one context to another, and in particular whether these flow-on effects occur
because the effects of emotion regulation in one interaction spill over to subsequent
interactions. Although emotion regulation has been argued to have lasting effects beyond the
context initially enacted (Gross, 2015), there has been no empirical research testing this
spillover effect. I aim to address this limitation by assessing whether emotion regulation
during couples’ conflict interactions shapes conflict resolution, and whether conflict
resolution in turn spills over to affect broader family functioning. Specifically, I examine
whether the connections between emotion regulation and conflict resolution during couples’
conflict interactions spills over to shape the degree to which parents are responsive towards
their child in a subsequent family interaction (couples and their child).
The research article which follows is the author’s copy of a manuscript submitted to *Emotion*.

It is currently under review.
Abstract

How does emotion regulation in one social context spill over to affect functioning in another? We investigate this novel question by drawing upon recent evidence that three categories underpin the most commonly assessed emotion regulation strategies: Disengagement, Aversive Cognitive Perseveration, and Adaptive Engagement. We examine how these emotion regulation categories during marital conflict shape conflict resolution, and assess the associated implications for functioning during a subsequent family activity. We also develop and compare observational and self-report measures of these three emotion regulation categories. Couples (N=101) were video-recorded discussing a major conflict and reported on their emotion regulation attempts during the discussion. Couples then participated in a family activity with their five-year-old child, and reported on the quality of the family experience and responsiveness toward their child. Observational coders rated how much each participant exhibited each type of emotion regulation during the conflict discussion. Greater disengagement and aversive cognitive perseveration predicted lower conflict resolution, and in turn, less positive experiences and poorer parental responsiveness during the family activity. Greater adaptive engagement had the opposite effects, but only disengagement and aversive cognitive perseveration had independent effects when controlling for the other emotion regulation categories. Finally, observational and self-report measures were only weakly associated, but illustrated the same pattern of effects. These novel findings demonstrate that emotion regulation strategies have important flow-on effects beyond the context initially enacted. The results also indicate that self-report versus observed measures of emotion regulation reveal similar patterns, but may capture different personal and interpersonal elements of emotion regulation.
Emotion Regulation, Conflict Resolution, and Spillover on Subsequent Family Functioning

Emotion regulation is pivotal to people’s ability to manage emotionally challenging social interactions, and the outcomes of these interactions should have important implications for people’s ability to pursue goals in future contexts (Gross, 1998b, 2015). Yet, understanding of the relative importance of different emotion regulation strategies in helping people navigate important social interactions, and thus the potential aftermath of social challenges, is still being unveiled. A growing body of research has begun to examine how the natural emergence of emotion regulation strategies predict key goal-relevant outcomes within challenging social contexts that are likely to have important implications for subsequent interactions (e.g., Impett et al., 2012; Low, Overall, Hammond & Girme, 2017; Peters & Jamieson, 2016; Richards, Butler & Gross, 2003). However, no prior investigations have examined how central outcomes shaped by emotion regulation strategies enacted in one context affect experiences and social functioning in subsequent interactions. Moreover, a large number of emotion regulation strategies exist (Gross, 1998b), and it is virtually impossible to assess all strategies within a specific social interaction. Accordingly, prior research has typically focused on assessing specific emotion regulation strategies during social interactions rather than assessing how diverse strategies uniquely affect outcomes.

In the current research, we advance prior research by: (1) examining how different types of emotion regulation during marital conflict shape conflict resolution, (2) assessing the associated implications for functioning during a subsequent family activity, and (3) developing and comparing observational and self-report measures of different types of emotion regulation strategies. We achieve these aims by drawing upon recent evidence that three categories underpin the most commonly assessed emotion regulation strategies:
<table>
<thead>
<tr>
<th>Emotion Regulation Category</th>
<th>Observational Coding of Emotional and Behavioral Responses</th>
<th>Self-report Items Assessing Specific Emotion Regulation Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Disengagement</strong></td>
<td>Hypo emotion expression: emotional elements of communication are muted and individual attempts to suppress or conceal his/her emotions</td>
<td>Expressive suppression: I tried to control or suppress my negative emotions</td>
</tr>
<tr>
<td></td>
<td>Avoidance/Disengagement: lack of engagement and dismissing approach to the problem</td>
<td>I tried to hide my thoughts and feelings</td>
</tr>
<tr>
<td></td>
<td>Superficial problem solving: communication and any problem solving is superficial, lacks depth, and ‘skims the surface’</td>
<td>I kept my negative emotions to myself</td>
</tr>
<tr>
<td><strong>Aversive Cognitive Perseveration</strong></td>
<td>Ruminative problem engagement: fixating on and amplifying the symptoms, causes and consequences of the problem, and one’s own thoughts and feelings</td>
<td>Rumination: My thoughts and emotions were preventing me from focusing on finding possible solutions</td>
</tr>
<tr>
<td></td>
<td>Hyper emotion expression: exaggerated emotional expressions and pulling emotions from the partner</td>
<td>I kept going over and over the same thing</td>
</tr>
<tr>
<td></td>
<td>Self-focused orientation: focusing on own desires and needs, such as being heard and cared for by the partner</td>
<td>I was getting stuck on the causes of the problems rather than the solutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I kept thinking about why this was a problem in our relationship</td>
</tr>
<tr>
<td><strong>Adaptive Engagement</strong></td>
<td>Balanced emotion: open, comfortable and self-assured expression and acknowledgement of emotions/feelings</td>
<td>Cognitive reappraisal: I changed the way I thought about the issue</td>
</tr>
<tr>
<td></td>
<td>Collaborative engagement: accepting joint responsibilities, encouraging the partner’s contribution to the discussion and problem solving, and operating as a team</td>
<td>I made myself think about the issue in a way that helped me stay calm</td>
</tr>
<tr>
<td></td>
<td>Approach-oriented problem solving: constructive, direct efforts to move forward and deal with the problem</td>
<td></td>
</tr>
</tbody>
</table>
Disengagement, Aversive Cognitive Perseveration, and Adaptive Engagement (see Table 3.1). We assess and compare the spontaneous emergence of these three emotion regulation categories during marital conflict because it is an emotionally-relevant context in which emotion regulation is likely pivotal to achieve important social goals, such as conflict resolution. Marital conflict is also a valuable context to examine how outcomes of emotion regulation in one interaction can spillover to affect functioning in other social contexts, such as the degree to which parents can be responsive toward children during subsequent family interactions (Cummings & Davies, 1994). We develop the theoretical and empirical rationale for these important research aims in the following sections.

**Emotion Regulation during Marital Conflict and Conflict Resolution**

Our first aim was to examine the natural emergence and relative outcomes of different emotion regulation strategies during marital conflict. Conflicting needs, desires or goals are inevitable in marital relationships, and often produce a range of negative emotions. Conflict can generate hurt feelings because of perceived lack of partner care, anger in response to impositions on one’s goals, and resignation or sadness when the situation feels hopeless (Lemay, Overall & Clark, 2013; Sanford, 2007). Such negative emotions can also motivate destructive responses that hinder relationship improvement (Lemay & Dobush, 2015; Sanford, 2007; Parrott, 2001). Indeed, key theoretical models specify that intimate partners need to overcome emotionally imbued destructive impulses to behave in constructive ways that sustain and promote relationships (e.g., Rusbult & Van Lange, 2003; Murray & Holmes, 2009). Yet, the majority of research examining conflict in relationships has overlooked the ways in which individuals regulate negative emotions during conflict.

Emotion regulation consists of “extrinsic and intrinsic processes responsible for monitoring, evaluating and modifying emotional reactions, especially their intensive and temporal features, to accomplish one’s goals” (Thompson, 1994, p.27). Accordingly, a bulk
of work has shown that the way people regulate their emotions influences goal-directed activity and the successful navigation of social interactions (Gross, 2002, 2015; Gross & John, 2003). One key goal-relevant outcome during conflict that should have important flow-on effects for relationships and subsequent interactions is conflict resolution. Indeed, whether couples resolve conflict and improve relationship problems is a central mechanism through which responses during conflict influence relationship development (see Overall & McNulty, 2017). Recent evidence also suggests that the ability to regulate emotions during relationship conflict predicts less withdrawal and greater relationship satisfaction (Bloch, Haase, Levenson, 2014; Holley, Haase, Chui & Bloch, 2017; Vater & Schröder-Abé, 2015). Despite the likely importance of emotion regulation in the degree to which couples can resolve conflict, there has been scant examination of the specific links between emotion regulation during conflict and conflict resolution.

Although there are numerous emotion regulation strategies (Gross, 1998b), recent meta-analytic work by Naragon-Gainey, McMahon and Chacko (2017) demonstrated that three broad emotion regulation categories encapsulate the most commonly assessed emotion regulation strategies. **Disengagement** includes attempts to avoid or shift focus from the emotionally relevant situation, such as suppressing emotional expressions and behavioral avoidance (see Table 3.1 for definitions). **Aversive cognitive perseveration** involves over-engagement with or difficulty disengaging from negative cognitions and emotions, such as rumination. Lastly, **adaptive engagement** involves constructive problem solving, and open expressions and acceptance of emotions, such as cognitive reappraisal. We used the three categories identified by Naragon-Gainey et al. (2017), and key exemplar strategies within each category, to consider how emotion regulation during marital conflict will likely shape conflict resolution.
Disengagement. Although no investigation has specifically examined how different types of emotion regulation during marital conflict are associated with conflict resolution, the wider emotion regulation and marital conflict literature indicate that disengagement interferes with various cognitive and interpersonal processes that likely impede conflict resolution. For example, withdrawal behaviors during couples’ conflict discussions, such as avoiding discussing the problem and disengaging from the partner, predict lower conflict resolution (e.g., Overall, Simpson & Struthers, 2013). Prior studies examining expressive suppression, a central strategy falling within the disengagement category, also highlight several outcomes that should result in poor resolution. Individuals instructed to inhibit the outward display of emotions during relationship conflict exhibit poorer memory of the conversation (Richards et al., 2003) and experience more negative affect (Ben-Naim, Hirschberger, Ein-Dor & Mikulincer, 2013). The broader literature on expressive suppression has also demonstrated that this type of disengagement strategy interferes with cognitive performance, impedes self-regulation, and reduces interpersonal closeness (Goldberg & Grandey, 2007; Low et al., 2017; Muraven, Tice & Baumeister, 1998; Srivastava, Tamir, McGonigal, John & Gross, 2009). This kind of reduced cognitive and social engagement should undermine the degree to which people can engage in problem solving and cooperate with their partner to make progress in resolving conflicts.

Aversive Cognitive Perseveration. Similarly, although the conflict literature has not specifically assessed behavior that reflects over-engagement or difficulty disengaging from one’s own negative thoughts or emotions (see Table 3.1), prior studies provide indirect evidence that aversive cognitive perseveration is likely to hinder people’s ability to engage cognitively and socially during marital conflict, which should undermine conflict resolution. Communication strategies that involve a persistent emphasis on and exaggeration of emotions (e.g., guilt induction) tend to amplify negative emotions in both partners (e.g., Overall,
Girme, Lemay & Hammond, 2014) and reduce working memory (Schmeichel, 2007). Heightened attention toward negative emotions, rather than generating effective solutions, is also theorized to be a central reason why rumination is associated with less effective problem solving (Clore & Gasper, 2000; Watkins & Brown, 2002). Accordingly, greater trait-level and experimentally induced rumination are associated with generating poorer solutions to written social dilemmas as judged by independent coders (Donaldson & Lam, 2004; Lyubomirsky & Nolen-Hoeksema, 1995; Watkins & Baracaia, 2002). These studies indicate that emotion regulation involving a focus on the self, exaggerated emphasis on negative thoughts and emotions, and fixation on the negative causes and consequences of the issue—all key components of aversive cognitive perseveration—should impair conflict resolution.

Adaptive engagement. The final category of adaptive engagement is likely to be more beneficial for conflict resolution. Prior research examining communication during conflict has shown that voicing concerns, openly sharing feelings and opinions, and assessing causes and solutions with partners predict more successful problem resolution, and greater problem improvement across time (Drigotas, Whitney & Rusbult, 1995; Overall, Fletcher, Simpson & Sibley, 2009). This type of constructive problem solving process is assumed to involve attempts to think about the situation in ways that reduce blaming attributions and facilitate collaboration. An emotion regulation strategy that shares similar components and is part of the adaptive engagement strategy is cognitive reappraisal, which involves individuals changing how they think about a situation to minimize emotional impact (Lazarus & Alfert, 1964; Gross & John, 2003). Prior research has shown that induced cognitive reappraisal during conflict predicts better memory (Richards et al., 2003), and greater engagement with and responsiveness toward partners in new acquaintance interactions (Butler et al., 2003). Thus, greater cognitive reappraisal, and adaptive engagement, likely enhance people’s ability
to generate effective solutions and create a more positive interpersonal environment during marital conflict, which should promote conflict resolution.

**Emotion Regulation, Conflict Resolution and Spillover to Family Interactions**

The second aim of the current research was to investigate how the outcomes of emotion regulation go beyond the initial context enacted to shape experiences and functioning within subsequent social situations. Effective emotion regulation is important not only because of how it predicts goal-relevant outcomes of current challenges, such as whether couples can resolve conflict, but also because of how those outcomes flow on to affect broader functioning (Gross, 1998b, 2015). Indeed, there is longitudinal evidence that emotion regulation strategies produce changes in well-being over time. Greater expressive suppression is associated with poorer social relationships and greater depressive symptoms (Aldao, Nolen-Hoeksema & Schweizer, 2010; Cameron & Overall, 2017; English, John, Srivastava & Gross, 2012), greater rumination contributes to the maintenance of depression (Abela & Hankin, 2011; Michl, McLaughlin, Shepherd & Nolen-Hoeksema, 2013), and cognitive reappraisal predicts better social connections and psychological health (English et al., 2012; Gross & John, 2003). These long-term effects should arise because of the impact these different strategies have in navigating important emotionally relevant events. For example, one reason expressive suppression is associated with poorer well-being is that greater suppression undermines people’s success in coping with challenges and pursuing important goals across time (e.g., Low et al., 2017; Schlatter & Cameron, 2010). Accordingly, emotion regulation strategies that result in lower conflict resolution should mean that the problem spills over from one situation to another.

There is growing evidence that lack of conflict resolution can mean that marital conflict spills over to impact functioning in other important contexts. First, as noted above, conflict resolution is a central mechanism through which behavior during conflict affects
relationship quality across time (see Overall & McNulty, 2017). Second, research examining broader family dynamics has shown that conflict resolution is pivotal to understanding why greater interparental conflict predicts poorer child outcomes, including poorer well-being and health, greater behavioral problems, and poorer social functioning (Davies & Cummings, 1994; El-Sheikh & Harger, 2001; El-Sheikh et al., 2009; Troxel & Matthews, 2004). A primary reason these deleterious effects on children occur is that interparental conflict spills over to family interactions, thereby undermining responsive parenting (Kitzmann, 2000; Sturge-Apple, Gondoli, Bonds & Salem, 2003). Of importance, however, it is not just the mere presence of conflict that leads to these spillover effects (Bergman, Cummings & Warmuth, 2016). Rather, spillover effects in families’ daily life are most apparent when interparental conflict remains unresolved. For example, children experience more negative emotions when mothers report lower conflict resolution (Goeke-Morey, Cummings & Papp, 2007). No prior research, however, has directly examined whether the degree to which couples reach a resolution during a marital conflict discussion shapes the quality of family interactions or parents’ responsiveness toward children during a triadic family interaction immediately following a conflict discussion. In the current study, we focused on how conflict resolution predicts general enjoyment of a subsequent family interaction as well as parents’ ability to respond in a warm and sensitive manner to their child (i.e., responsiveness), which is an important factor contributing to children’s socio-emotional, cognitive and language development (e.g., Landry, Smith & Swank, 2006; Tamis-LeMonda, Bornstein & Baumwell, 2001).

Assessing Emotion Regulation during Interpersonal Interactions

The third aim of the current research was to integrate and compare the observational methods used to assess responses in marital conflict with self-report assessments of specific emotion regulation strategies. Although Naragon-Gainey et al. (2017) established that the
diverse range of emotion regulation strategies examined in prior research fall into three broad
categories, there are no existing measures that capture these three categories, and in particular
no existing assessments of the spontaneous enactment of these strategies within social
interactions. We therefore drew on standard measurement approaches of emotions and
behaviors within conflict interactions to develop observational assessments of the three broad
emotion regulation categories, which we complemented and compared with more standard
self-report measures of specific strategies that fall within each category (see Table 3.1).

The benchmark approach used to assess couples’ responses during conflict involves
observational coding of different tactics and strategies (e.g., avoidance, deflection) that fall
under broader categories of communication behaviors (e.g., withdrawal). A large body of
research shows that trained coders can reliably observe couples’ emotional and behavioral
responses during conflict, and these observations of emotions and behavior predict important
outcomes over time (Heyman, 2001; Karney & Bradbury, 1997; Overall & McNulty, 2017).
As evident in our consideration of the emotion regulation categories and conflict resolution
above, many common strategies across these observational coding schedules overlap with
indicators of disengagement, aversive cognitive perseveration, and adaptive engagement.
Moreover, additional evidence suggests that others can observe emotion regulation during
social interactions. For example, individuals who engage in greater expressive suppression
are perceived by others to be less authentic, more avoidant and anxious, and less extraverted
and agreeable (Impett, Le, Kogan, Oveis & Keltner, 2014; Tackman & Srivastava, 2015).

Guided by this prior literature, we developed a new coding schedule to capture
contextually relevant indicators of the emotion regulation categories outlined by Naragon-
Gainey et al. (2017). As summarized in Table 3.1, we incorporated verbal and non-verbal
indicators of key components of each emotion regulation category. Indicators were drawn
from important sources including: (1) emotional and behavioral responses included across the
most common coding schedules assessing communication during conflict (see Kerig & Baucom, 2004), (2) coding schedules targeting emotional expressions during social interactions (e.g., Specific Affect Coding System, Gottman & Kroff, 1989), and (3) coding used in experimental research to examine responses of participants instructed to suppress emotional expression (e.g., Gross & Levenson, 1993, 1997). We also drew upon important theoretical frameworks that distinguish between different types and categories of emotion regulation (e.g., Cassidy, 1994; Gross, 1998b; Shaver & Mikulincer, 2007) that closely intersect with the three empirically generated categories by Naragon-Gainey et al. (2017); for example, deactivating strategies, hyperactivating strategies, and security-based strategies (Shaver & Mikulincer, 2007). See Table 3.1 for details of the types of responses featured in each category (also see Supplemental Materials for more details).

The development of this new observational coding enabled us to rate the degree to which each participant exhibited key indicators of the broad categories that underlie the most common emotion regulation strategies in the field. Thus, if successful, this approach offers an important contribution by (a) offering the first test of whether different types of emotion regulation attempts can be reliably observed during social interactions, (b) advancing understanding regarding how emotion regulation manifests during social interactions, and (c) specifying what categories of emotion regulation may enhance or hinder social functioning.

We had confidence in this approach given that we developed the coding schedule for observing emotion regulation categories based on methods established to be valid and reliable assessment of communication strategies that often involve emotion expression and regulation. Moreover, given the established interpersonal effects of emotion regulation, and prior evidence that others can detect emotion regulation strategies in others, we had good

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6 Please refer to Appendix 2 for Supplemental Materials.
reason to suspect that observational coding would be able to assess, at the very least important components of, emotion regulation during conflict interactions.

Nonetheless, we also wanted to draw on more typical self-report assessments of emotion regulation strategies that fall within each emotion regulation category. Indeed, despite the interpersonal nature of emotion regulation in this context, particularly during social contexts, emotion regulation also involves an internal process, which may not be easily observed by independent coders. Thus, we also asked participants to report on the degree to which they engaged in specific strategies that reflect commonly assessed strategies within each category: expressive suppression (disengagement), rumination (aversive cognitive perseveration), and cognitive reappraisal (adaptive engagement). Incorporating both observer ratings and self-report measures enabled us to examine whether observed and self-report ratings are correlated and whether they produce the same pattern of effects, which has important implications for the assessment of emotion regulation in future research as well as understanding the connection between emotion regulation and the wider literature investigating interpersonal dynamics within social interactions.

**Current Research**

Figure 3.1 displays the aims and measures of the current research. We examined how different emotion regulation strategies facilitate or hinder conflict resolution during marital conflict (Path A, Figure 3.1), and tested whether conflict resolution spills over into parent-child interactions immediately following the conflict discussion (Path B, Figure 3.1). We did this by assessing and comparing three types of emotion regulation—disengagement, aversive cognitive perseveration, adaptive engagement—that capture the most commonly assessed emotion regulation strategies (see left side of Figure 3.1). Couples were video-recorded discussing major, ongoing relationship conflicts and were asked to report on their emotion regulation attempts during the discussion. Following the conflict discussion, couples
Figure 3.1. Theoretical Model specifying that Emotion Regulation during Couples’ Conflict Discussions will be associated with Conflict Resolution, which will in turn be associated with Functioning during Subsequent Family Interactions
participated in a family play activity with their child, and were asked to report on the quality of the family experience and their responsiveness toward their child during the activity (see right side of Figure 3.1). Finally, trained coders rated how much each participant exhibited each type of emotion regulation during the conflict as well as the degree to which couples reached a resolution.

We first examined the effects of disengagement, aversive cognitive perseveration and adaptive engagement on conflict resolution (Path A, Figure 3.1). Informed by prior research, we predicted that greater disengagement and aversive cognitive perseveration would be associated with poorer conflict resolution. Extending prior research, we also expected that lack of conflict resolution would spill over to shape parents’ experience and responsiveness during the subsequent family activity, such that lower conflict resolution would predict lower quality of family experience and poorer parental responsiveness toward children (Path B, Figure 3.1). In contrast to disengagement and aversive cognitive perseveration, we predicted that greater adaptive engagement would be associated with more successful conflict resolution (Path A, Figure 3.1), and in turn, a more positive family experience and greater parental responsiveness during the subsequent family activity (Path B, Figure 3.1).

Our final goals focused on comparisons of the emotion regulation categories and our different assessment approaches (i.e., observational and self-report measures). First, a major advantage of assessing all three major types of emotion regulation is the ability to assess which strategies have unique, independent effects and thus advance understanding regarding which strategies may be the most detrimental or optimal in this context. Accordingly, we ran additional analyses assessing the effects of each emotion regulation category controlling for the other two. Second, one of our key aims was to incorporate observational assessments developed from validated and widely used methods in the conflict literature with self-report assessments often used to assess the spontaneous emergence of emotion regulation in social
interactions. We assessed the relative connection between observational and self-report measures and tested whether these two assessment approaches revealed similar patterns.

**Method**

**Participants**

Families were recruited from a database of parents who had expressed interest in contributing to studies investigating children’s socio-emotional, cognitive and language development. The database was generated via advertisements posted around community boards, early childhood centers, on Facebook, and at large annual events targeting parents with young children. To be eligible for the current study, parents had to be cohabiting for at least one year, speak fluent English, and have a child between 4.5-5.5 years old who had not been formally diagnosed with a social or cognitive impairment. One hundred and four eligible families (two parents and one child) were recruited and paid NZ$100 for participating in the session described below. Three families were excluded from analyses because of video-recording equipment failure or the parents did not speak English during the discussion, leaving a sample of 101 families for analyses. Parents’ ages ranged from 21-66 years ($M = 36.79$, $SD = 6.33$) and their children’s ages ranged from 54-66 months ($M = 59.66$, $SD = 3.66$). Couples were married (85.1%) or cohabiting (14.9%), and length of relationship ranged from 16 months to 23 years ($M = 11.81$ years, $SD = 4.07$ years). Approximately a third of the sample held a postgraduate qualification (34% of mothers, 33% of fathers), and half a college degree (52% of mothers, 39% of fathers), with the remainder a higher school certificate or less. The majority of fathers were employed full-time (89%; 7% part-time, 4% unemployed), with annual incomes above NZ$60,000 (34% $100,000+$, 23% $81-100,000, 21% $61-80,000, 10% $41-60,000, 12% ≤ $40,000). Mothers were most likely to be employed part time (45%; 29% full-time, 26% unemployed), and had lower annual incomes (5% $100,000+, 13% $81-100,000, 11% $61-80,000, 18% $41-60,000, 53% ≤
The majority of the sample were Caucasian (63% of mothers, 79% of fathers), with the remainder identifying as Maori (2%, 3%), Pacific Nations (2%, 4%), Asian (11%, 3%), other (9%, 5%) or mixed (13%, 6%).

**Procedure**

Mothers and fathers attended a laboratory session with their child. During this session, parents completed questionnaires assessing areas of conflict, and engaged in a video-recorded conflict discussion while their children participated in a series of experimental tasks unrelated to the focus of this study. After the conflict discussion, parents were reunited with their child and engaged in a play activity involving both parents and the child building a tower together. We describe the marital conflict and family play activity procedure and measures in separate sections for clarity.

**Marital Conflict Procedure and Measures**

After seeing their child engaging in experimental tasks comfortably, parents were escorted to a private room. There they independently identified and ranked in order of importance the two most serious or difficult areas of conflict in their relationship, which they were told could be the basis of a video-recorded discussion with their partner. Following a 5-minute warm-up discussion about routine events over the past week, couples engaged in a 7-minute discussion about the highest-ranked issue shared by both partners. At the start of the conflict discussion, couples were told “The aim of the discussion is to work towards resolving the issue.” After the discussion, each partner completed a questionnaire that assessed the degree to which they: (a) experienced negative emotions, (b) attempted to regulate their emotions, and (c) reached a resolution to the conflict during the discussion.

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7 Five couples had a younger child in the room during the discussion. Given the importance of maximizing statistical power, we included these couples in our analyses. Nonetheless, rerunning the analyses with these families removed revealed the same pattern of results reported below and supported the same conclusions.
Independent coders also rated the degree to which different emotion regulation strategies were exhibited during the discussion and the degree to which couples reached a resolution to the conflict.

**Measures of Emotion Regulation.** As described above, our aim was to assess three categories of emotion regulation shown by Naragon-Gainey et al. (2017) to encapsulate the most commonly assessed emotion regulation strategies: disengagement, aversive cognitive perseveration, and adaptive engagement. As outlined in Table 3.1, we assessed each of the categories in two ways. First, we generated an observational coding schedule that assessed contextually relevant behavioral indicators of the broad emotion regulation categories outlined by Naragon-Gainey et al. (2017; see Table 3.1 and full coding schedule in Supplemental Materials, Appendix 2). Three coders were trained to identify the different behavioral indicators for each category, and then at least two of the three coders independently rated the frequency, intensity, and duration of these behavioral indicators for each participant (1–2 = low, 3–5 = moderate, 6-7 = high). Each category was coded in a separate viewing for each partner. For half of the discussions, men were coded first; for the other half, women were coded first. Second, as shown in Table 3.1, we also gathered self-report ratings of specific strategies that reflect the most commonly assessed self-report strategies within each emotion regulation category, including expressive suppression (disengagement), rumination (aversive cognitive perseveration), and cognitive reappraisal (adaptive engagement).

*Disengagement.* Behavioral observation assessments of *disengagement* included coders providing four ratings of the degree to which individuals were displaying (a) attempts to suppress or conceal emotions and/or signs that emotional elements of the discussion were muted, (b) a lack of engagement with the partner and taking a passive and dismissing approach to the problem, (c) contributions to the discussion and problem solving that were
superficial, lacked depth, and ‘skimmed the surface’, and (d) a global rating that captured overall levels of disengagement (see Table 3.1 and Supplemental Materials, Appendix 2 for more details). Coders’ ratings were highly consistent across each of the four ratings (intraclass correlation coefficients [ICCs] ranged from .85 to .96), and were thus averaged across coders. The final aggregated scores for each rating were averaged to provide an overall behavioral measure of disengagement (α = .73).

Self-report assessments of disengagement focused on expressive suppression. Immediately following the conflict discussion, participants rated the three items shown in Table 3.1 (1 = strongly disagree, 7 = strongly agree), which were derived from the most widely used self-report scale of expressive suppression (ERQ; Gross & John, 2003) and used in prior research to assess expressive suppression during relationship interactions (Cameron & Overall, 2017; Low et al., 2017). Items were averaged to assess the degree to which participants tried to hide or inhibit their emotions during the discussion (α = .78). Unexpectedly, the observer ratings of the overall behavioral measure of disengagement and self-reports of expressive suppression were only weakly correlated (see Table 3.2) so we analyzed these two measures separately. We consider the reasons for this weak association, and the implications for understanding the measures and results, in the discussion.

**Aversive Cognitive Perseveration.** As summarized in Table 3.1, the observed indicators of this emotion regulation category involved behaviors that indicate participants were (a) fixating on and amplifying causes, symptoms, and consequences of the problem, (b) directly expressing emotions in ways that appeared exaggerated, (c) excessively focusing on the self when contributing to the discussion, and (d) a global rating that captured overall levels of aversive cognitive perseveration (ICCs = .78-.88). The final scores for each observational rating aggregated across coders were then averaged to provide an overall behavioral measure of aversive cognitive perseveration (α = .93).
<table>
<thead>
<tr>
<th>Table 3.2. Descriptive Statistics and Correlations for Primary Measures.</th>
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<tbody>
<tr>
<td><strong>Observed Emotion Regulation:</strong></td>
</tr>
<tr>
<td>1. Disengagement:</td>
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<tr>
<td>Mean (SD)</td>
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<tr>
<td>2. Aversive Cognitive Perseveration:</td>
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<tr>
<td>Mean (SD)</td>
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<tr>
<td>3. Adaptive Engagement:</td>
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<tr>
<td>Mean (SD)</td>
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<tr>
<td><strong>Self-Reported Emotion Regulation:</strong></td>
</tr>
<tr>
<td>4. Expressive suppression:</td>
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<tr>
<td>Mean (SD)</td>
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<tr>
<td>5. Rumination:</td>
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<tr>
<td>Mean (SD)</td>
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<tr>
<td>6. Cognitive reappraisal:</td>
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<tr>
<td>Mean (SD)</td>
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<tr>
<td>7. Conflict Resolution:</td>
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<tr>
<td>Mean (SD)</td>
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<tr>
<td><strong>Family functioning:</strong></td>
</tr>
<tr>
<td>8. Own experience of quality of family experience:</td>
</tr>
<tr>
<td>Mean (SD)</td>
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<tr>
<td>9. Own reports of responsiveness toward child:</td>
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<tr>
<td>Mean (SD)</td>
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<tr>
<td>10. Partner’s perception of responsiveness toward child:</td>
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<tr>
<td>Mean (SD)</td>
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<tr>
<td><strong>Negative Emotions:</strong></td>
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<tr>
<td>11. Negative emotions during conflict discussion:</td>
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<td>Mean (SD)</td>
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</table>

*p < .05. **p < .01.
Self-report assessments of aversive cognitive perseveration focused on rumination during the conflict discussion. Immediately following the discussion, participants rated the four items listed in Table 3.1 (1 = strongly disagree, 7 = strongly agree) which were drawn from prior theory and research on the components of the ruminative response style associated with depressed mood, including individuals’ excessive attention to potential causes, meaning and consequences of depressed mood (Gratz & Roemer, 2004; Nolen-Hoeksema, 1987, 1991). Items were averaged to assess the degree to which participants engaged in rumination during the discussion (α = .76). As shown in Table 3.2, the observational ratings of aversive cognitive perseveration were positively associated with self-report assessments of rumination (r = .41, p < .001). However, given the weak links between observational and self-reported disengagement, we also analyzed these two measures of aversive cognitive preservation separately and consider the consistency and independent effects of the two measures in the results.

Adaptive Engagement. As summarized in Table 3.1, the behavioral indicators of this emotion regulation category involved participants displaying (a) open, comfortable and self-assured expression and acknowledgement of emotions without being afraid of conflict or allowing emotions to take over the interaction, (b) a collaborative environment by accepting joint responsibilities, acknowledging the partner’s contribution, and facilitating a team approach to problem solving, (c) constructive and direct efforts to move forward and solve or cope with the problem, and (d) a global rating that captured overall levels of adaptive engagement (ICCs = .84-.94). The final scores for each observational rating aggregated across coders were averaged to provide an overall behavioral measure of adaptive engagement (α = .95).

Self-report assessments of adaptive engagement focused on cognitive reappraisal. Immediately following the conflict discussion, participants rated the two items listed in Table
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3.1 (1 = strongly disagree, 7 = strongly agree), which were derived from the ERQ (Gross & John, 2003) and used by prior research to assess cognitive reappraisal during relationship interactions (Low et al., 2017). Items were averaged to assess the degree to which participants engaged in cognitive reappraisal during the discussion (r = .29, p < .001). The behavioral observation measure of adaptive engagement was positively but weakly associated with self-reports of cognitive reappraisal (see Table 3.2). Consistent with the other strategies, we consider the independent effects of the observational and self-report measures of adaptive engagement in the results.

**Conflict Resolution.** We also gathered both behavioral and self-report assessments of conflict resolution. In a separate coding wave, three independent coders rated the extent to which couples generated some kind of solution regarding their relationship difficulty by rating “To what extent has the couple worked out some kind of solution regarding the issue?” (1 = no solution, 7 = worked out a solution; ICC = .95). Participants also rated two items assessing the degree to which they felt the discussion was successful in resolving the area of conflict: “How successful was the discussion in resolving this relationship issue?” (1 = not at all successful, 7 = extremely successful) and “To what extent have you and your partner worked out some kind of solution regarding this issue?” (1 = no solution, 7 = worked out a solution). These two items were averaged (r = .57, p < .001). As expected, observers’ and participants’ ratings of conflict resolution were positively correlated (r = .42, p < .001), and so we averaged these to provide an overall index of conflict resolution, which streamlined the number of analyses conducted across the different measures of emotion regulation.

**Negative Emotions.** To ensure the effects of emotion regulation were not simply due to experiencing more negative emotions during the conflict discussion, participants also rated how much they had felt “sad/disappointed”, “hurt/rejected”, “annoyed/frustrated”, “hopeless”
and “angry” during the discussion (1 = not at all, 7 = very much). Items were averaged to index negative emotions experienced during the conflict discussion ($\alpha = .86$).

**Family Play Activity Procedure and Measures**

On completion of the conflict discussion and measures described above, parents were reunited with their child and asked to engage in a fun family activity. Families were provided with paper materials and stationery and given the following instructions: “As a family, we would like the three of you to work together to build a free-standing tower. Build the best tower you can—it must stand on its own.” Families were given ten minutes to complete the task. After the allotted time, the experimenter returned to the room to take the child to a separate playroom while the parents completed a final set of questionnaires assessing their thoughts, feelings and behavior during the play activity.

**Quality of family experience.** Three items assessed the degree to which parents thought the play activity was a fun and positive experience: “We had good quality family time”, “We had a fun and positive family experience”, and “We were connected as a family” (1 = strongly disagree, 7 = strongly agree). Items were averaged ($\alpha = .94$) to assess parents’ evaluation of the quality of the family experience.

**Responsiveness toward child.** Four items were drawn or adapted from previous theory and research on parental responsiveness to index the degree to which parents were warm, sensitive and supportive to their child (e.g., Ainsworth, Blehar, Waters & Wall, 1978; Landry et al., 2006): “I was involved/engaged with my child during the play activity”, “I was warm/affectionate towards my child”, “I supported and helped my child”, and “I was responsive to my child’s needs” (1 = strongly disagree, 7 = strongly agree). These items were averaged ($\alpha = .89$) to assess parents’ responsiveness toward their child.

**Perception of partner’s responsiveness toward child.** Parents rated analogous items with regard to their partner’s responsiveness (e.g., “My partner was involved/engaged with
my child during the play activity”; 1 = *strongly disagree*, 7 = *strongly agree*). The four items were averaged (α = .90) to assess parents’ *perceptions of their partner’s* responsiveness toward their child.

**Results**

We present the analyses in three sections. First, we present the analyses examining the associations between observed and self-reported emotion regulation strategies during parents’ conflict discussion and conflict resolution (Path A, Figure 3.1). Second, we present the associations between conflict resolution and experiences during the family play activity (Path B, Figure 3.1), and show that these effects are independent of Path A. Third, we present the indirect effects which test the mediation process presented in Figure 3.1.

For all analyses, we followed the guidelines by Kenny, Kashy, and Cook (2006) using the MIXED procedure in SPSS 24 to run dyadic regression models that accounted for the dependencies in dyadic data. Given partners were distinguishable by gender, we modeled the main and interaction effects of gender (-1 female, 1 male) across all analyses. There were generally no differences in levels of emotion regulation across men and women, with the exceptions that men exhibited greater observed disengagement ($t = 3.02, p = .003$), whereas women exhibited greater aversive cognitive perseveration ($t = -4.08, p < .001$). However, none of the effects of self-reported or observed emotion regulation reported in Tables 3-6 significantly differed across men and women.

**Emotion Regulation Strategies and Conflict Resolution (Path A, Figure 3.1)**

Our first analyses tested whether observed and self-reported emotion regulation strategies during the conflict discussion predicted conflict resolution. In a set of initial analyses, we regressed conflict resolution on each measure of emotion regulation (in separate analyses). As shown in the top half of Table 3.3, greater observed disengagement and aversive cognitive perseveration were associated with lower conflict resolution, whereas
Table 3.3. The Associations between Observed and Self-Reported Emotion Regulation Strategies and Conflict Resolution (Path A)

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Associations without Control Variables</th>
<th>Controlling for Other Emotion Regulation Strategies</th>
<th>Controlling for Negative Emotions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Associations</td>
<td>Variables</td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>t</td>
<td>95% CI</td>
</tr>
<tr>
<td>Observed Emotion Regulation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disengagement</td>
<td>-.20</td>
<td>-2.73**</td>
<td>-.347, -.056</td>
</tr>
<tr>
<td>Aversive Cognitive Perseveration</td>
<td>-.09</td>
<td>-2.02*</td>
<td>-.173, -.002</td>
</tr>
<tr>
<td>Adaptive Engagement</td>
<td>.12</td>
<td>2.56*</td>
<td>.028, .214</td>
</tr>
<tr>
<td>Self-Reported Emotion Regulation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expressive Suppression</td>
<td>-.11</td>
<td>-2.85**</td>
<td>-.193, -.035</td>
</tr>
<tr>
<td>Rumination</td>
<td>-.16</td>
<td>-3.63***</td>
<td>-.255, .075</td>
</tr>
<tr>
<td>Cognitive Reappraisal</td>
<td>.11</td>
<td>3.01**</td>
<td>.039, .189</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01. ***p < .001
greater adaptive engagement was associated with greater conflict resolution. As shown in the bottom half of Table 3.3, this pattern of results was replicated with the self-report assessments of emotion regulation: greater self-reported expressive suppression and rumination during the discussion were associated with lower conflict resolution, whereas self-reported cognitive reappraisal was associated with greater conflict resolution.

**Unique Effects of Emotion Regulation Strategies on Conflict Resolution.** Both observer ratings of disengagement and aversive cognitive perseveration were negatively associated with adaptive engagement (see Table 3.2). Self-reported expressive suppression was positively associated with rumination as well as cognitive reappraisal, which is consistent with recent research showing that people often report both expressive suppression and cognitive reappraisal when faced with challenging situations in daily life (Kivity, Tamir, & Huppert, 2016; Low et al., 2017). To identify whether each emotion regulation strategy independently predicted conflict resolution, we reran the dyadic regressions testing each association reported in Table 3.3 while controlling for the other observed or self-reported emotion regulation strategies. As shown in the middle section of Table 3.3, all of the effects of observed and self-reported emotion regulation remained significant, with the exception of observer ratings of adaptive engagement. Thus, the presence of disengagement and aversive cognitive perseveration may have stronger and independent associations with conflict resolution compared to behavioral indicators of more adaptive emotion regulation.

**Observed versus Self-Reported Emotion Regulation Strategies on Conflict Resolution.** To test whether observed and self-reported emotion regulation strategies were independently associated with conflict resolution, we regressed conflict resolution on both observed and self-reported measures for each emotion regulation category in separate analyses (e.g., observed disengagement and expressive suppression on conflict resolution). As displayed in Table 3.4, both observed and self-reported emotion regulation remained
Table 3.4. Comparing the Associations between Observed and Self-Reported Emotion Regulation Strategies and Conflict Resolution

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Conflict Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td><strong>Disengagement</strong></td>
<td></td>
</tr>
<tr>
<td>Observed</td>
<td>-.21</td>
</tr>
<tr>
<td>Self-reported (i.e., Expressive Suppression)</td>
<td>-.10</td>
</tr>
<tr>
<td><strong>Aversive Cognitive Perseveration</strong></td>
<td></td>
</tr>
<tr>
<td>Observed</td>
<td>-.03</td>
</tr>
<tr>
<td>Self-reported (i.e., Rumination)</td>
<td>-.18</td>
</tr>
<tr>
<td><strong>Adaptive Engagement</strong></td>
<td></td>
</tr>
<tr>
<td>Observed</td>
<td>.10</td>
</tr>
<tr>
<td>Self-reported (i.e., Cognitive Reappraisal)</td>
<td>.10</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01. ***p < .001
significant, with the exception of observer ratings of aversive cognitive perseveration. Thus, despite relatively weak correlations between the observer and self-report assessments of disengagement and adaptive engagement, both forms of assessment were independently associated with conflict resolution. By contrast, the unique effects of the different and moderately correlated assessments of aversive cognitive perseveration suggested that participants’ own reports of rumination had stronger effects on conflict resolution than the observed indicators of this emotion regulation strategy.

**Emotion Regulation Effects Independent of Negative Emotions.** Greater observed disengagement and aversive cognitive perseveration, and greater self-reported expressive suppression and rumination, were associated with experiencing greater negative emotions during the conflict discussions, and greater negative emotions were associated with lower conflict resolution (see Table 3.2). To rule out the possibility that the effects of emotion regulation strategies simply arose because participants were experiencing more negative emotions during the discussion, we recalculated the effects of each emotion regulation strategy controlling for negative emotions. As shown on the far-right section of Table 3.3, all of the effects of self-reported and observed emotion regulation remained significant, with the exception of observer ratings of aversive cognitive perseveration. Along with the reduced effect when comparing observer ratings and self-reported rumination, this one reduced effect may be because behavioral indicators of aversive cognitive perseveration capture the overt expression of experienced negative emotions that interfere with conflict resolution.

**Conflict Resolution and Functioning in the Family Play Activity (Path B, Figure 3.1)**

The next set of dyadic analyses examined the effects of conflict resolution on outcomes during the family play activity. Using the same analytic approach (Kenny et al., 2006), we regressed parents’ reports of their own experience and responsiveness toward their child on conflict resolution. In addition, we also examined whether the effect of conflict
resolution was associated with partner’s perceptions of responsiveness toward the child (controlling for the partner’s own responsiveness).

Quality of Family Experience. As displayed in the top row in the left section of Table 3.5, lower conflict resolution was associated with participants reporting a lower quality family experience during the play activity. The remaining sections in the left section of Table 3.5 present these associations controlling for each of the measures of emotion regulation, and then negative emotions experienced during the conflict discussion. The effects remained significant across all of these control analyses revealing that the negative impact of conflict resolution on the quality of experience in the family play activity represented flow-on effects independent of emotion regulation and negative emotions during the conflict discussion.

Responsiveness toward Child. As displayed in the top row in the middle section of Table 3.5, lower conflict resolution was also associated with parents reporting lower responsiveness toward their child during the play activity. This positive effect was also corroborated by their partner’s perceptions (see top row on the right section of Table 3.5), such that lower conflict resolution was associated with parents being perceived by their partners (i.e., the other parent) as being less responsive toward their child (controlling for the partner’s own responsiveness toward their child). Lastly, as shown by the remaining rows on the middle and right side of Table 3.5, these associations were independent of the emotion regulation strategies exhibited or reported during the conflict discussion and independent of the negative emotions experienced during the conflict discussion.

Indirect Effects Connecting Paths A and B in Figure 3.1

The associations above indicate that both observed and self-reported emotion regulation strategies shape conflict resolution during couples’ discussions, and conflict resolution in turn shapes the quality of and parents’ responsiveness during subsequent family
<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Quality of Family Experience</th>
<th>Responsiveness Toward Child</th>
<th>Partners’ Perception of Responsiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>t</td>
<td>95% CI</td>
</tr>
<tr>
<td>Conflict Resolution</td>
<td>.18</td>
<td>3.62***</td>
<td>.081, .275</td>
</tr>
<tr>
<td>Effect of Conflict Resolution controlling for Observed Emotion Regulation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disengagement</td>
<td>.20</td>
<td>3.74***</td>
<td>.095, .307</td>
</tr>
<tr>
<td>Aversive Cognitive  Perseveration</td>
<td>.19</td>
<td>3.57**</td>
<td>.083, .289</td>
</tr>
<tr>
<td>Adaptive Engagement</td>
<td>.23</td>
<td>4.19***</td>
<td>.120, .334</td>
</tr>
<tr>
<td>Effect of Conflict Resolution controlling for Self-Reported Emotion Regulation:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expressive Suppression</td>
<td>.15</td>
<td>2.98**</td>
<td>.049, .243</td>
</tr>
<tr>
<td>Rumination</td>
<td>.12</td>
<td>2.23*</td>
<td>.013, .223</td>
</tr>
<tr>
<td>Cognitive Reappraisal</td>
<td>.19</td>
<td>3.69***</td>
<td>.086, .285</td>
</tr>
<tr>
<td>Effect of Conflict Resolution controlling for Negative Emotions during Conflict Discussion:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Emotions</td>
<td>.16</td>
<td>2.95**</td>
<td>.053, .267</td>
</tr>
</tbody>
</table>

\[ ^{†}p = .08. \ *p < .05. \ **p < .01. \ ***p < .001 \]
interactions. Although we expected that emotion regulation during the conflict would impact functioning in subsequent family interactions because of whether and how emotion regulation shaped conflict resolution, for completeness we also present the direct effects between emotion regulation and family functioning in Table 3.6. The only consistent significant associations were those between observed aversive cognitive perseveration and self-reported rumination predicting poorer functioning during the family activity. Moreover, analyses controlling for conflict resolution revealed that only the associations between self-reported rumination and individuals’ reported quality of experience and responsiveness toward child remained significant (see effects in italics in Table 3.6). These results provide support that resolution at the end of conflict is a more proximal factor than emotion regulation during conflict in shaping the quality of experience and responsiveness during subsequent family interactions.

To test the mediation process presented in Figure 3.1, our next set of analyses involved calculating the indirect effects linking observed and self-reported emotion regulation strategies with outcomes during the play activity via conflict resolution. We followed the procedures recommended by MacKinnon, Fritz, Williams and Lockwood (2007) to compute asymmetric confidence intervals for the indirect effect of each emotion regulation assessment on functioning in the family play activity. Thus, these analyses link the effect of each emotion regulation measure on conflict resolution shown in Table 3.3 (first column) and the independent flow-on associations between conflict resolution and functioning within subsequent family interactions shown in Table 3.5 (the associations controlling for the specific emotion regulation tested). The resulting indirect effects are displayed in Table 3.7, and in most cases supported Figure 3.1 across the measures of emotion regulation. The emotion regulation → conflict resolution → family functioning pathway was supported across analyses for all three types of self-reported emotion regulation (expressive
### Table 3.6. The Associations between Emotion Regulation Strategies and Family Functioning during Post-Conflict Play Activity

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Quality of Family Experience</th>
<th></th>
<th></th>
<th>Respondiveness Toward Child</th>
<th></th>
<th></th>
<th>Partners’ Perception of Responsiveness</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>B</td>
<td>95% CI</td>
<td>r</td>
<td>B</td>
<td>95% CI</td>
<td>r</td>
<td>B</td>
<td>95% CI</td>
</tr>
<tr>
<td><strong>Observed Emotion Regulation:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disengagement</td>
<td>-0.03</td>
<td>-0.39</td>
<td>-0.179, 0.120</td>
<td>0.03</td>
<td>-0.05</td>
<td>-0.61</td>
<td>-0.222, 0.117</td>
<td>0.05</td>
<td>-0.06</td>
</tr>
<tr>
<td>Aversive Cognitive Perseveration</td>
<td>-0.07</td>
<td>-1.55</td>
<td>-0.161, 0.019</td>
<td>0.12</td>
<td>-0.12</td>
<td>-2.12*</td>
<td>-0.235, -0.008</td>
<td>0.17</td>
<td>-0.09</td>
</tr>
<tr>
<td>Adaptive Engagement</td>
<td>-0.01</td>
<td>-0.14</td>
<td>-0.099, 0.086</td>
<td>0.01</td>
<td>0.06</td>
<td>1.13</td>
<td>-0.046, 0.172</td>
<td>0.08</td>
<td>0.10</td>
</tr>
<tr>
<td><strong>Self-Reported Emotion Regulation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expressive Suppression</td>
<td>-0.15</td>
<td>-3.61***</td>
<td>-0.225, -0.066</td>
<td>0.26</td>
<td>-0.05</td>
<td>-1.01</td>
<td>-0.153, 0.050</td>
<td>0.07</td>
<td>-0.04</td>
</tr>
<tr>
<td>Rumination</td>
<td>-0.18</td>
<td>-4.00***</td>
<td>-0.263, -0.089</td>
<td>0.28</td>
<td>-0.16</td>
<td>-3.01**</td>
<td>-0.271, -0.056</td>
<td>0.22</td>
<td>-0.06</td>
</tr>
<tr>
<td>Cognitive Reappraisal</td>
<td>-0.00</td>
<td>-0.04</td>
<td>-0.084, 0.080</td>
<td>0.00</td>
<td>0.06</td>
<td>0.26</td>
<td>-0.042, 0.154</td>
<td>0.09</td>
<td>0.03</td>
</tr>
</tbody>
</table>

*Note.* The effects displayed in italics remained significant when controlling for conflict resolution.

*p < 0.05. **p < 0.01. ***p < 0.001
Table 3.7. Indirect Effects Testing the Paths between Emotion Regulation Strategies, Conflict Resolution, and Family Functioning during Post-Conflict Family Play Activity

<table>
<thead>
<tr>
<th>Indirect Pathway Tested</th>
<th>Quality of Family Experience</th>
<th>Responsiveness Toward Child</th>
<th>Partners’ Perception of Responsiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indirect effect</td>
<td>95% CI</td>
<td>Indirect effect</td>
</tr>
<tr>
<td><strong>Observed Emotion Regulation → Conflict resolution → Family functioning</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disengagement</td>
<td>-.04</td>
<td>-.082, -.009</td>
<td>-.04</td>
</tr>
<tr>
<td>Aversive Cognitive Perseveration</td>
<td>-.02</td>
<td>-.037, .000</td>
<td>-.02</td>
</tr>
<tr>
<td>Adaptive Engagement</td>
<td>.03</td>
<td>.006, .056</td>
<td>.02</td>
</tr>
<tr>
<td><strong>Self-Reported Emotion Regulation → Conflict resolution → Family functioning</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expressive Suppression</td>
<td>-.02</td>
<td>-.035, -.003</td>
<td>-.02</td>
</tr>
<tr>
<td>Rumination</td>
<td>-.02</td>
<td>-.043, -.002</td>
<td>-.02</td>
</tr>
<tr>
<td>Cognitive Reappraisal</td>
<td>.02</td>
<td>.006, .042</td>
<td>.02</td>
</tr>
</tbody>
</table>

*Note.* Estimates for paths between variables (indicated by→→) are displayed in Tables 3 and 5. Asymmetric Confidence intervals were calculated following Mackinnon, Fritz, Williams and Lockwood (2007). Confidence intervals which do not overlap “0” can be considered significant.
suppression, rumination, and cognitive reappraisal). This pathway was also supported across outcomes for observer ratings of disengagement and, with the exception of partners’ perception of responsiveness, for adaptive engagement. However, the indirect effects were not significant across outcomes for aversive cognitive perseveration.

**Discussion**

Emotion regulation is thought to be pivotal in managing goal-directed behavior during emotionally challenging situations (Gratz & Roemer, 2004), and thus has important implications for people’s ability to subsequently achieve important goals in future interactions (Gross, 1998b; 2015). Yet there has been scant examination of how different emotion regulation strategies predict key goal-relevant outcomes that shape the ability to function effectively in subsequent contexts. The current research uniquely examined this spillover implication of emotion regulation. First, we examined how different types of emotion regulation within emotionally challenging situations (marital conflict) are associated with a primary goal-relevant outcome within that situation (conflict resolution). Second, we assessed whether this immediate outcome (conflict resolution) spilled over to shape social functioning within subsequent interactions (responsiveness during parent-child interactions). Third, we integrated measures used in the conflict and emotion regulation literatures to develop and compare observational and self-report assessments of three emotion regulation categories that capture the most commonly assessed strategies: disengagement, aversive cognitive perseveration, and adaptive engagement (Naragon-Gainey et al., 2017).

To achieve these novel aims, couples were video-recorded while discussing a major conflict. Immediately after the discussion, couples independently reported on their use of three types of emotion regulation during the discussion and then jointly participated in a family activity with their child. At the end of the family activity, parents reported on the quality of the family experience and their responsiveness toward their child during the
activity. Observational coders also rated the degree to which each participant displayed disengagement, aversive cognitive perseverance, and adaptive engagement during the conflict discussion. The results advanced understanding in three pivotal ways.

Demonstrating the important implications of emotion regulation on goal-relevant outcomes and subsequent social functioning, greater disengagement and aversive cognitive perseverance were associated with lower conflict resolution, which in turn predicted less positive experiences and lower parental responsiveness during the family activity. Moreover, showing the value of assessing and comparing diverse types of emotion regulation in the same study, the detrimental effects of disengagement and aversive cognitive perseverance on conflict resolution and subsequent family functioning were independent of each other. By contrast, although greater adaptive engagement was associated with greater conflict resolution and, in turn, more positive family outcomes, these beneficial effects did not hold controlling for the other emotion regulation strategies. Finally, observational and self-report measures showed the same pattern of effects, but were generally only weakly correlated, suggesting that they may assess different internal versus interpersonal elements of emotion regulation. In the following text, we detail how these findings contribute to the emotion regulation, conflict and family literatures by demonstrating the importance of emotion regulation during marital conflict, illustrating the pivotal role of conflict resolution on subsequent family interactions, and offering potential advances in the assessment of emotion regulation during interpersonal interactions.

**Emotion Regulation during Marital Conflict: Conflict Resolution and Subsequent Family Functioning**

Marital conflict, by its very nature, involves conflicting interests and goals that create an emotionally relevant context in which different emotion regulation strategies will emerge. Moreover, the myriad established effects of different emotion regulation strategies indicate
that emotion regulation will have an important impact on arguably the most central outcome of this social interaction: conflict resolution. Prior research has provided evidence that greater downregulation of negative experience during conflict predicts more positive changes in marital satisfaction (Bloch, Haase & Levenson, 2014), whereas less adaptive emotion regulation strategies, such as expressive suppression, predict declines in satisfaction (Vater & Schröder-Abé, 2015). A growing number of studies have also shown that different types of emotion regulation interfere with a range of personal and interpersonal processes within relationship interactions (e.g., Butler et al., 2003; Impett et al., 2012; Low et al., 2017). However, the current study represents the first to examine how the spontaneous use of different types of emotion regulation during marital conflict are associated with conflict resolution. Greater disengagement and aversive cognitive perseveration were independently associated with lower conflict resolution suggesting that these emotion regulation strategies uniquely interfere with the processes needed to effectively resolve conflict. Moreover, in general, the effects of these emotion regulation strategies were independent of the level of negative emotions experienced, showing that the way individuals regulate emotions, rather than simply individuals’ experiences of negative emotions, shape conflict resolution.

The existing literature illustrates a range of cognitive and interpersonal processes that likely underpin why disengagement impedes conflict resolution. Disengagement involves attempts to avoid or shift focus from the situation, and thus individuals enacting this strategy will be disengaged from the interaction and/or expending effort towards inhibiting negative emotions, rather than focusing on generating a solution with their partner. Indeed, prior research reveals that manipulated expressive suppression (the most commonly examined strategy within the disengagement category) increases self-monitoring and thus reduces engagement and problem solving (Baumeister, Bratslavsky, Muraven & Tice, 1998; Gross, 2002; Richards et al., 2003), which likely minimizes the attention and effort needed for
generating effective solutions during conflict. Expressive suppression (and similar behavioral components of disengagement, such as withdrawal) are also associated with a range of interpersonal effects, such as reduced rapport, lower responsiveness, social support, and closeness (Butler et al., 2003; Srivastava et al., 2009), which will also reduce the degree to which individuals can cooperate with their partner to solve problems.

Greater aversive cognitive perseveration also has detrimental cognitive and interpersonal effects that should account for the negative association between this emotion regulation strategy and conflict resolution. Individuals who enact greater aversive cognitive perseveration have difficulty disengaging from negative thoughts and emotions surrounding the problem, which make it difficult for individuals to engage in problem solving (Clore & Gasper, 2000; Donaldson & Lam, 2004; Kuhl, 1981; Watkins & Baracaia, 2002). In addition, greater rumination heightens the salience of negative relationship perceptions (Mikulincer, Shaver & Slav, 2006), and the attentional focus on the self or negative aspects of the situation likely impede problem solving during conflict. These prior effects support why aversive cognitive perseveration should impede conflict resolution, but this study is the first to illustrate that the spontaneous use of aversive cognitive perseveration during actual conflict interactions hinders important interpersonal outcomes.

The diverse effects of expressive suppression and rumination established from prior research provide a solid foundation for why disengagement and aversive cognitive perseveration will be associated with poorer social outcomes, such as conflict resolution. However, prior research has rarely examined and compared the effects of different emotion regulation strategies within social interactions. This is important in demonstrating that commonly assessed ‘maladaptive’ emotion regulation strategies have distinct effects, as disengagement and aversive cognitive perseveration did in the current study, and also showing these are distinct from more adaptive strategies. Adaptive engagement should have
opposite effects on conflict resolution because it involves open expression of emotions, collaborative communication, and deliberate approach-oriented problem solving. Indeed, recent research has shown that reappraising marital conflict by thinking about it from a neutral, third-person perspective produces sharper declines in conflict-related distress (Finkel, Slotter, Luchies, Walton & Gross, 2013). However, although adaptive engagement was associated with greater conflict resolution, controlling for the detrimental effects of disengagement and aversive cognitive perseveration eliminated these beneficial effects. Other studies have also shown that the salubrious effects of cognitive reappraisal are not robust when accounting for the detrimental effects of expressive suppression (Low et al., 2017). Thus, the pattern of results suggests that, at least in terms of reaching the key social outcome of conflict resolution, the damaging effects of ‘maladaptive’ emotion regulation strategies are stronger and more robust than more ‘adaptive’ forms of emotion regulation.

The Spillover Effects of Conflict Resolution to Family Interactions

Even more uniquely, the current studies go beyond prior research by considering how the links between emotion regulation and goal-relevant outcomes in one social interaction spillover to shape outcomes in another. Indeed, although a key outcome of emotion regulation strategies involves the facilitation of social goals within the context initially enacted, the implications of emotion regulation will extend beyond that context to shape broader functioning and future interactions. Our results indicated, for example, that disengagement and aversive cognitive perseveration had indirect effects on subsequent family functioning because they were associated with reduced resolution during couples’ conflict discussion. The poorer the resolution in couples’ conflict discussions, the less parents had positive experiences in a subsequent family activity with their children and the less parents were able to be responsive to their children during that activity (as rated by themselves and their partner). Thus, emotion regulation strategies not only shape immediate outcomes within
the social context initially enacted, but can have significant implications for social functioning in subsequent interactions.

These spillover effects expand both the emotion regulation and marital conflict literatures in multiple ways. The detrimental effects of disengagement and aversive cognitive perseveration are consistent with prior research showing that these types of emotion regulation strategies within social interactions can undermine personal and interpersonal well-being across time (e.g., Bloch, Haase & Levenson, 2014; Cameron & Overall, 2017; Low et al., 2017; Nolen-Hoeksema & Davis, 1999). The spillover pathway from emotion regulation to family functioning via conflict resolution (see Figure 3.1) offers a new perspective for how these long-term effects might arise. In particular, these spillover processes indicate that the effect of emotion regulation strategies on goal-relevant outcomes will likely compound over time as the immediate social outcomes reverberate across subsequent interactions. We examined one important context, but these spillover processes are likely to be evident across a range of emotionally relevant interactions within close, familial relationships as well as other non-intimate social interactions. Thus, the potential continual flow-on effects of different emotional regulation strategies may be critical to why and how different strategies affect psychological well-being and health over time.

The results also advance the relationship conflict literature by highlighting the pivotal role of conflict resolution in determining broader outcomes beyond the couple facing conflict. Prior research has shown that a primary mechanism for the longitudinal associations between communication strategies during conflict and relationship well-being is whether strategies facilitate or impede conflict resolution (Overall & McNulty, 2017). The current findings also add to some existing evidence that marital conflict undermines children’s emotional security to the extent that conflict remains unresolved (Brock & Kochanska, 2016; Goeke-Morey, Cummings & Papp, 2007). However, the current study is the first to directly test whether
unresolved conflict spills over into parent-child interactions immediately after conflict. These spillover effects were also independent of the associations between negative emotions and poorer family functioning, suggesting that it is not simply the transfer of negative affect from one setting to another as postulated in the literature (Erel & Burman, 1995). In addition to lingering tension, poorer conflict resolution may leave couples depleted and preoccupied in ways that reduce their ability to engage and be responsive to their children, which is critical to promoting children’s socio-emotional, cognitive and language development (Landry et al., 2006; Tamis-LeMonda et al., 2001). Unresolved conflict may also mean that parents are continuing to regulate conflict-related thoughts, feeling and behavioral responses rather than fully focusing on the responses relevant to the new family context. Indeed, conflict resolution only partially mediated the links between rumination and family functioning, probably because rumination involves continued and perhaps uncontrollable perseveration on prior negative events.

**Assessing Emotion Regulation during Interpersonal Interactions**

One aim of the current study was to develop and compare observational and self-report measures of the three main emotion regulation categories: disengagement, aversive cognitive perseveration, and adaptive engagement (Naragon-Gainey et al., 2017). To do this, we integrated observational methods used in the conflict literature with self-report measures often used in the emotion regulation literature. The new observational coding of the emotion regulation categories produced high coder reliability indicating that the theoretically and empirically informed indicators of each type of emotion regulation can be reliably detected within social interactions. The effects of the behavioral assessments also conformed to expectations based on prior research and demonstrated the same pattern as more standard self-report assessments. Thus, these results provide preliminary reliability and validity data
that observational assessments can capture important components of emotion regulation strategies that are associated with important interaction outcomes.

However, the observed and self-report assessments within emotion regulation types were only weakly correlated, with the exception of the moderate association between observed aversive cognitive preservation and self-reported rumination. The weak associations across methods are likely a function of the different levels of measurement: the observational assessments focused on overarching categories of disengagement and adaptive engagement whereas the self-report ratings of expressive suppression and cognitive reappraisal assess only one specific strategy within each category (see Naragon-Gainey et al., 2017). Providing support that the differences in breadth of measurement played a role, analyses of the individual ratings of behavioral indicators making up the disengagement category revealed a significant positive association between expressive suppression and the observational rating of hypo emotion expression, which is closest conceptually (see Supplemental Materials, Appendix 2). Of importance, although Naragon-Gainey et al. (2017) demonstrated that an array of specific emotion regulation strategies fall into these three broad categories, no prior research has measured or compared these categories to more specific strategies. Our finding that broad observational assessments and specific self-report ratings produced the same pattern of effects indicate that the shared ingredient across strategies within each broader category may play an important role in the outcomes of different emotion regulation strategies.

In addition to differences in breadth, observational versus self-report assessments may reflect different intrapersonal and interpersonal elements of emotion regulation. For example, disengagement can include efforts to inhibit or avoid the internal experience of emotions (an internal, personal process) as well as efforts to inhibit or hide the external expression of emotions (an external, interpersonal process). Both processes may affect emotion expression,
avoidance and superficial problem solving (i.e., the behavioral indicators outlined in Table 3.1) and thus be evident to observers, but these processes may also be distinct, sometimes co-occurring and sometimes not. Further, individuals who more frequently or more successfully suppress emotions may show fewer external signs of this strategy and some individuals who need to enact greater effort to suppress or disengage may exhibit more obvious signs or leakage of their emotion regulation efforts. Thus, the weak associations across the two measurement approaches may be assessing important differences in the intrapersonal enactment versus the interpersonal expression of emotion regulation strategies, and the connection between these may vary across individuals.

Nonetheless, it is important to consider the implications of the relative associations across methods for assessing emotion regulation in future research. On the one hand, the pattern of results suggest that observational assessments might offer valuable information regarding how broad emotion regulation strategies manifest within social interactions that could be distinct from individuals’ self-reports of specific strategies. For example, when modelling both assessments simultaneously, observer-rated disengagement and self-reported expressive suppression had independent negative associations with conflict resolution. Consistent with the possibility that observer-ratings and self-report assessments may be capturing different interpersonal and personal elements of emotion regulation, more visible emotion regulation efforts that are detected by partners and others during social interactions may have stronger interpersonal effects (e.g., reduced closeness, support, rapport, cooperative resolution). By contrast, if self-reported ratings of emotion regulation reflect more internal processes, these measures may have stronger associations with personal effects (e.g., depressed mood, cognitive depletion, problem solving). In addition, individual differences in the success of enacting emotion regulation strategies may play a role. For example, self-reported expressive suppression may have stronger personal than interpersonal effects for
individuals who can successfully inhibit the outward display of emotion (producing low
correlations between self-report and observer-ratings). Identifying factors that modify the
association between self-reported and observed emotion regulation, and the potential
differential outcomes associated with these measures, is a valuable goal for future research.

On the other hand, the pattern of results also suggest that self-report assessments may
be a more cost-effective way of assessing emotion regulation. Not only did self-reported
expressive suppression independently reveal the same pattern as observer ratings of
disengagement, self-reported rumination had stronger independent effects than observed
aversive cognitive perseveration. This may be because self-reported rumination and aversive
cognitive perseveration were more highly correlated than the other emotion regulation types,
probably because the internal process of rumination/aversive cognitive perseveration
manifests more clearly behaviorally. Indeed, it is not surprising that ruminative problem
engagement, hyper emotion expression and self-focus are more visible than efforts to
suppress, avoid, and disengage (see Table 3.1). It could also be the case that people are more
aware of or feel more acutely their own rumination than intentional or automatic efforts to
suppress and disengage. Overall, however, the patterns of results were consistent and robust
with self-report measures, including controlling for the experience of negative emotions,
which provides strong support for the use of self-reports in assessing the natural emergence
of emotion regulation in future research.

**Strengths, Caveats, and Directions for Future Research**

This study has several notable strengths. The results add to the limited number of
studies assessing naturally occurring emotion regulation in social interactions. A large
percentage of emotion regulation episodes occur within social contexts (Gross, Richards &
John, 2006), but less than 12% of research assessing emotion regulation involves an
interaction partner (Campos, Walle, Dahl & Main, 2011). In the current study, we maximized
ecological validity by capturing spontaneous emotion regulation strategies within emotionally challenging social interactions where they will emerge (Levenson, Haase, Bloch, Holley & Seider, 2014). We also uniquely compared the effects of self-report and observational assessments of three different types of emotion regulation on a key goal-relevant outcome during marital conflict, and advanced both the emotion regulation and marital conflict literature by assessing the flow-on implications for parent-child functioning within subsequent family interactions. Nonetheless, the focus on the natural emergence of emotion regulation during conflict meant the data were correlational in nature, preventing causal conclusions. Future research would benefit by using experimental paradigms to manipulate the use of specific emotion regulation strategies to not only assess the causal impact on conflict resolution, but also how conflict resolution goes on to affect subsequent social interactions as we uniquely examined here. Longitudinal designs would also be a valuable direction for future research to track how emotion regulation strategies exacerbate or improve conflicts, and other flow-on relationship and familial outcomes, over time.

Additional research is also required to identify the underlying mechanisms for why disengagement and aversive cognitive perseveration predict lower conflict resolution. As highlighted in earlier sections, disengagement and aversive cognitive perseveration interfere with cognitive and interpersonal processes necessary for effective problem solving. Future studies directly assessing these mechanisms, as well as experimental paradigms designed to overcome these cognitive and interpersonal deficits, will not only provide stronger evidence for the processes presented here but also provide clearer targets for interventions. Indeed, the importance of the spillover effects of conflict resolution on parent-child interactions, and the long-term damage to parent and child well-being that these effects may create, highlights that understanding the factors that mitigate these processes is crucial in reducing the potential detrimental effects of different emotion regulation strategies.
Similarly, it is also important to identify the contexts that magnify these harmful effects. The current study reveals the general importance of these processes as they emerge in relatively stable and committed couples. The magnitude and damage of spillover effects may be more consequential when conflict is more serious or particularly hostile and when parents are experiencing heightened parenting stress. Moreover, consistent with our major point that the effects of emotion regulation should culminate across different social interactions, these family processes may be exacerbated when parents face greater external stress (e.g., economic strain, work, health problems) in which poorer emotion regulation in other contexts also spills over to compound emotion regulation difficulties within couple and familial interactions. Thus, this study provides important directions for future investigations to examine the broader spreading effects of emotion regulation strategies beyond the context they are initially enacted.

**Conclusion**

The current research supports and advances prior research demonstrating the importance of emotion regulation in navigating challenging social interactions. By assessing the spontaneous use of three broad types of emotion regulation during marital conflict, the results indicate that disengagement (expressive suppression) and aversive cognitive perseveration (rumination) not only contribute to the relative success of conflict resolution, but in turn shape the degree to which parents are able to be responsive to their children in subsequent family interactions. The results also offer insight into the relative independence of these emotion regulation strategies, show that the effects are distinct from the experience of negative emotions, and indicate that elements of these emotion regulation strategies may be uniquely captured by observational and self-report assessments. More generally, by offering the first examination of how the effects of emotion regulation strategies may spillover to subsequent interactions, the current study highlights an important new direction for emotion
regulation research involving examining the flow-on effects emotion regulation has beyond the context initially enacted.
CHAPTER CONCLUSION

How does emotion regulation in one social context spill over to affect functioning in another? This chapter provided a novel demonstration of emotion regulation spillover by examining the associations between three broad categories of emotion regulation within relationship conflict, couples’ conflict resolutions, and parents’ experience and responsiveness toward their child in a subsequent family interaction. Greater disengagement and aversive cognitive perseveration during conflict was associated with lower conflict resolution, and lower conflict resolution, in turn, was associated with parents reporting less positive experiences and poorer responsiveness toward their child during the family activity. Thus, these results illustrate that emotion regulation is crucial when couples need to navigate relationship challenges. The results also demonstrate that the effects of emotion regulation are not contained to the couple interaction, but can have significant flow-on effects for other relationships within the family domain.

This study was also the first to compare and contrast three broad emotion regulation categories to highlight whether different maladaptive and adaptive forms of emotion regulation have independent effects. The results suggested that greater adaptive engagement predicted greater conflict resolution, and thus more positive outcomes during the family interaction, these effects were removed when controlling for the more maladaptive categories of disengagement and aversive cognitive perseveration. By contrast, disengagement and aversive cognitive perseveration remained significant when controlling for the other two emotion regulation strategies suggesting that the detrimental effects of maladaptive emotion regulation strategies on conflict resolution are independent and stronger than adaptive strategies.

Finally, this study was also the first to compare the effects of observational and self-reported measures of these three emotion regulation categories. Interestingly, observational
and self-report measures of disengagement were only weakly associated, but the different measures revealed the same pattern of effects. These results suggest that the different assessment approaches may capture different personal and interpersonal elements of emotion regulation. By contrast, observational and self-report measures of aversive cognitive perseveration were positively associated, but self-reports of this strategy had stronger independent effects. The pattern of results suggests that some emotion regulation strategies (e.g., aversive cognitive perseveration) may be more visible than other forms of emotion regulation (e.g., disengagement). In addition, the results also provide strong support for the use of self-reports in assessing spontaneous emotion regulation in future research.
CHAPTER FOUR: GENERAL DISCUSSION

Emotion regulation has important implications for individuals’ psychological, social and physical health (Gross & John, 2003; John & Gross, 2004; Mauss & Gross, 2004). Emotion regulation has also been found to be associated with a range of interpersonal outcomes, such as relationship formation and relationship quality (Butler et al., 2003; Richards et al., 2003; Tackman & Srivastava, 2016). However, there is a surprising dearth of research investigating the personal and interpersonal processes that contribute to the long-term outcomes associated with emotion regulation. The current thesis makes a novel contribution to the emotion regulation literature in three ways: (1) examining emotion regulation in contexts in which emotion regulation is often enacted—during interpersonal interactions, (2) assessing how emotion regulation shapes central personal and interpersonal goal-relevant outcomes specific to the contexts examined, and (3) examining how the effects of emotion regulation extend across time and social interactions.

In this final chapter, I briefly summarize the findings of the studies presented in each chapter (summarized in Table 4.1) and highlight how examining emotion regulation during interpersonal interactions advances the understanding of why emotion regulation has important long-term effects for personal and relationship well-being. I also discuss how these studies advance the emotion regulation literature. Specifically, I highlight the strengths of the studies and the implications for future research. I also consider the limitations and caveats in the current thesis to provide a foundation for future research.
Table 4.1 Summary of Thesis Chapters and Points Demonstrating How Emotion Regulation within Social Interactions are Central to understanding why Emotion Regulation Shapes Goal-Relevant Outcomes and Spills Over to Subsequent Interactions

<table>
<thead>
<tr>
<th>Thesis Section</th>
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<tbody>
<tr>
<td><strong>Chapter 2. Emotional Suppression and Goal Pursuit</strong></td>
<td>Emotion regulation plays a crucial role in navigating challenging situations in daily lives. Existing research has established the relationship between emotion regulation and psychological, social and physical well-being. However, there has been scant examination of emotion regulation during interpersonal interactions and assessing how emotion regulation shapes goal-relevant outcomes which are likely to predict longitudinal and spillover outcomes.</td>
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<tr>
<td></td>
<td>Chapter Two examined the spontaneous use of emotional suppression in the context of personal goal pursuit, and whether suppressing emotions when experiencing challenges during goal pursuit concurrently and longitudinally predicts key goal-relevant outcomes in this context.</td>
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<tr>
<td></td>
<td>Results illustrated that greater use of emotional suppression during the context of goal pursuit hindered goal strivings and achievement. Consistent with prior research, greater emotional suppression predicted increases in depressed mood and reduced perceived support/closeness. In addition, the results revealed that greater emotional suppression reduced goal effort, competence and success across time.</td>
</tr>
<tr>
<td><strong>Chapter 3. Emotion Regulation, Relationship Conflict and Spillover</strong></td>
<td>Emotion regulation not only shapes the degree to which individuals can achieve personal goals, but can also facilitate or impede interpersonal goals. Further, the effects of emotion regulation should also spill over to shape personal and interpersonal outcomes in other contexts.</td>
</tr>
<tr>
<td></td>
<td>Chapter Three examined whether emotion regulation strategies enacted during couples’ conflict interactions are associated with a key interpersonal goal in this context—conflict resolution. This chapter also broadened the assessment of emotion regulation by assessing three categories of emotion regulation strategies shown to underpin the most commonly assessed emotion regulation strategies by utilizing observational and self-report measures.</td>
</tr>
<tr>
<td></td>
<td>Results illustrated that greater disengagement (e.g., expressive suppression) and aversive cognitive perseveration (e.g., rumination) during marital conflict predicted lower conflict resolution, and in turn, parents reported lower responsiveness toward their child and lower positive experience in the subsequent family activity. By contrast, greater adaptive engagement (e.g., cognitive reappraisal) predicted greater conflict resolution and thus more positive outcomes during the family interaction.</td>
</tr>
<tr>
<td></td>
<td>Results also demonstrated that observed and self-reported disengagement and aversive cognitive perseveration remained significant when controlling for the other two emotion regulation strategies.</td>
</tr>
<tr>
<td></td>
<td>Lastly, observational and self-reported measures of disengagement and aversive cognitive perseveration revealed the same pattern of effects.</td>
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Summary of Results

**Emotional Suppression and Goal Pursuit**

Emotion regulation is theorized to be pivotal in helping individuals manage goal-directed behaviour and impulses during emotionally challenging situations (Gratz & Roemer, 2004; Thompson, 1994), and should have implications for how well people can achieve important personal and interpersonal goals. Indeed, the wealth of research contrasting the effects of different emotion regulation strategies (e.g., emotional suppression and cognitive reappraisal) demonstrate that emotional suppression interferes with cognitive performance and impedes self-control (Richards & Gross, 1999, 2000; Muravan et al., 1998), whereas cognitive reappraisal does not. However, no research to date has directly examined whether emotion regulation shapes the degree to which people can successfully achieve important goals in their routine lives. Extending prior research, Chapter Two investigated whether emotional suppression in the context of personal goal pursuit impedes people’s goal strivings and achievement (see upper section of Table 4.1).

The two longitudinal studies in Chapter Two demonstrated that, consistent with prior research, greater use of emotional suppression was associated with greater depressed mood and lower perceived support/closeness. Advancing prior literature, the results also illustrated the negative consequences of emotional suppression for goal strivings and progress. Specifically, greater emotional suppression predicted reduced goal effort, lower goal competence and less successful goal achievement over time. These studies provide the first evidence that the spontaneous use of emotional suppression impedes the degree to which people can manage and achieve personal goals. In particular, my research extends prior research by demonstrating that the effects of emotional suppression are not limited to immediate affective and social costs at the time emotion suppression is enacted but can also
undermine goal strivings and success across time, which is likely one important reason why emotional suppression is associated with poorer psychological and physical well-being.

The studies presented in Chapter Two also explored how the outcomes assessed in the context of goal pursuit work together to explain why emotional suppression has detrimental effects on personal and interpersonal outcomes. Overall, the additional analyses presented in Chapter Two revealed that emotional suppression was a robust predictor when considering alternative predictors. However, there were some evidence to suggest that goal competence and might mediate the effects of emotional suppression on goal success and depressed mood. More specifically, emotional suppression interferes with the degree to which individuals feel competent that they can overcome challenges that arise during goal pursuit, and in turn, undermines goal success and exacerbates depressed mood over time.

The examination of emotional suppression during the context of goal pursuit provides a novel contribution to the current literature on emotion regulation in three ways. First, as emotion regulation episodes often occur within social interactions (Gross et al., 2006), the context of goal pursuit offers an important and routine situation in which the personal and interpersonal outcomes of emotion regulation will emerge. Second, my research uniquely demonstrates that these outcomes extend beyond changes in affective or relational experiences that have been focused on in prior research. In particular, these studies demonstrate that emotional suppression enacted during goal pursuit predicted contextually relevant goal outcomes, including that emotional suppression interferes with personally driven goal-relevant activity across time. Finally, the longitudinal methods in the studies presented in Chapter Two demonstrate how emotional suppression during goal pursuit culminates to shape outcomes across time, demonstrating one reason why emotional suppression is associated with poorer psychological and health outcomes. These results extend the emotion regulation literature by demonstrating that emotional suppression is
associated with lower well-being because it interferes with the ability to overcome challenges in important domains relevant to people’s everyday lives.

**Emotion Regulation, Relationship Conflict and Spillover**

Emotion regulation should also play an important role in managing interpersonal challenges to facilitate or hinder goal-directed behaviour during interpersonal interactions, such as during relationship conflict. One way individuals can regulate negative emotions that arise during relationship conflict is by suppressing or concealing emotions and thoughts from their partners. Although people enact this strategy to avoid conflict and hurting the partner’s feelings (Lemay, Bechis, Martin, Neal & Coyne, 2013), recent research examining emotional suppression in the context of romantic relationship reveals that this emotion regulation strategy has negative implications for relationships, including reduced closeness and relationship satisfaction (Cameron & Overall, 2017; Impett et al., 2012; Velotti et al., 2015). Building upon this prior research, Chapter Three investigated how three types of emotion regulation strategies during marital conflict shape conflict resolution, and assessed whether poorer conflict resolution would spill over to affect functioning in a subsequent family activity.

As summarized in the lower section of Table 4.1, the results from Chapter Three revealed that greater disengagement (e.g., expressive suppression) and aversive cognitive perseveration (e.g., rumination) during couples’ conflict predicted lower conflict resolution, and in turn, less positive experiences and poorer parental responsiveness during a family activity immediately following the couples’ conflict discussion. In contrast, greater adaptive engagement (e.g., cognitive reappraisal) was associated with greater conflict resolution, and in turn, more positive family outcomes. However, the results also illustrated that the effects of maladaptive forms of emotion regulation were independent and stronger than adaptive strategies. Finally, observational and self-reported emotion regulation revealed the same
pattern of effects, but were weakly associated indicating that observational and self-reported emotion regulation might capture different personal and interpersonal elements of emotion regulation.

Building upon the results from Chapter Two, showing the importance of emotion regulation for personal goal strivings and progress, the results from Chapter Three demonstrate that emotion regulation also shapes important interpersonal goal-relevant outcomes. Prior research has shown that the ability to effectively downregulate emotions during conflict predicts greater marital satisfaction (Bloch et al., 2014), whereas less adaptive emotion regulation strategies, such as expressive suppression, leads to declines in satisfaction (Vater & Schröder-Abé, 2015). However, the results presented in Chapter Three provide the first demonstration of how the spontaneous use of different types of emotion regulation strategies during marital conflict shapes a central outcome within this domain – conflict resolution. Even more uniquely, the results also highlighted that the effects of emotion regulation are not limited to outcomes within the specific interaction emotion regulation was enacted, and demonstrate how the outcomes of emotion regulation in one context further shape broader functioning within subsequent social interactions.

Emotion Regulation within Interpersonal Interactions: Strengths, Caveats, Implications for Future Research, and Conclusions

The studies presented across this thesis advance the emotion regulation literature in multiple ways and have important implications for advancing understanding of how emotion regulation shapes personal and interpersonal well-being. In the sections that follow, I outline how the methods and results of the studies presented in this thesis open up new and exciting avenues for future research. First, I highlight the advantages of examining emotion regulation within social interactions, including discussing how incorporating a dyadic, social interaction approach provides a deeper assessment of emotion regulation processes (Point I). Next, I
discuss the importance of focusing on contextually goal-relevant outcomes and mechanisms, and consider additional contextual factors that will determine the degree to which different emotion regulation strategies are adaptive or maladaptive (Point II). Finally, I discuss the advantages of incorporating longitudinal designs to extend understanding of how the effects of emotion regulation flow on to shape well-being across time and across interactions (Point III). Across each section I highlight the strengths of the studies and the advancements the results offer, but also consider limitation and caveats, in order to provide a foundation for considering future research directions.

I. Assessing Emotion Regulation within Interpersonal Interactions

Emotion regulation is often embedded within social interactions. In fact, there is evidence that 98% of emotion regulation episodes take place within social contexts (Gross et al., 2006). As the studies in my thesis illustrate, the spontaneous use of emotion regulation strategies during emotionally relevant interpersonal interactions predicts important personal and interpersonal outcomes immediately and across time. In addition, assessing emotion regulation during specific domains provides uniform contexts to examine how different emotion regulation strategies shape the personal and relationship outcomes central to those domains. Indeed, although prior research has documented the wide-ranging effects of habitual emotion regulation on people’s emotional and psychological well-being (Gross & John, 2003; Kashdan et al., 2008; Richards & Gross, 2000), the degree to which emotion regulation shapes well-being should be the result of how emotion regulation strategies influence contextually relevant outcomes within the specific domains that emotion regulation is enacted. Moreover, assessing emotion regulation processes within dyadic interactions allows additional partner reports and observational assessments of both outcomes and the enactment of emotion regulation. Below, I discuss these strengths and their associated implications for future research.
Emotion regulation enacted within interactions shapes context-specific outcomes.

The comparison of habitual versus context-specific use of emotional suppression demonstrates the importance of assessing emotion regulation within specific contexts (Chapter Two). In particular, habitual measures assessing individual differences in tendencies to use emotional suppression replicated established effects within the context of goal pursuit, such as predicted levels of depressed mood and perceived support/closeness. Moreover, habitual measures of emotional suppression were significantly associated with the self-reported use of emotional suppression during goal pursuit. However, compared to the measure of habitual emotional suppression, the context-specific assessment of emotional suppression when discussing goals with partners had stronger and more robust associations with goal-relevant outcomes concurrently and over time. This pattern supports that the effects of general tendencies of emotion regulation are likely to be the result of enacting emotion regulation strategies within specific contexts, which should thus mediate the effects between general tendencies and outcomes specific to that domain.

However, although the data support that the assessment of emotion regulation during social interactions is a better predictor of habitual measures of emotion regulation, my studies did not directly test whether emotion regulation within specific social interactions mediated the long-term effects that prior research shows arise from habitual emotional suppression. This is an important direction for methodological reasons. First, the weaker effects of habitual measures in Chapter Two indicate that the vast literature based on these assessments likely underestimate the potential effects of different emotion regulation strategies. Second, if emotion regulation during specific contexts are responsible for the effects of habitual tendencies, then the overall impact of habitual tendencies will be magnified by how often people encounter emotionally challenging situations and repeatedly enact specific emotion regulation strategies. Thus, the broader emotion regulation literature should examine the
degree to which the effects of emotional suppression (and other emotion regulation strategies) are stronger as the use of emotion regulation strategies culminate across repeated challenging social interactions. Finally, recognizing that emotion regulation during specific episodes likely underpin long-term effects also highlights that interventions addressing poor emotion regulation tendencies should occur within the specific contexts in which emotion regulation is enacted. In particular, tangible ways of changing emotion regulation in specific contexts should be easier to target than trying to change general tendencies devoid of context.

*Social interaction partners provide additional assessment of outcomes.* Examining emotion regulation strategies as they manifest during interpersonal interactions also provides a valuable tool to assess whether the effects of emotion regulation go beyond the individual. Prior research has demonstrated that the effects of emotion regulation are not confined to the individual, but extend to important interpersonal qualities between interaction partners, such as perceived support/closeness and evaluations of the relationship (Gross & John, 2003; Srivastava et al., 2009; Velotti et al., 2015). Not only are examinations of dyadic interactions important to understand these interpersonal effects, examining emotion regulation within interpersonal interactions also enabled me to test whether the outcomes of emotion regulation as reported by individuals were corroborated by their partners’ reports. For example, the individual reports of lower depressed mood, lower perceived support/closeness and lower goal competence arising from greater emotional suppression during the pursuit of personal goals were also validated by partners perceiving those individuals having greater depressed mood, lower perceived support/closeness, and feeling less competent about their goal (Chapter Two). Similarly, partners also perceived individuals to be less responsive to their children in a triadic family interaction following less successfully resolved conflicts arising from poorer emotion regulation (Chapter Three). This pattern across studies demonstrate that the self-reported effects of emotion regulation do not just lie in the minds of individuals
enacting emotion regulation strategies. Thus, these partner reports provide stronger evidence that emotion regulation is affecting important personal and interpersonal outcomes that likely contribute to the poorer well-being arising from emotional suppression.

Another strength of examining the use and outcomes of emotion regulation from both partners’ perspectives is that it allows examination of how the emotion regulation of one dyad member affects the other. Recent research has provided good evidence that greater emotional suppression affects interaction partners, such as increased negative emotional experiences, lower relationship evaluations, and greater physiological threat responses (Butler et al., 2003; Ben-Naim et al., 2013; Impett et al., 2012; Peters et al., 2014). The current studies focused on establishing individual outcomes within important social contexts, but the processes examined are also likely to shape important outcomes for relationship partners. For example, one reason why emotional suppression may have reduced perceptions of support/closeness as reported by both partners is that partners were less able to understand what support individuals desired. By reducing their effective support provision, these interpersonal processes may also result in partners experiencing drops in their own feelings of competence in ways that could impact their own goal pursuit. Similarly, poorer conflict resolution also has important effects on partners (Overall & McNulty, 2017), including undermining relationship quality, conflict efficacy, and their own ability to be responsive parents in subsequent family interactions. These partner effects are important to examine in future studies given the impact emotion regulation will have within the interdependent context of social interactions.

Moreover, the interdependent nature of social interactions also means that partners will affect each other’s emotion regulation strategies. The studies in this thesis demonstrated that individuals’ emotion regulation strategies shaped the degree to which individuals feel supported/close during goal pursuit and the success of conflict resolution during marital
conflict. However, I did not assess how both partners’ emotion regulation strategies interact to affect outcomes or how different strategies may affect partners’ own ability to regulate their emotions during social interactions. Recent research examining interpersonal emotion regulation provides some evidence that different combination of emotion regulation strategies may differentially impact personal and interpersonal outcomes. For example, greater co-rumination (i.e., when relationship partners excessively dwell on negative aspects of problems; Rose, 2002) among adolescent dyads was associated with positive relationship quality and closeness but was also associated with greater depressive symptoms and anxiety (Rose, Schwartz-Mette, Glick, Smith & Luebbe, 2014). Similarly, partners play a role in each other’s emotion regulation strategies. For example, partners can soften each other’s tendencies to experience negative emotions and regulate them by disengaging or suppressing (Overall, Simpson & Struthers, 2013). Future research should incorporate these dyadic perspectives to understand how the effects shown in the current studies may be magnified or ameliorated by partners’ own personal and interpersonal emotion regulation strategies.

*Observing social interactions provides additional assessments of emotion regulation processes.* In addition to obtaining partner reports to corroborate individual outcomes and partner effects, assessing emotion regulation during interpersonal interactions enables researchers to observe the enactment of emotion regulation strategies and the ensuing interpersonal processes as they manifest during social interactions. The study presented in Chapter Three represents the first attempt of gathering observational assessments of emotion regulation by applying standard methodology used to study interpersonal behaviour in the marital conflict literature. The results indicate that observational assessments provide valuable insight into the way emotion regulation strategies are visible and expressed within social interactions as well as how these different strategies produce independent effects on context-specific outcomes, such as conflict resolution. However, these measures require
further validation to understand what specific elements are being captured and how they may cohere and/or depart from self-report assessments. In particular, although they illustrated the same effects, observed and self-report measures of emotion regulation were not highly correlated, which may indicate that the internal enactment and external expression reflect different elements of emotion regulation and/or reflect individual differences in the awareness or successful enactment of regulation strategies (as outlined in Chapter Three).

These unexpected yet interesting effects highlight valuable directions for future research. First, these differential effects might provide a way of teasing apart the mechanisms for the ways in which emotion regulation shapes individual (e.g., depressed mood) versus interpersonal (e.g., closeness) outcomes. Self-reported emotion regulation may have stronger predictive utility for individual outcomes, whereas interpersonal outcomes may be more strongly determined by behavioural indicators during interpersonal interactions or when self-reports cohere more strongly with those indicators. Second, comparing self-report and observational measures indicates that self-report assessments will provide valuable insights into the effects of people’s awareness or intention of their emotion regulation strategies (self-reported strategies), but also the way their unintentional emotional regulation behaviour influences important outcomes and social interactions. Third, comparing self-report and observational measures may also provide a way of understanding how well people can effectively utilize different strategies, such as emotional suppression, so that the internal process is less visible to others and therefore has a more minimal impact on social interactions and interpersonal outcomes.

These strengths of a combined approach indicate that gathering observational assessments during social interactions will allow researchers a closer examination of the different ways emotion regulation shapes the interpersonal processes and outcomes of emotion regulation (e.g., responsiveness). Observational assessments are a standard approach
used by relationship researchers to study communication and behaviours during interpersonal interaction. However, researchers studying emotion regulation have typically relied on self- and partner reports to assess the effects of emotion regulation as certain emotion regulation strategies are harder to detect than others (e.g., suppressing emotional experiences).

Incorporating observational assessments as well as both self- and partner reports in future investigations will provide the opportunity to compare individuals’ and partners’ perceptions of the emotion regulation processes and interaction outcomes against ratings by independent observers. These multiple comparisons may provide insight into what observers and partners see that is distinct from self-reports, potential biases in self- versus partner perspectives, and assess which of these measures are the strongest predictors of personal versus relationship outcomes.

II. Examining Goal-Relevant Outcomes of Emotion Regulation

Recent theory and research suggest that the evaluation of the adaptiveness of emotion regulation strategies cannot rest solely on the degree to which they decrease emotional distress (Aldao, 2013; Aldao & Christensen, 2015; Gratz & Roemer, 2004; Tamir & Ford, 2012). Instead, emotion regulation strategies should also be evaluated by examining the degree to which they facilitate or hinder important goal-directed behaviours during emotionally-challenging situations. As discussed in this section, the focus on goal-relevant outcomes in this thesis advances understanding and highlights important directions for future research by showing that: (a) the effects of emotion regulation strategies on goal-relevant outcomes were independent of negative emotions experienced, (b) assessing a range of goal-relevant outcomes is important in revealing the differential effects and underlying mechanisms of emotion regulation strategies, and (c) the outcomes of emotion regulation strategies should depend on contextual and individual difference factors.
Assessing context-specific outcomes. Prior theories posit that emotion regulation is pivotal to managing goal-directed behaviour during emotionally challenging situations, which should shape the degree to which individuals are able to meet situational demands and achieve important goals within those contexts (Gratz & Roemer, 2004; Thompson, 1994). The studies presented in this thesis provide the first evidence that emotion regulation shapes the degree to which people can achieve personal and interpersonal goals across different contexts relevant to people’s routine lives. Greater emotional suppression while pursuing personal goals predicted lower goal strivings and achievement across time (Chapter Two). Greater disengagement and aversive cognitive perseveration were associated with lower conflict resolution during marital conflict, whereas greater adaptive engagement was associated with greater conflict resolution (Chapter Three). These results advance the literature by demonstrating that emotion regulation strategies enacted during emotionally-challenging contexts have significant implications for the degree to which people can achieve personal and interpersonal goals central to those domains.

The studies in this thesis provide a preliminary framework for understanding how to examine the goal-relevant outcomes and associated mechanisms of enacting emotion regulation in specific contexts. However, although the outcomes assessed in these studies were arguably the most central outcomes during goal pursuit and marital conflict, there are other relevant outcomes I did not assess that will likely be affected by emotion regulation strategies enacted within these contexts. For example, the study presented in Chapter Three assessed how three broad types of emotion regulation strategies shape couples’ conflict resolution, but emotion regulation strategies enacted within this context are also likely to shape other important personal and interpersonal outcomes, such as closeness, responsiveness, or emotional contagion during conflict. These additional outcomes are important to assess because prior research has demonstrated that they shape relationship
quality and functioning (Impett et al., 2012; Katz, Beach & Joiner, 1999; Reis, Clark & Holmes, 2004), and they also likely play a role in shaping couples’ ability to resolve conflict as well as their ability to move on to function effectively in subsequent family interactions.

Examining these additional context-relevant outcomes in future research will enable researchers to examine potential differential effects of emotion regulation, which will enable a deeper theoretical understanding of which particular outcomes are most strongly shaped by different emotion regulation strategies. For example, as well as assessing key goal-relevant outcomes, I also measured the degree to which participants experienced goal-related stress during goal pursuit (Chapter Two), and negative emotions during marital conflict (Chapter Three). Across all analyses, controlling for stress/negative emotions did not diminish the effects of emotion regulation, with the exception of aversive cognitive perseveration on conflict resolution. This pattern reveals that the assessment and effects of emotion regulation strategies on goal-relevant outcomes are typically not due to negative emotions, except for observations of aversive cognitive perseveration which theoretically involve visible signs of exacerbated distress. This pattern is important for two reasons. First, the adaptiveness of emotion regulation cannot be determined solely by the degree to which it decreases emotional distress given that important goal outcomes were facilitated or hindered independent of negative emotions. Second, different strategies may produce a different array of effects that account for similar deficits in goal-relevant functioning. For example, aversive cognitive perseveration likely interferes with problem solving by amplifying negative emotional expressions and increasing self-focus, whereas disengagement likely interferes with problem solving by reducing attention, closeness and interpersonal co-ordination.

Assessing context-specific mechanisms. Indeed, assessing multiple theoretically relevant outcomes associated with specific emotion regulation strategies will enable greater insight into the underlying mechanisms for any differential effects. For example, I examined
the effects of emotion regulation on conflict resolution as well as parental responsiveness during family interactions (Chapter Three). The results demonstrated that greater disengagement during marital conflict was associated with lower parental responsiveness toward children in a subsequent family activity because disengagement hindered conflict resolution. In contrast, although there were some evidence suggesting that greater aversive cognitive perseveration was associated with lower parental responsiveness due to lower conflict resolution, aversive cognitive perseveration continued to have direct effects on parental responsiveness. Moreover, these direct effects were not due to the carryover of negative emotions from the conflict interaction to the family interaction. Thus, factors additional to conflict resolution and negative emotions are at play.

Guided by existing research and theory on the various effects associated with emotion regulation, it is important that future research assess the likely mediating factors involved. For example, communication strategies that involve persistent emphasis on and exaggeration of negative emotions tend to amplify negative emotions in both partners (e.g., Overall et al., 2014) and reduce working memory (Schmeichel, 2007). The heightened attention toward negative emotions and reduction in cognitive functioning is also theorized to be a central reason why rumination is associated with less effective problem solving (Clore & Gasper, 2000; Watkins & Brown, 2002). The effects on partners’ emotions also undermine relationship closeness and satisfaction (Overall et al., 2014). Thus, assessing theoretically relevant indices of cognitive, emotional and interpersonal functioning in both partners is important to isolate how aversive cognitive perseveration leads to spillover effects across contexts.

*The effects of emotion regulation are context-dependent.* The results of the current studies indicate that disengagement (e.g., expressive suppression) and aversive cognitive perseveration (e.g., rumination) emotion regulation strategies hindered important goal-
relevant outcomes, whereas adaptive engagement strategies (e.g., cognitive reappraisal) predict more positive outcomes. However, these associations emerged within contexts in which disengagement and cognitive perseveration should have harmful effects, and adaptive engagement strategies more positive effects. During the context of relationship conflict, behavioural avoidance, suppressing emotions or over-engagement and difficulty disengaging from negative emotions/cognitions are likely to undermine the degree to which couples can resolve conflict. By contrast, strategies which involve constructive problem solving and minimisation of emotional impact may facilitate conflict resolution, at least in the short term (Overall & McNulty, 2017). However, there are likely to be other contexts in which disengagement and aversive cognitive perseveration have beneficial outcomes, and in which adaptive engagement has negative outcomes, and this should depend on the context in which emotion regulation strategies are enacted.

Indeed, prior research provides evidence that ‘maladaptive’ emotion regulation strategies (e.g., expressive suppression) do not always predict negative interpersonal outcomes depending upon important contextual or individual difference factors. For example, individuals from Asian cultures (Butler et al., 2007) and individuals high in interdependence (Le & Impett, 2013) do not report the same costs when enacting emotional suppression, probably because of their focus on sustaining relationships. Similarly, holding back negativity when experiencing minor relationship problems can also help sustain relationships, as expressing negativity when problems are minor may appear unjustified (Overall & McNulty, 2017). Kalokerinos, Greenaway and Casey (2017) have also shown that participants who suppressed positive emotions were evaluated more positively within contexts in which it was inappropriate to express positive emotions (e.g., expressing positive emotions when watching a sad film clip). Finally, research also suggests that cognitive reappraisal is most beneficial for people experiencing high levels of uncontrollable stress and
are unable to change their situation but is not beneficial for people experiencing controllable stress and thus should more adaptively change their situation (Troy, Shallcross & Mauss, 2013).

These growing examples of contextual effects indicate that the findings demonstrated across this thesis may represent the average effects of the emotion regulation strategies assessed, but that these could differ by context (also see Aldao, 2013). For example, emotional suppression during couples’ interaction may be harmful when trying to solve relationship problems but could be beneficial for partners when people need to be happy for partners’ personal success even when that has costs for the relationship. Similarly, expressive suppression may be important when holding back negativity arising from couples’ conflict in order for parents to focus on children during familial interactions. Although recent research has shown that emotional suppression in parent-child interactions has similar negative outcomes in terms of parent-child relationship quality and responsiveness (Le & Impett, 2016), high levels of marital negativity may need to be effectively inhibited to reduce negative parent-child emotion contagion until the marital conflict can be more constructively resolved. This example highlights the importance of timing and flexibility of emotion suppression versus expression, which is an additional key quality of emotion regulation that will determine psychological well-being (see Aldao, Sheppes & Gross, 2015; Bonanno & Burton, 2013) and should shape interpersonal outcomes. Thus, examining how central goal-relevant outcomes are shaped by when and how different emotion regulation strategies are enacted is a pivotal goal for future research.

III. Longitudinal and Spillover Effects of Emotion Regulation

Despite the mounting evidence linking emotion regulation to a broad range of psychological and health outcomes (Aldao, et al., 2010; Gross & John, 2003; Gross & Muñoz, 1995; John & Gross, 2004; Karreman & Vingerhoets, 2012), there is a surprising
dearth of research examining the underlying mechanisms between emotion regulation and well-being. In the following text, I discuss how future research would benefit from incorporating the methods applied in the current thesis to examine the ways in which emotion regulation shapes well-being across time. In particular, I highlight the benefits of (a) gathering repeated measures of emotion regulation and goal-relevant outcomes across time, (b) assessing the effects of emotion regulation on performance in subsequent tasks, and (c) combining these methods to assess immediate and longitudinal effects.

*The importance of longitudinal designs.* Longitudinal research is pivotal to understanding how emotion regulation shapes personal and interpersonal well-being over time. To test whether emotion regulation shapes people’s ability to make progress on their goals, I gathered repeated assessments of emotional suppression as well as important goal-relevant outcomes during goal pursuit, including depressed mood, perceived support/closeness, and goal effort, competence and success (Chapter Two). Across two longitudinal studies, the results revealed that greater emotional suppression hindered goal strivings and success across time. As outlined in Chapter Two, these results indicate that emotional suppression interferes with people’s ability to make progress towards important personal goals, which is likely one important reason why emotional suppression has been linked with detrimental psychological and health outcomes.

By including repeated assessments of multiple goal-relevant outcomes, I also examined different theoretical models explaining how these variables work together to explain the effects of emotional suppression (Chapter Two). Although emotional suppression was a robust predictor of all the outcomes assessed, the results indicated that feelings of competence was an important mechanism that helped explain the links between emotional suppression on goal success and depressed mood. Specifically, greater emotional suppression was associated with lower success and greater depressed mood across time in part because it
undermined feelings of efficacy when faced with challenges that arise during goal pursuit. These results highlight a pivotal reason why repeated assessments of multiple goal-relevant outcomes are important; this approach enables a test of the differential strength of competing mechanisms underlying the effects of emotion regulation strategies. Thus, this methodological approach will be particularly beneficial in future investigations attempting to tease apart the differential mechanisms that explain the different ways distinct emotion regulation strategies, such as disengagement and aversive cognitive perseveration, produce similar broad outcomes, such as poorer personal well-being and interpersonal functioning.

*Emotion regulation spillover and broader functioning.* Another valuable approach to examine the degree to which emotion regulation affects functioning across time is to assess whether emotion regulation enacted in one context influences individuals’ performance or experience in a subsequent context (also see Aldao, 2013). The study presented in Chapter Three represents the first demonstration of how the effects of emotion regulation can spill over across social interactions. Emotion regulation strategies enacted during marital conflict shaped the degree to which couples were able to resolve conflict during the conflict discussion, which in turn predicted the degree to which parents were responsive to their child during a subsequent family activity. These spillover processes indicate that the effects of emotion regulation strategies on goal-relevant outcomes in one context are likely to compound over time as the immediate social outcomes reverberate across subsequent interactions. This novel demonstration paves the way for a new wave of research examining how emotion regulation spills over across contexts. Indeed, future research assessing processes across laboratory tasks or naturalistic observations will be able to identify the various ways different emotion regulation strategies spill over to shape important contextually relevant outcomes. Moreover, combining these assessments of sequential interactions with the longitudinal designs described above will also allow greater
understanding of how these spillover processes contribute to psychological well-being and health over time.

*Integrating methods to assess the immediate and longitudinal effects of emotion regulation.* Although my studies demonstrated the ways in which emotion regulation strategies enacted during social interactions have significant implications on personal and interpersonal outcomes across time, my studies were correlational in nature, and thus, do not provide insights into the causal nature of these associations. One fruitful direction for future researchers would be to incorporate experimental paradigms to manipulate the use of specific emotion regulation strategies, which could be combined with the methods applied in this thesis to assess both the immediate and longitudinal effects of different emotion regulation strategies. The most fruitful way to combining experimental, naturalistic, and longitudinal designs would be to use experimental interventions designed to reduce the use of ‘maladaptive’ strategies (e.g., emotional suppression) and then assessing contextually relevant outcomes within immediate interactions coupled with ongoing assessments of personal and interpersonal outcomes across time. This integrative approach will provide the best platform for revealing how the immediate causal effects of different emotion regulation strategies culminate to shape broader functioning and well-being over time.

**Conclusion**

Emotion regulation is an inherently social phenomenon. The research presented in this thesis highlights the value of examining emotion regulation during interpersonal interactions. In addition to maximizing ecological validity, examining emotion regulation processes as they occur during social interactions offers several methodological advantages. First, a dyadic, social interaction approach enables researchers to more fully examine personal, interpersonal and partner outcomes from multiple perspectives—actors, partners and observers. Second, this approach enhances focus on assessing multiple goal-relevant
outcomes that are specific to the context investigated, which allows a deeper examination of the differential effects and underlying mechanisms of different emotion regulation strategies. Lastly, repeatedly assessing sequential interactions and important goal-relevant outcomes across time expand understanding of how emotion regulation spills over to shape personal and interpersonal functioning. Combining this novel approach with experimental methods is pivotal to fully comprehend how and why different emotion regulation strategies influence psychological, social and physical well-being. Thus, taken together, the results and methods in the current research provide a springboard for future research and highlight several promising avenues to extend understanding of emotion regulation processes.
References


Appendix 1 - Chapter Two Supplemental Materials

In these Supplemental Materials, we present tables relevant to the exploratory analyses we conducted to examine three plausible theoretical models regarding how the outcome variables we assessed might work together to explain the effects of emotional suppression on other relevant outcome variables. These models are depicted in Figure 1.

The Tables SM1.1-SM1.3 provide analyses of the lagged effects across outcome variables relevant to assessing whether any outcomes could act as plausible mediators of the effects of emotional suppression in the ways outlined in Figure 1.

Table S4 examine whether the outcome variables precede emotional suppression.

Relevant analyses and conclusions are described in the text of the paper in each study under the headings “Additional Analyses Exploring Associations across Outcome Variables.”
Table SM1.1. Tests of Lagged Effects of Depressed Mood and Perceived Support/closeness on Goal Effort, Competence and Success (controlling for goal stress)

<table>
<thead>
<tr>
<th>Study 1</th>
<th>Study 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B</strong></td>
<td><strong>t</strong></td>
</tr>
<tr>
<td>Low</td>
<td>High</td>
</tr>
</tbody>
</table>

Depressed Mood as Predictor of:

- **Goal Effort**
  - Study 1: -0.09, -1.31, -0.231, 0.047, 0.10
  - Study 2: -0.17, -1.96*, -0.350, 0.001, 0.15

- **Goal Competence**
  - Study 1: -0.04, -0.78, -0.132, 0.058, 0.06
  - Study 2: -0.07, -0.91, -0.211, 0.078, 0.07

- **Goal Success**
  - Study 1: -0.01, -0.12, -0.146, 0.130, 0.01
  - Study 2: -0.30, -2.93**, -0.500, -0.097, 0.23

Perceived Support/closeness as Predictor of:

- **Goal Effort**
  - Study 1: 0.03, 0.52, -0.079, 0.135, 0.07, 1.24, -0.067, 0.292, 0.09
  - Study 2: 1.24

- **Goal Competence**
  - Study 1: 0.10, 3.23**, 0.039, 0.161, 0.29, 0.15, 2.10*, 0.009, 0.291, 0.17

- **Goal Success**
  - Study 1: 0.04, 0.86, -0.057, 0.142, 0.09, 0.32, 2.91**, 0.102, 0.534, 0.23

*Note. All analyses predict the dependent variable at time \( i + 1 \) from depressed mood (upper half of table) or perceived support/closeness (lower half of table) at time \( i \) controlling for the dependent variable at time \( i \). In Study 2, time \( i \) represents variables assessed post-discussion given that corresponds to when emotional suppression was assessed (although the same pattern of results emerged using initial pre-discussion measures).*  

*\( p < .05 \). **\( p < .01 \).
Table SM1.2. Tests of Lagged Effects of Goal Effort, Competence and Success on Depressed Mood and Perceived Support/closeness (controlling for goal stress)

<table>
<thead>
<tr>
<th></th>
<th>Study 1</th>
<th>Study 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>$t$</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressed Mood</td>
<td>-.09</td>
<td>-2.31*</td>
</tr>
<tr>
<td>Perceived Support/closeness</td>
<td>-.03</td>
<td>-.79</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressed Mood</td>
<td>-.25</td>
<td>-3.86**</td>
</tr>
<tr>
<td>Perceived Support/closeness</td>
<td>.03</td>
<td>.48</td>
</tr>
</tbody>
</table>

**Goal Competence as Predictor of:**

<table>
<thead>
<tr>
<th></th>
<th>Study 1</th>
<th>Study 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$B$</td>
<td>$t$</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depressed Mood</td>
<td>-.08</td>
<td>-2.25*</td>
</tr>
<tr>
<td>Perceived Support/closeness</td>
<td>-.05</td>
<td>-1.29</td>
</tr>
<tr>
<td><strong>High</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Goal Success as Predictor of:**

Note. All analyses predict the dependent variable at time $i+1$ from goal effort, goal competence and goal success at time $i$ controlling for the dependent variable at time $i$. In Study 2, time $i$ represents goal competence assessed post-discussion given that corresponds to when emotional suppression was assessed. Pre-discussion competence did not significantly predict depressed mood or perceived support/closeness across time. In analyses with goal effort as a predictor in Study 2, the initial pre-discussion measure of goal effort across the past month was used as time $i$ because goal effort could not be assessed until 1-month after the discussion. Finally, in Study 2, goal success could only be assessed 1-month follow-up and so could not be included as a predictor. *$p < .05$. **$p < .01$. 
Table SM1.3. Tests of Lagged Effects across Goal Effort, Competence and Success (controlling for goal stress)

<table>
<thead>
<tr>
<th></th>
<th>Study 1</th>
<th>Study 2</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>t</td>
</tr>
<tr>
<td></td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td><strong>Goal Effort as Predictor of:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal Competence</td>
<td>.11</td>
<td>.329*</td>
</tr>
<tr>
<td>Goal Success</td>
<td>.23</td>
<td>.331*</td>
</tr>
<tr>
<td><strong>Goal Competence as Predictor of:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal Effort</td>
<td>.13</td>
<td>1.71</td>
</tr>
<tr>
<td>Goal Success</td>
<td>.13</td>
<td>1.60</td>
</tr>
<tr>
<td><strong>Goal Success as Predictor of:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal Effort</td>
<td>.13</td>
<td>1.83</td>
</tr>
<tr>
<td>Goal Competence</td>
<td>.07</td>
<td>2.05*</td>
</tr>
</tbody>
</table>

Note. All analyses predict the dependent variable at time \(i+1\) from goal effort, goal competence and goal success at time \(i\) controlling for the dependent variable at time \(i\). In Study 2, time \(i\) represents goal competence assessed post-discussion given that corresponds to when emotional suppression was assessed (although a similar pattern emerged using pre-discussion ratings of competence). In analyses with goal effort as a predictor in Study 2, the initial pre-discussion measure of goal effort across the past month was used as time \(i\) because goal effort could not be assessed until 1-month after the discussion. Finally, in Study 2, goal success could only be assessed 1-month follow-up and so could not be included as a predictor. *\(p < .05\). **\(p < .01\).
Table SM1.4. The Effects of Outcome Variables on Emotional Suppression (controlling for goal stress)

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Study 1</th>
<th></th>
<th>Study 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>t</td>
<td>r</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td></td>
<td>95% CI Low</td>
<td>95% CI High</td>
<td>r</td>
</tr>
<tr>
<td>Depressed mood</td>
<td>.13</td>
<td>2.59*</td>
<td>.032</td>
<td>.240</td>
</tr>
<tr>
<td>Perceived Support/closeness</td>
<td>-.11</td>
<td>-2.79**</td>
<td>-.187</td>
<td>-.032</td>
</tr>
<tr>
<td>Goal Effort</td>
<td>-.06</td>
<td>-1.41</td>
<td>-.135</td>
<td>.023</td>
</tr>
<tr>
<td>Goal Competence</td>
<td>-.19</td>
<td>-3.46**</td>
<td>-.299</td>
<td>-.081</td>
</tr>
<tr>
<td>Goal Success</td>
<td>-.09</td>
<td>-2.41*</td>
<td>-.167</td>
<td>-.017</td>
</tr>
</tbody>
</table>

Note. All analyses for Study 1 predict emotional suppression at time \( i +1 \) from the predictor variables at time \( i \) controlling for emotional suppression and goal stress at time \( i \). In Study 2, initial pre-discussion measures were used as predictor variables to predict emotional suppression during the discussion. In study 2, goal success could only be assessed 1-month follow-up and so could not be included as a predictor. Approximate effect sizes (\( r \)) were computed using Rosenthal and Rosnow’s (2007) formula: \( r = \sqrt{r^2 / (r^2 + df)} \). *\( p < .05 \). **\( p < .01 \).
Appendix 2 - Chapter Three Supplemental Materials

These supplemental materials include additional information on the behavioural observation and coding procedures for the three categories of emotion regulation during the conflict discussion. We have also included a table displaying the correlations between observed indicators and self-reported emotion regulation.

Coding Schedule Provided to Coders

This coding schedule is designed to assess three categories of emotion regulation that may be evident during couples’ video-recorded discussions of a current relationship problem. Each category involves three different indicators, which assess experience and expression of emotion, engagement in the discussion and approach to problem solving.

Coding will be conducted separately for each partner, and each strategy. Thus, the interactions will be viewed six times to provide independent ratings of each category separately for the female partner and the male partner. In half the couples, female partners will be coded first, and in half the couples, males will be coded first.

Each indicator, and the global rating of each category, will be rated on a 7-pt scale to globally capture the degree to which each individual exhibits the variety of responses falling within each category. Coders will watch the entire interaction and take into account the frequency, intensity and duration of behaviors associated with each category (low = 1-2, moderate = 3-5, high = 6-7).

Disengagement

This category involves a lack of engagement with the partner and the problem being discussed, and a passive and dismissing approach to problem solving that involves suppressed emotional expressions and superficial, non-intimate disclosures. Low-to-moderate levels of disengagement may involve the person displaying muted emotional expressions that appear incongruent with the situation or the person’s actual feelings, simply not being involved or engaged in the discussion, appearing as they care very little about the issues, avoiding conflict or ‘hot’ issues and emotions, and discussing the issue in an impersonal manner that lacks depth and ‘skims the surface’. Higher levels of disengagement are likely to also include obvious suppression and concealment of emotions, actively reflecting the partner’s attempts to engage, and behaviorally and emotionally withdrawing from the partner.

Hypo emotion expression: Emotional elements of the communication or discussion are muted and person attempts to suppress or conceal his/her emotions, which may manifest as:
- verbal dialogue that does not match the emotion expressed (e.g., communicating anger or hurt with a flat, affect-free voice tone) or emotion expressed does not seem to fit with actual feelings (versus expressions that ‘feel’ genuine and congruent with actual feelings)
- slow and labored speech or periods of silence in which person appears to be trying to steady themselves, slow down the interaction, or prevent/recover from emotion
- slow and controlled body movements (e.g., holding breath, purposeful deep breaths, slow nod, slow shifts in chair, infrequent blinking) which indicate the person is not breathing, blinking, swallowing, talking and moving as they would normally (i.e., non-consciously, automatically)
- physical indicators that the person is trying to conceal emotion expressions (e.g., holding body back, clasping or sitting on hands, tight closed mouth, biting lips or tongue, covering the mouth, looking away or hiding face)
NB: be careful to distinguish concealment efforts associated with hypo emotion expression from visible attempts to control emotions that are spilling over or becoming overwhelming, which occur in conjunction with hyper emotional responses (see below)

**Avoidance/Disengagement:** Lack of engagement with the partner and a passive and dismissing approach to the problem, which may involve:

- avoiding discussing the problem (e.g., diverting attention, hesitating, changing topics, delaying the discussion)
- ignoring/refusing to acknowledge the problem, dismissing its importance, and deflecting the partner’s concerns and attempts to discuss the issue
- conveying little concern about the problem or the partner’s views and feelings
- disengaging from the partner (e.g., no, reduced or glazed eye contact, physical distancing, closing off, withdrawing warmth and affection)
- withdrawing from the discussion (e.g., silent, cold and/or distant)

**Superficial problem solving:** Contributions to the discussion and any problem solving is superficial, lacks depth, and "skims the surface", such as:

- superficial contributions that are impersonal and reveal little about the person’s thoughts or feelings (versus meaningful, self-revealing, personal and intimate disclosures)
- rational discussion of the problem that is information-oriented and logical, but lacks deep reflection and exploration of the issues, causes and solutions or recognition of the person’s (or their partner’s) thoughts and feelings about the issues

**Aversive Cognitive Perseveration**

This category involves engagement in the discussion and desires/attempts to connect with the partner, but in ways that (a) fixate on and amplify the symptoms, causes, and consequences of the problem rather than solutions to the problem, (b) focus on, express, exaggerate and pull emotions, (c) emphasize the desires and needs of the self, including being heard and cared for by the partner. Low-to-moderate levels of aversive cognitive perseveration may involve reflecting on the existence rather than solutions to the problem, a somewhat pessimistic outlook, focusing on one’s own perspective, and expressing and discussing emotions, including some emotion-based attempts to elicit reassurance from the partner. Higher levels of this type of strategy are also likely to include high levels of perseveration and inflexible perspective-taking, negatively biased interpretations and expectations, frustrated attempts to ‘make the partner understand’, going around in circles or getting ‘stuck’ on the issue, a sense of helplessness and doom, and high levels of negative emotions or exaggerated emotional displays to pull guilt, attention or reassurance from the partner.

**Ruminative problem engagement:** Discussing the problem in a way that dwells on and amplifies the causes, symptoms and (negative) consequences of the problem and one’s own (negative) thoughts and feelings rather than generating and enacting solutions to the problem. The person is stuck in the problem and maximizes the meaning and severity of the problem.

- remains fixated on the causes and (negative) consequences of the problem, including detailed reflections on what the problem is, why it is a problem and how severe the problem is (rather than generating solutions and considering how to enact solutions)
- perseverating on personal thoughts and feelings, including restating thoughts, feelings and concerns (e.g., expressing the same sentiments repeatedly in different ways), going over the same issues or around in circles (and perhaps conveying that the partner ‘just doesn’t understand’), and not moving forward when partner changes focus or offers solutions
pessimistic appraisals, such as offering more negative interpretations of the problem and the partner’s response than is justified and expressing more pessimistic expectations regarding potential solutions and the future of the relationship

**Hyper emotion expression:** Person’s emotions are clear, either directly expressed or visibly conveyed via facial expressions and body language, emotions may appear exaggerated, and person may seem to be trying to pull emotions from their partner.

- emotion-focused dialogue, including considering how the problem and the partner’s behavior makes the person feel, seeking emotional responses or comfort from the partner, questioning the partner about his/her feelings, and discussion generally imbued with emotional tone
- non-verbal indicators of emotion are obvious and perhaps exaggerated, either purposively (see below) or because the person is overwhelmed by his/her emotions and is having difficulty controlling their emotions and emotional expressions
- person appears to be using emotional expressions (e.g., tears, sulking, making sad face, pouting) or appeals to the partner’s own emotions (e.g., love, guilt, hurt) to influence the partner or obtain reassurance from him/her
- verbal emphasis on words that exaggerate feelings or negative consequences surrounding the issue (e.g., “do you even care?”, “oh my god… please!”, “I really think that…”)

**Self-focused orientation:** Contributions to the discussion and any problem solving are focused on the self or the self vis-à-vis the relationship, such as:

- discussions revolve around the person’s own perspective and how the problem affects the self (rather than consequences for the partner)
- evident desire or need for the partner to understand, accept and agree with the person’s own perspective (and little evidence the person is trying to understand or adopt the partner’s)
- verbal/non-verbal attempts to connect with the partner that appear to have self-oriented motivations, such as gaining reassurance and feeling more secure
- may portray self as needing more help, being less capable, worthy or powerful, and experiencing more negative outcomes than the partner (e.g., ‘I’m worse off’) or trying harder, doing more, and placing more importance on the relationship than the partner

**Adaptive Engagement**

This category involves open and self-assured disclosure of thoughts, opinions and emotions, acknowledging the problem, and active efforts to collaboratively make progress towards solving the problem. Low-to-moderate levels of adaptive engagement may include a general open and warm manner, acknowledgement of the problem, and collaborative efforts to solve or deal with the problem. Higher levels of adaptive engagement are also likely to involve disclosure of one’s thoughts or feelings without being overwhelmed by ‘negative’ emotions or ‘negative’ emotions interrupting the flow of the discussion, efforts to engage in reflection and reappraisal of the problem to accommodate both partners’ views, and greater focus on the couple as a unit working together to resolve the issue.

**Balanced emotion:** Open and self-assured expression and acknowledgement of emotions and feelings without being afraid of conflict or allowing the emotion to take over the interaction. The person is inherently comfortable with their own and their partner’s emotions.

- open expression and acknowledgement of own emotions, without negative emotions overwhelming or disabling the person, dominating or interrupting the flow of the discussion, or interfering with the connection between the couple
- comfortable with each other’s emotions, including not being threatened or phased by the partner’s negative emotions
responsive to any negative emotions partner expresses or seems to be feeling, but not overly responsive (i.e., recognizes partner’s emotions, expresses care and provide comfort if needed, but keeps the discussion moving)

seizing opportunities to understand each other’s negative emotions and feelings, being willing to seek and receive emotional support or comfort, and encourage (but not coerce) the partner to do the same

**Collaborative engagement:** Encouraging an equal platform for the *self* and *partner* by accepting *joint responsibilities*, *encouraging the partner’s contribution* to the discussion and problem solving, and operating as a ‘*relationship team*’ including:

- creating an open and positive environment by displaying positive affect and warmth during the interaction (e.g., maintaining eye contact, open body posture, signaling engagement via active listening and verbal encouragements)
- acknowledging one’s own part in the problem and what s/he can do to change and recognizing the partner’s role and potential actions without blame and acrimony
- accepting, validating and acknowledging the partner’s position and attempting to understand the partner’s views (regardless of whether the self agrees with the partner)
- approaching solutions to the problem as a team (e.g., ‘we’, ‘us’, ‘our’) and conveying that the couples can withstand and solve the problem together (i.e., ‘we are in it together and we can fix it together’)

**Approach-orientated problem solving:** *Constructive and direct* efforts to *move forward* and solve or cope with the problem including:

- active and constructive efforts to problem solving, including assessing (but not dwelling on) causes and consequences, offering realistic and achievable solutions, accepting suggestions offered by the partner (i.e., *not* taking over and solving the problem without the partner’s input), and striving to overcome challenges
- reframing and reappraising problem in ways that reduce any threat or ‘negativity’ the problem may pose and convey the problem can be dealt with/solved (e.g., benign interpretations of the problem, construing as a challenge rather than a vulnerability, seeing the positives in the situation, viewing as an opportunity to strengthen the relationship, recognizing improvements)
- communicating optimistic appraisals of both partner’s ability to deal with the problem and enact solutions and expressing positive expectations about the future of the relationship
Table SM2.1. Correlations between Observed Indicators and Self-Report Emotion Regulation Assessed During the Conflict Discussion

<table>
<thead>
<tr>
<th>Disengagement (Expressive suppression)</th>
<th>Aversive Cognitive Perseveration (Rumination)</th>
<th>Adaptive Engagement (Cognitive Reappraisal)</th>
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<tbody>
<tr>
<td><strong>Observed Indicators</strong></td>
<td><strong>Observed Indicators</strong></td>
<td><strong>Observed Indicators</strong></td>
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<tr>
<td>Hypo emotion expression</td>
<td>.17*</td>
<td>Balanced emotion</td>
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<tr>
<td>Avoidance/Disengagement</td>
<td>.04</td>
<td>Collaborative engagement</td>
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<td>Superficial problem solving</td>
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<td>Global rating</td>
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<td>Global rating</td>
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<td>Ruminative problem engagement</td>
<td>.39**</td>
<td>.09</td>
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<tr>
<td>Hyper emotion expression</td>
<td>.41**</td>
<td>.09</td>
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<tr>
<td>Self-focused orientation</td>
<td>.29**</td>
<td>.10</td>
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<tr>
<td>Global rating</td>
<td>.40**</td>
<td>.10</td>
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