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Emotion Regulation Goals Influence Strategy Use and Outcomes

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ABSTRACT OF THE THESIS

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Functionalist theories of emotion posit that people regulate their emotions in ways that help them accomplish their goals, suggesting that goals may be important for strategy selection. Two studies were conducted to examine reappraisal and suppression use when pursuing emotional and instrumental goals, and to assess the utility of those strategies in achieving distinct goals. In Study 1, participants ($N = 97$) wrote about situations when they used either suppression or reappraisal, then reported on their pursuit of emotional and instrumental goals, and their experience of emotional and instrumental outcomes. In Study 2, participants ($N = 103$) were instructed to pursue an emotional goal or instrumental goal during a negative social interaction. Emotional and instrumental outcomes were assessed using self-, partner-, and observer-reports. Both studies found a stronger link between emotional goals and reappraisal than between emotional goals and suppression, but found no preference between strategies when pursuing an instrumental goal. Study 1 found that reappraisal had higher utility than suppression in achieving emotional goals, but not instrumental goals. In Study 2, individuals who used suppression more experienced more negative emotion and thought they made a worse impression on their partner, but they were not actually seen more negatively by others. Together these studies suggest that emotional goals may influence strategy selection and that strategies differ in their utility.

Introduction

Emotions serve many important functions that allow people to respond to the challenges and opportunities in their environment (LeDoux, 2003). However, there are many reasons why people may regulate, or control the experience and expression of their emotions (Gross, 1998b). For example, they may regulate their emotions to reach *emotional goals,* that is, to experience a particular emotion as an end state in itself (e.g., wanting to feel happy). Alternatively, they may regulate their emotions to reach *instrumental goals*, that is, to reach an end state beyond just experiencing a particular emotion (e.g., wanting to avoid conflict with others; Parrot, 1993; Tamir, 2009). Emotion theorists have argued that people regulate their emotions in ways that will help them accomplish these different goals (Gross, Sheppes, & Urry, 2011; Mauss, Bunge, & Gross, 2007; Thompson, 1994). For example, an employee may hide his anger towards a critical boss to avoid getting fired, or attempt to view his boss' criticism as constructive to feel less angry. The pursuit of various goals, such as not wanting to get fired or wanting to feel less angry, suggests that goals may be an important factor that influence strategy selection.

The role of goals in strategy selection can be especially useful for understanding why people use strategies that can contribute to vastly different affective and social consequences. Substantial research has compared the consequences of two strategies in particular: *cognitive reappraisal*, changing the meaning of an event to influence emotional experience (Lazarus & Alfert, 1964), and *emotional suppression*, inhibiting a behavioral component of emotion expression (e.g., facial, gestural, or verbal; Gross, 1998b). Affectively, reappraisal has been linked to increased positive emotion experience (e.g., Gross & John, 2003; McRae, Ciesielski, & Gross, 2012), while suppression has been linked to decreased positive emotion experience. Socially, reappraisal has been linked to strong social connections, while suppression has been

linked to weak social connections (Butler, Egloff, Wilhelm, Smith, Erickson, & Gross, 2003; English, John, Srivastava, & Gross, 2012; Gross & John, 2003). Taken together, these findings suggest that reappraisal is more adaptive to use than suppression because of its positive consequences. However, they do not explain why people use either strategy, or why people might use suppression in particular given that is generally maladaptive.

It may be that people use a particular strategy because it has *utility*, or is useful in accomplishing a particular type of goal (Thompson, 1994). For example, people may use reappraisal because it has utility in increasing happiness and thus, whenever they have the goal to feel happy, they opt to use reappraisal. Similarly, people may use suppression because it has utility in helping them avoid conflict with others and thus, whenever they want to avoid conflict, they opt to use suppression. Therefore, it is possible that depending on the type of goal, people may have a preference for suppression or reappraisal because the strategy is actually useful or is perceived to be useful. The benefit of understanding this association between strategies and goals is that it sheds light on when people use each strategy and how a strategy may be useful.

The main objective of the present research was to investigate the goals pursued when using suppression and reappraisal, as well as the utility of these two strategies in goal achievement. This paper begins with a review of the literature on emotion regulation goals. This is followed by a discussion on how emotional- and instrumental goals influence strategy selection, as well as how strategies may provide utility in achieving these goals. Lastly, two studies are presented, both of which test two core hypotheses. The first hypothesis tests whether reappraisal is used more than suppression when pursuing emotional goals, and whether suppression is used more than reappraisal when pursuing instrumental goals. The second

hypothesis then tests whether reappraisal is associated with more positive emotional and instrumental outcomes than suppression.

Emotion Regulation Goals

When people engage in any form of self-regulation, they try to minimize the discrepancy between their current state and their desired state (Carver & Scheier, 2001). In the context of emotion regulation, an individual may use emotion regulation to get further away from his or her current emotional state (e.g., sadness) and closer to his or her desired emotional state (e.g., happiness). The cognitive representation of an individual's desired emotional state is known as an *emotion regulation goal* (Mauss & Tamir, 2014). One way that emotion regulation goals can be divided is on the basis of why and how people reach their desired emotional state. These sub-categories are emotional goals and instrumental goals.

The emotional state of an emotional goal is the experience of an emotion, which it treats as an end in itself. For example, an emotional goal may be wanting to feel happy for the sake of feeling happy. Since people are often driven to experience hedonic benefits (i.e., more pleasure, less pain), their emotional goals are usually to increase their experience of pleasant emotions (e.g., happiness) or to decrease their experience of unpleasant emotions (e.g., fear; Diener, 2000; Tsai, Knutson, & Fung, 2006). Instrumental goals differ from emotional goals in that they do not treat the experience of an emotion as an end to itself, but rather as a means to an end. For example, an instrumental goal may be wanting to feel happiness in order to maintain harmony in a relationship, rather than just feeling happy for the sake of feeling happy. However, instrumental goals are not restricted to changing one's emotional experience. One may also achieve instrumental goals by changing his or her emotional expression. For example, expressing, rather than experiencing, happiness, in order to maintain harmony in a relationship.

Instrumental goals aided by experience. Previous research has largely focused on instrumental goals that are achieved by changing one's emotional experience. Much of this research draws on functionalist theories of emotion, which consider how different emotions serve various important functions (Campos, Mumme, Kermoian, & Campos, 1994; Parrott, 1993). For instance, anger can signal to others that an event is perceived as being unfair (Solomon, 1995) and distress can demonstrate to others that an individual desires sympathy and help (Keltner & Haidt, 1998). Given that people want to experience emotions that will help them achieve their goals (Tamir & Ford, 2012; Tamir, Ford, & Gilliam, 2013), they will rely on an emotion's function. For example, studies have found that people want to feel angry before playing a confrontational game, but not before playing a non-confrontational game, since anger boosts performance (Tamir, Mitchell, & Gross, 2009). Other studies have shown that people prefer to feel angry when confronting others, but prefer to feel happy when collaborating with others (Tamir & Ford, 2009). Taken together, these findings show that people may modify their emotional experience for instrumental reasons. This paper will focus on instrumental goals aided by expression, rather than experience.

Instrumental goals aided by expression. While instrumental goals may be aided by changing emotional experience, they may also be aided by changing emotional expression. Emotional expressions are an important source of information that can reveal to others an individual's motivations, attitudes, needs, desires, and intentions (Ekman, 1993; Izard, 1992; Zaki, Bolger, & Oschner, 2009), factors which people generally have limited access to (Keltner & Haidt, 1999; Van Kleef, 2010). For instance, people are more motivated to forgive people who express embarrassment than those who do not (Keltner & Buswell, 1997) and are more likely to comply with the instructions of people who express anger (Van Kleef & Côté, 2009). At the

same time however, emotional expressions can have negative consequences. For instance, when expressed in inappropriate situations (Jones, Abbey, & Cumberland, 1998; Kalokerinos, Greenaway, Pedder, & Margetts, 2014; Markus & Kitayama, 1991; Saarni, 1988; Spinrad et al., 2004; Zeman & Shipman, 1996), emotional expressions may contribute to a bad impression (Farmer & Kashdan, 2012; Kashdan & Steger, 2006), conflict (Mikulincer & Shaver, 2003), and disrupting social harmony (Butler, Lee, & Gross, 2007). The sections below examine four instrumental goals that may be aided by modifying emotional expression: impression management, conflict avoidance, social maintenance, and pro-social.

Impression management goals. One reason why people may modify their emotional expression is because they are concerned with *impression management*, the attempt to control others' impressions of them (Baumeister, 1982; Baumeister & Tice, 1986; Jones & Pittman, 1982; Schlenker, 1980). A way in which people can manage their impressions on others, is through non-verbal behavior (DePaulo, 1992; Leary & Kowalski, 1990; Schlenker, 1980), such as modifying emotional expression. For instance, people hide their emotions more on days when they are socially anxious (Farmer & Kashdan, 2012; Kashdan & Steger, 2006) than when they are less socially anxious. Additionally, people high on social anxiety hide their emotions because they believe emotional expression will lead to social rejection (Spokas, Luterek, & Heimberg, 2009).

Modifying emotional expression to accomplish impression management goals can also be supported by research on display rules, rules that influence whether expressing certain emotions is appropriate depending on societal or cultural norms (Ekman, Friesen, & Ellsworth, 1972; Kitayama, Markus, & Kurokawa, 2000; Markus & Kitayama, 1991; Matsumoto, Kasri, & Kooken, 1999; Mesquita, 2001; Mesquita & Frijda, 1992). For instance, studies have shown that

some cultures view the expression of powerful emotions (e.g., anger) as less appropriate (Markus & Kitayama, 1991) than the expression of less powerful emotions (e.g., sadness; Matsumoto et al., 1999; Miyake & Yamazaki, 1995). Other studies looking at gender differences in emotional expressivity have found that it is less appropriate for men than women to express powerless emotions that may make them appear vulnerable to others (Brody, 1999; Labott, Martin, Eason, & Berkey, 1991; Safdar et al., 2009). Similar studies have extended these findings to the work environment as well (Gardner & Martinko, 1988), where failure to suppress certain emotions at certain times can cost an individual his or her job (Grandey, 2000). Thus, in light of various norms, people may modify their emotional expression to avoiding making a bad impression.

Social maintenance goals. In addition to managing their impression on others, people may also modify their emotional expression to reach social maintenance goals, that is, to maintain their relationship with others. Several studies have demonstrated that cultural differences contribute to emotions being regulated in a way that may take into consideration an individual's self in relation to others (Butler et al., 2007; Mesquita & Karasawa, 2002). For instance, research has shown that certain cultures believe that suppressing powerful emotions helps maintain the harmony of a group, whereas expressing those emotions can threaten a group (Matsumoto et al., 1998). Much of this research has been done by comparing collectivistic cultures (e.g., Asian cultures), where groups are valued over the individual (English & John, 2013; Ekman et al., 1972; Gross & John, 2003; Matsumoto, Yoo, & Nakagawa, 2008) and individualistic cultures (e.g., Western cultures), where asserting the self is of utmost importance (Markus & Kitayama, 1991). Additionally, people from collectivistic cultures have been found to use strategies that target emotional expression, such as suppression, more frequently than people

from individualistic cultures (e.g., Butler et al., 2007; English & John, 2013), suggesting that suppression is perhaps linked to a desire to maintain relationships (Wierzbicka, 1994).

Conflict avoidance goals. While people may modify their emotional expressions to manage their impressions on others or maintain harmony in their relationships, they may also do so to avoid conflict with others. Evidence for the role of modifying emotional expression in conflict avoidance comes from research on attachment, the systematic patterns of cognition, affects, and behaviors influenced by an early relationship with one's caregiver (Bowlby, 1958, 1980; Fraley & Shaver, 2000; Shaver & Mikulincer, 2002). Attachment is believed to play an important role in emotion regulation because it influences how one manages relationships with others (Cassidy, 1994). People high on attachment-related avoidance often minimize emotional expression because of past relationships where they may have been punished or rejected for opening up (Cassidy, 1994). Inhibiting emotional reactions prevents them from being vulnerable and getting into more conflict in their relationships (Mikulincer & Shaver, 2003), suggesting that modifying emotional expression may be used for conflict avoidance.

Prosocial goals. Lastly, people may modify their emotional expressions to achieve prosocial goals, that is, goals that focus on the well-being of others. At a broad level, healthy emotion regulation has been consistently linked to the ability to empathize with others, or be concerned for their feelings (Eisenberg, Fabes, Murphy, Karbon, Smith, & Maszk, 1996; Young, Fox, & Zahn-Waxler, 1999). Most research has examined how regulating another person's emotions directly (i.e., making someone feel better; de Waal, 2008) helps maintain people's relationships. However, there may be times in which people regulate their own emotions to maintain their relationships. For example, someone may suppress anger when trying not to hurt a friend's feelings (Tavris, 1984) or hide happiness when beating a friend at a game (Friedman &

Miller-Herringer, 1991). Expressing anger towards a friend or expressing happiness when winning a game may harm his or her feelings. Thus, people may modify their emotional expression for pro-social reasons.

Emotion Regulation Goals and Strategy Selection

People can select from many regulation strategies to reach their goals. According to Gross' process model (1998b, 2001, 2002), an influential framework for emotion regulation, strategies can be distinguished based on when they occur in the emotion generative process. At a broad level, strategies can be *antecedent-focused*, occurring before emotion-response tendencies are fully activated, or *response-focused,* occurring after emotion-response tendencies have been activated. The process model posits that reappraisal and suppression will differ in their consequences because they occur at different time points. Reappraisal, an antecedent-focused strategy, should completely alter an emotion trajectory by decreasing emotional experience and expression. Alternatively, suppression, a response-focused strategy, occurs once the emotion-response has been elicited (Gross, 1998b; Gross & John, 2003; Mauss et al., 2007) and therefore should reduce emotionally expressive behavior, but not necessarily emotional experience.

Given that reappraisal and suppression occur at different time points in the emotion-generative process (Gross, 1998b), they have differential affective consequences. Several studies have demonstrated that reappraisal is effective in changing emotional experience. For instance, it effectively reduces the experience of negative emotion (Gross, 1998a; Gross, 2002; Jackson, Malmstadt, Larson, & Davidson, 2000; Koenigsberg et al., 2010; McRae, Ochsner, Mauss, Gabrieli, & Gross, 2008; McRae et al., 2012; Ochsner et al., 2004; Shiota & Levenson, 2009) and increases the experience of positive emotion (Goldin, McRae, Ramel, & Gross, 2008; Kim & Hamann, 2007; McRae et al., 2012). Its habitual use has also been associated with positive

emotional outcomes, such as increased experience of positive emotion (Gross & John, 2003; Nezlek & Kuppens, 2008). Since reappraisal targets and effectively changes emotional experience, people may want to use it when pursuing emotional goals relative to response-focused strategies. Thus, suppression, which occurs later in the emotion generative process and targets emotional expression, should be relatively ineffective at changing emotional experience. Indeed, studies have shown that suppression does not change emotional experience (see Gross, 2002 for review), and its habitual use is in fact linked to negative emotional outcomes, such as increased negative emotion experience and decreased positive emotion experience (Gross & John, 2003; Nezlek & Kuppens, 2008). Consequently, people may not want to use suppression when pursuing emotional goals (at least not for hedonic emotional goals). However, suppression may still be used to pursue goals that do not target emotional experience. Studies have shown that suppression effectively reduces emotional expression (Gross, 1998a; Gross & Levenson, 1993; Gross & Levenson, 1997; Gross, 2002) and that its habitual use is associated with low expression of positive emotion (Gross & John, 2003). Given that suppression targets emotional expression as opposed to experience, people may want to use it more than reappraisal when pursuing instrumental goals aided by modifying emotional expression.

The Utility of Emotion Regulation Strategies

People are more likely to engage in behaviors that have helped them reach their goals in the past (Custers & Aarts, 2010; Fishbein & Ajzen, 1975). Therefore, people should use strategies that are useful in achieving their goals (Thompson, 1994). Research on strategy choice provides some evidence for this hypothesis. For instance, studies have found that people prefer distraction, another antecedent-focused strategy, over reappraisal, in contexts of high emotional intensity, and that distraction is indeed more effective than reappraisal in those contexts (Sheppes

& Meiran, 2007; Thiruchselvam, Blechert, Sheppes, Rydstrom, & Gross, 2011). Those studies also show that people prefer reappraisal over distraction in contexts of low emotional intensity, and that reappraisal is more effective than distraction in those contexts. These findings suggest that people's strategy choices are in line with the utility of those strategies.

Although people should use strategies when they provide the most utility, it is important to note that this may depend on whether they are adaptive regulators, that is, they have a certain knowledge or awareness of how to regulate, and can effectively use a strategy. Assuming that people are adaptive regulators, then reappraisal should have higher utility in achieving emotional goals than suppression, as shown in previous research (Gross, 1998a, 1998b; Gross & Levenson, 1993; Gross & Levenson, 1997). If suppression is used more than reappraisal when pursuing instrumental goals related to (inhibiting) emotional expression, then it should have higher utility than reappraisal. However, since suppression is linked to many negative social consequences, such as decreased interpersonal warmth and low rapport (Butler et al., 2003; English et al., 2012; Gross & John, 2003; Impett, Kogan, English, John, Oveis, Gordon, & Keltner, 2012; Impett, Le, Kogan, Oveis, & Keltner, 2014; Srivastava, McGonigal, John, & Gross., 2009), it may not have higher utility. It may be that people use suppression to achieve those goals because they *believe* it has higher utility, even though it does not. Thus, even if suppression is used to pursue instrumental goals aided by expression more than reappraisal, it should not have greater utility.

The Present Research

To summarize, people can regulate their emotions to pursue emotional goals and instrumental goals and can pursue these goals using different strategies. Additionally, the use of different strategies can contribute to distinct affective and social consequences. Drawing on the process model and consequences of strategies, the present research examined the role of

suppression and reappraisal in goal pursuit and goal achievement in two studies. Study 1 examined the link between emotion regulation (i.e., suppression, reappraisal), goals, and utility of strategies in daily life. Study 2 experimentally tested the effects of pursuing an emotional goal or an impression management goal on emotion regulation during a social interaction. Utility was assessed in Study 2 by measuring outcomes from three sources of information: self-report, partner-report, and observer-report.

Study 1

The first aim of Study 1 was to test whether people primarily pursue emotional goals when using reappraisal and instrumental goals when using suppression. The second aim was to test whether people experience greater emotional goal achievement when using reappraisal versus suppression, and whether they experience more instrumental goal achievement when using suppression versus reappraisal. Participants wrote about three situations where they used suppression or reappraisal in close relationships (e.g., family member, friend, romantic partner). Emotion regulation was examined in the context of close relationships for two reasons. First, emotion regulation frequently occurs in the presence of other people (Campos, Walle, Dahl, & Main, 2011). Second, by fixing a core attribute of the situations that participants wrote about (i.e., who was present), comparisons could be made between goal pursuit and outcomes in each condition with minimal effects being due to the situations.

Method

Participants

The total sample consisted of 97 adults (58.8% female) ranging in age from 21 – 72 years[1] (*M* = 37.16 years, *SD* = 1.28) recruited in two waves[2] from Amazon Mechanical Turk. 78.4% were European/European American, 5.2% were Asian/Asian American, 7.2% were

African American, 5.2% were Latino, 1% were multi-racial, and 3.1% identified with other ethnicities. Participants recruited in the first wave were given $1.00 and participants recruited in the second wave were given $2.00 via Amazon payments.

Procedure

Participants were randomly assigned to complete a writing task in one of two emotion regulation conditions: suppression or reappraisal. Participants in the suppression condition (n = 47) received the following instructions:

> Sometimes people try to hide the expression of (or suppress) their emotions through talk, gesture, or behavior because they do not want others to know how they are feeling. We would now like for you to reflect on a specific situation in which you suppressed an emotion you were experiencing. Please take 30 seconds to reflect on this past situation.

Participants in the reappraisal condition (n = 50) received the following instructions:

> Sometimes people try to change how they feel by thinking about a situation differently (or reappraising). We would now like for you to reflect on a specific time in which you reappraised a situation. Please take 30 seconds to reflect on this past situation.

All participants were then asked to write about the situation they reflected on for at least two minutes and discuss any details relevant to the situation (e.g., location). They completed this writing task in the context of three close relationships: suppressing (or reappraising) with a family member, friend, and romantic partner, then were asked questions about their relationships (e.g., how long they have been in a relationship with their current romantic partner). Participants not in a romantic relationship wrote about a situation involving an additional friend (n = 36)[3]. After completing the writing task for each relationship in a randomized order, participants rated

the goals they pursued and outcomes they experienced in each situation. Afterwards, they were compensated for their time.

Measures

Goals. Participants rated the extent to which they suppressed their emotion(s) in the situation (or reappraised the situation) in order to accomplish one emotional goal ("feel more positive emotion")[4] and four types of instrumental goals: impression management, conflict avoidance, social maintenance, and prosocial. The impression management goals included "maintain a certain image in front of others", "maintain a certain image for myself", "avoid social rejection," "avoid appearing vulnerable in front of others," and "avoid being inappropriate (e.g., laughing at a funeral)"; $\alpha = .84$ across situations. The conflict avoidance goal was "avoid conflict (e.g., a fight)," the social maintenance goal was "maintain harmony in a relationship," and the prosocial goal was "protect someone else's feelings." Since people can pursue multiple goals (Mauss & Tamir, 2014), participants rated pursuit of each goal on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Outcomes. Participants rated how much they experienced five outcomes in the situation after using suppression (or reappraisal): one emotional outcome ("felt more positive emotion (than before I suppressed) or (by reappraising)")[5] and four instrumental outcomes: impression management, conflict avoidance, social maintenance, and prosocial. Impression management outcomes included "maintained a certain image in front of others", "maintained a certain image for myself", "avoided social rejection," "avoided appearing vulnerable in front of others," and "avoided being inappropriate (e.g., laughing at a funeral)"; $\alpha = .89$ across situations. The conflict avoidance outcome was "avoided conflict (e.g., a fight)," the social maintenance outcome was "maintained harmony in a relationship," and the prosocial outcome was "protected someone

else's feelings." Participants rated the extent to which they experienced each outcome on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Results

Analysis Plan

Since the data was nested (situations nested within persons[6]), multilevel modeling was used to test the hypotheses using SPSS. Two-level mixed models were used with emotion regulation condition (reappraisal = 0; suppression = 1) as a predictor of each goal and outcome, and with goal as a predictor of each outcome[7].

Main Analyses

Emotion regulation strategy use and goals. Table 1 shows the results of a two-level model predicting the pursuit of emotional goals and instrumental goals as a function of condition. As expected, participants in the reappraisal condition pursued the emotional goal (B = -1.20, *SE* = .28, $p < .001$, semi-partial $R^2 = .0005$, 95% CI[-1.771, -.6405)] significantly more than participants in the suppression condition. Also, as expected, participants in the suppression condition pursued impression management (B = .48, *SE* = .28, $p = .09$, semi-partial $R^2 = .0035$, 95% CI[-.0830, 1.046]) and conflict avoidance goals (B = .55, *SE* = .28, $p = .05$, semi-partial $R^2 = .0027$, 95% CI[-.0142, 1.125]) marginally more than participants in the reappraisal condition. However, there were no differences across the two conditions in the pursuit of social maintenance (B = .15, *SE* = .25, $p = .53$, semi-partial $R^2 = .0264$, 95% CI[-.3509, .6670]) or prosocial goals (B = .14, *SE* = .31, $p = .64$, semi-partial $R^2 = .0467$, 95% CI[-.4775, .7642]).

Emotion regulation strategy use and emotional- and instrumental outcomes. Table 2 shows the results of a two-level model predicting the experience of emotional and instrumental outcomes as a function of condition. As expected, participants in the reappraisal condition

experienced more positive emotion (B = -1.55, *SE* = .30, $p < .001$, semi-partial $R^2 = .0004$, 95% CI[-.2.169, -.9432]) than those in the suppression condition. Contrary to what was expected however, there was no difference across the conditions in the experience of instrumental outcomes: impression management (B = .47, *SE* = .29, $p = .11$, semi-partial $R^2 = .0039$, 95% CI[-.1124, 1.058]), conflict avoidance (B = .32, *SE* = .28, $p = .25$, semi-partial $R^2 = .0078$, 95% CI[-.2391, .8839]), social maintenance (B = .22, *SE* = .28, $p = .43$, semi-partial $R^2 = .0166$, 95% CI [-.3450, .7936]), or prosocial (B = .14, *SE* = .32, $p = .65$, semi-partial $R^2 = .0486$, 95% CI[-.5065, .8024]).

Emotion regulation goals and emotional- and instrumental outcomes. Table 2 also shows the results of a two-level model predicting the experience of emotional and instrumental outcomes as a function of goal pursuit. As expected, pursuing an emotional goal was associated with feeling more positive emotion (B = .54, *SE* = .05, $p < .001$, semi-partial $R^2 = .0000$, 95% CI[.4335, .6488]). However, pursuing social maintenance (B = .24, *SE* = .05, $p < .001$, semi-partial $R^2 = .0002$, 95% CI[.1301, .3534]) or prosocial goals (B = .25, *SE* = .05, $p < .001$, semi-partial $R^2 = .0001$, 95% CI[.1569, .3598]) was also significantly associated with feeling more positive emotion. There was a marginal association for pursuing a conflict avoidance goal (B = .09, *SE* = .05, $p = .07$, semi-partial $R^2 = .0011$, 95% CI[-.0091, .1986]), but none for pursuing impression management goals (B = .03, *SE* = .07, $p = .66$, semi-partial $R^2 = .0179$, 95% CI[-.1112, .1742]).

As predicted, experiencing a positive impression management outcome (B = .83, *SE* = .03, $p < .001$, semi-partial $R^2 = .0000$, 95% CI[.7617, .8996]) was associated with pursuing impression management goals. However, experiencing a positive impression management outcome was also associated with pursuing an emotional goal (B = .11, *SE* = .05, $p = .02$, semi-

partial R^2 = .0007, 95% CI[.0127, .2109]). It was not associated with pursuing conflict avoidance (B = .02, *SE* = .04, *p* = .55, semi-partial R^2 = .0111, 95% CI[-.0596, .1099]), social maintenance (B = .02, *SE* = .04, *p* = .63, semi-partial R^2 = .0173, 95% CI[-.0691, .1133]), or prosocial goals (B = .07, *SE* = .04, *p* = .10, semi-partial R^2 = .0014, 95% CI[-.0150, .1552]).

As expected, conflict avoidance was significantly associated with pursuing a conflict avoidance goal (B = .72, *SE* = .03, *p* < .001, semi-partial R^2 = .0000, 95% CI[.6511, .7948]). However, it was also associated with pursuing emotional (B = .24, *SE* = .06, *p* < .001, semi-partial R^2 = .0002, 95% CI[.1233, .3631]), social maintenance (B = .63, *SE* = .04, *p* < .001, semi-partial R^2 = .0000, 95% CI[.5425, .7373]), or prosocial goals(B = .30, *SE* = .05, *p* < .001, semi-partial R^2 = .0001, 95% CI[.1979, .4061]). It was not associated with pursuing impression management goals (B = -.00, *SE* = .07, *p* = .97, semi-partial R^2 = .7993, 95% CI[-.1435, .1397]).

As predicted, social maintenance was significantly associated with pursuing a social maintenance goal (B = .59, *SE* = .04, *p* < .001, semi-partial R^2 = .0000, 95% CI[.5081, .6867]). However, it was also associated with pursuing emotional (B = .18, *SE* = .05, *p* < .01, semi-partial R^2 = .0003, 95% CI[.0758, .3007]), conflict avoidance (B = .36, *SE* = .04, *p* < .001, semi-partial R^2 = .0000, 95% CI[.2687, .4524]), or prosocial goals (B = .36, *SE* = .04, *p* < .001, semi-partial R^2 = .0000, 95% CI[.2778, .4602]); It was not associated with pursuing impression management goals (B = .01, *SE* = .06, *p* = .84, semi-partial R^2 = .0831, 95% CI[-.1188, .1458]).

Lastly, experiencing a prosocial outcome was significantly associated with pursuing a prosocial goal (B = .81, *SE* = .03, *p* < .001, R^2 = .0000, 95% CI[.7427, .8857]). However, it was also associated with pursuing all other goals: emotional (B = .28, *SE* = .06, *p* < .001, semi-partial R^2 = .0001, 95% CI[.1583, .4151]), impression management (B = .20, *SE* = .07, *p* < .01, semi-partial R^2 = .0005, 95% CI[.0579, .3591]), conflict avoidance (B = .26, *SE* = .05, *p* < .001, semi-

partial R^2 = .0001, 95% CI[.1489, .3741]), or social maintenance (B = .37, *SE* = .06, $p < .001$, semi-partial R^2 = .0000, 95% CI[.2545, .4944]).

Discussion

Study 1 provided some support for the idea that emotional goals are pursued more when using reappraisal than when using suppression. The findings from Study 1 also provide some evidence to suggest that instrumental goals, specifically impression management and conflict avoidance goals, may be pursued more when using suppression than when using reappraisal. One potential explanation of the weaker effects for the social maintenance and prosocial goals is that each goal included one item, while the impression management goal category did not. Perhaps there would have been a significant effect of emotion regulation strategy on social maintenance and prosocial goals if a more reliable index was used. Alternatively, it may be that people use suppression and reappraisal to a similar degree when pursuing social maintenance and prosocial goals. There may not be a preference for a strategy since both impact emotional expression.

Consistent with past work, there were differential outcomes associated with the use of suppression and reappraisal. As expected, individuals using reappraisal experienced more positive emotional outcomes than individuals using suppression. These findings support findings from previous research demonstrating that reappraisal has a greater utility in achieving emotional goals than suppression (Gross, 2002). In contrast to what was predicted though there was no effect of condition on instrumental outcomes. Although this shows that suppression does not have lower utility than reappraisal in achieving instrumental goals, it also demonstrates that reappraisal does not greater utility than suppression in achieving instrumental goals. This suggests that both strategies may have similar utility in achieving instrumental goals.

There are two main limitations to Study 1. First, it used past situations recalled by participants, which may have been influenced by memory distortion. Second, its correlational approach did not allow for a direct test of whether goal pursuit influences the emotion regulation strategies that people use. This makes the causal direction of emotion regulation and goal pursuit unclear. It may be that the pursuit of a particular goal motivates people to use a particular strategy. Alternatively, the use of a strategy may activate the pursuit of a particular goal. Thus, an experimental design in which goals are manipulated would be better suited to test how goals play a role in strategy use.

Study 2

Study 1 found a relationship between emotion regulation strategy use and goal pursuit, as well as a relationship between emotion regulation and emotional outcomes. However, the study used past situations recalled by participants and did not directly manipulate goals. To address theses issues, Study 2 was designed to directly test whether pursuing a particular goal leads people to use a particular strategy. The study focused on one emotional goal and one instrumental goal. The emotional goal involved down-regulating the experience of negative emotion since people often are driven by hedonic concerns (Diener, 2000). The instrumental goal was impression management because the findings from Study 1 suggested that suppression may be particularly tied to this type of instrumental goal and because people may control their non-verbal behavior to influence their impression on others (Leary & Kowalski, 1990; Schlenker, 1980). A controlled situation was created in which there was a reason for participants to regulate their emotions and both types of goals (i.e., emotional and instrumental) were relevant. In particular, the selected situation was one of interpersonal conflict (Bloch, Haase, & Levenson,

2014; Levenson & Gottman, 1983) elicited using a confederate who was trained to be unfriendly and disagree with participants[8].

As in Study 1, Study 2 also examined emotional and instrumental outcomes. However, given that Study 1 only examined utility by using self-reported outcomes, Study 2 examined utility by taking a multi-method approach using self-, partner-, and observer-reported outcomes. It was expected that reappraisal would be associated with positive emotional outcomes. This hypothesis was based on reappraisal's place in the process model (Gross, 1998) and past research on the affective consequences of reappraisal (e.g., Gross & John, 2003; Nezlek & Kuppens, 2008). This pattern was expected to be true for self-, partner-, and observer-reports, reflecting a high utility of reappraisal in achieving emotional goals. It was expected that suppression would be linked to positive impression management outcomes, based on the idea that people use strategies that are helpful in accomplishing their goals (Fishbein & Ajzen, 1975). However, given that partners of people who use suppression report negative social consequences (e.g., low affiliation, Butler et al., 2003), it was expected that suppression would be linked to self-reported positive impression management, but not partner- or observer-reported impression management.

Method

Participants

The sample consisted of 103 undergraduates (81.6% female) ranging in age from 18 – 24 years (M = 19.40 years, SD = 1.23) recruited from Washington University's Psychology Subject Pool. 53.4% were Caucasian, 24.3% were Asian/Asian American, 2.9% were Latino, 8.7% were African American, 8.7% were multi-racial, and 1% identified with other ethnicities[9]. Participants received one course credit for their participation in the study.

Procedure

When participants arrived at the laboratory, they were greeted by the experimenter and introduced to a confederate[10] of the same sex whom they were told was another participant they would interact with. It was ensured that the participant and confederate did not know each other prior to the experiment. The experimenter escorted the participant and confederate to separate testing rooms and gave participants a consent form. After participants reviewed and signed the consent form, they completed a measure of their current experience of various emotions. Next, participants were given a list of statements regarding issues that are encountered on college campuses (e.g., same-sex only housing) and asked to provide two ratings for each statement: how much they agreed with it and how personally important it was to them. These statements were the basis of the conflict discussion participants later had with the confederate.

After participants rated the statements, the experimenter escorted them to the confederate's testing room for the events of the day discussion. The participant and confederate sat on two chairs facing each other and with a small table in between them. They had a discussion for five minutes about what they did prior to coming to the experiment and what plans they had after completing the experiment. This was meant to serve as a baseline discussion before these unacquainted dyads would engage in the conflict discussion. During the events of the day discussion, the experimenter examined participants' ratings of the college issue statements and selected the statement that was most personally important to them. The most important statement was selected to increase the likelihood of participant negative emotion experience and engagement during the later conflict discussion. If multiple statements were equally important to participants, the experimenter selected the first one.

After the events of the day discussion was over, the experimenter escorted participants back to their testing room. Participants rated their experience of various emotions then received the following online instructions:

> You will soon be joining the other participant for another conversation. During the conversation, you will be discussing your feelings regarding the following issue: (insert statement selected by experimenter). We would like for you to prepare for the conversation by calling to mind major points related to the issue you'll be discussing. Please write about your position related to this issue in the space below.

After writing for five minutes, participants were given online instructions on what goal they should pursue when regulating their emotions during the upcoming discussion. They were randomly assigned to one of three conditions: control, instrumental, or emotional. Participants in the control condition (n = 25) received the following instructions:

> These conversations can sometimes get emotion, so please try to control your emotions.

Participants in the emotional condition (n = 41) received the following instructions:

> These conversations can sometimes get emotion, so please try to control your emotions in order to reduce your experience of negative emotion.

Participants in the impression management condition (n = 37) received the following instructions:

> These conversations can sometimes get emotional, so please try to control your emotions in order to avoid making a bad impression on your partner.

Both the experimenter and the confederate were blind to participants' goal condition. As participants received their goal condition instructions, the experimenter informed the confederate of the statement he or she would be discussing with participants. To create conflict during the

discussion, participants' agreement rating was used to determine which position the confederate would take on the statement (i.e., if participants agreed with the statement, then the confederate would disagree with it). Confederates had been trained on a list of key points to agree or disagree with each college issue statement[11]. During the experiment, the confederate also completed a 3 min writing task to write points supporting his or her assigned position.

After participants completed the writing task, the experimenter escorted them to the confederate's testing room, asked them to discuss their positions on the statement they wrote about for 10 minutes, and then left the room. After the conflict discussion, the experimenter escorted the participant back to their testing room for the remainder of the study. Participants completed a set of questionnaires measuring their emotion regulation, goal pursuit, and various outcomes. Meanwhile, the confederate completed a similar questionnaire about his or her interaction with participants. Upon completion of the last set of questionnaires, the experimenter debriefed participants and thanked them for their time.

Measures

College issue statements. Participants were presented with a list of 14 college issue statements generated by undergraduate research assistants (see Appendix A) and asked to provide two ratings for each statement: how much they agreed with each statement on a scale of 0 (*strongly disagree*) to 100 (*strongly agree*) and how important the issue was to them on a scale of 0 (*not very important*) to 100 (*very important*).

Emotion regulation. Participants rated their suppression and reappraisal during the conflict discussion using a modified version of the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003), an extensively validated scale (see John & Gross, 2004). The usual items were slightly rephrased to assess emotion regulation in a specific situation instead of habitual

emotion regulation. For example, an original item for suppression is "I keep my emotions to myself," while the rephrased item was "I kept my emotions to myself." The suppression scale was made up of four items (e.g., "I kept my emotions to myself") and the reappraisal scale was made up of six items (e.g., "I controlled my emotions by *changing the way I thought* about the situation I was in." Participants rated their agreement with each of the items in regards to their the conflict discussion on scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). $\alpha = .79$ for suppression and $\alpha = .85$ for reappraisal.

Impression management. Participants rated how poor of an impression they made on their partner in the conflict discussion using the question "To what extent did you make a bad impression on the other participant?" Confederates also rated impression management using the question "To what extent did the participant make a bad impression on you?" Participants and confederates made their ratings on a scale of 1 (*not at all*) to 7 (*a lot*).

Negative emotional experience. Participants rated their experience of negative emotion in the conflict discussion using the question "To what extent did you experience negative emotions?" Confederates also rated the participants' experience of negative emotion using the question "To what extent did the participant experience negative emotions?" Participants and confederates made their ratings on a scale of 1 (*not at all*) to 7 (*a lot*).

Goal commitment. For a manipulation check of goal condition, participants rated how much they tried to achieve the assigned goal on a scale of 1 (*not at all*) to 7 (*a lot*). The item for pursuing the emotional goal was "To what extent did you try to control your emotions in order to avoid experiencing negative emotions?" The item for pursuing the instrumental goal was "To what extent did you try to control your emotions in order to avoid making a bad impression on

the other participant?" Since participants may have pursued a goal contrary to their assigned goal or multiple goals, all participants rated these items on a scale of 1 (*not at all*) to 7 (*a lot*).

Behavioral Measures

Two trained judges who were blind to participants' condition and had not been experimenters or confederates in the study coded the 10-minute conflict discussion videos. They watched the entire video then rated the participants' overall impression management ("the participant made a bad impression on partner") and experience of negative emotion ("the participant felt negative emotion; e.g., anger, annoyance") during the conflict discussion on a scale of 1 (*not at all*) to 7 (*a lot*). There was a high correlation between the coders for impression management (r =. 92, $p < .001$) and negative emotional experience (r =. 69, $p < .001$), so ratings from both coders were averaged to create indices of observer-rated outcomes[12].

Results

Preliminary Analyses

A total of 26 participants were removed from the analyses, leaving a total of 77 participants for the final analyses. Four of these participants were from the control condition, seven were from the emotional condition, and 15 were from the impression management condition. Four were removed for personally knowing the confederate, one was removed for telling the confederate her condition during the conflict discussion, and six were removed for suspecting that there was a confederate. Additionally, sixteen participants were removed for failing the manipulation check, as described in the section below; one of these participants was also excluded for suspecting interaction with a confederate.

Manipulation check. A manipulation check was conducted to test whether participants followed the instructions for their conditions. Participants from the emotional condition were

removed for providing a rating of one out of seven (i.e., meaning "not at all") on pursuing the emotional goal, while participants from the impression management condition were removed for providing a rating of one out of seven on pursuing the impression management goal. Since there was no manipulation for control participants, none of them were removed for failing a manipulation check.

There was no effect of condition on goal pursuit, such that participants in the emotional condition (M = 3.46, SD = 1.95) did not pursue the emotional goal significantly more than participants in the control (M = 3.48, SD = 1.73) or impression management (M = 3.41, SD = 2.02) conditions, $F(2,99) = .01$, $p = .98$, $\eta^2 = .00$, and participants in the impression management condition (M = 4.03, SD = 1.92) did not pursue the impression management goal significantly more than participants in the control (M = 3.46, SD = 1.95) or emotional (M = 3.32, SD = 1.79) conditions, $F(2,99) = 1.65$, $p = .19$, $\eta^2 = 0.03$. Within conditions, participants in the control condition pursued the emotional goal (M = 3.48, SD = 1.73) as much as they pursued the impression management goal (M = 3.36, SD = 1.82), $t(24) = .32$, $p = .74$, $d = .06$. Participants in the emotional condition also pursued the emotional goal (M = 3.46, SD = 1.95) as much as the impression management goal (M = 3.32, SD = 1.79), $t(40) = .55$, $p = .58$, $d = .08$. However, participants in the impression management condition pursued the impression management goal (M = 4.03, SD = 1.92) significantly more than the emotional goal (M = 3.47, SD = 2.00), $t(35) = -2.34$, $p = .02$, $d = .39$.

Excluded participants versus non-excluded participants. Analyses were conducted to test whether there were differences in outcomes between participants excluded from the final analyses and participants who were not excluded. Collapsed across conditions, excluded participants were found to use suppression (M = 3.00, SD = 1.18) and reappraisal (M = 3.30, SD

= 1.29) marginally less than non-excluded participants (M = 3.48 , SD = 1.24 and M = 3.82 , SD = 1.21, respectively), $F(1,99) = 2.88$, $p = .09$, $\eta^2 = 0.02$ and, $F(1,99) = 3.44$, $p = .06$, $\eta^2 = 0.03$ respectively.

When examining emotional outcomes, excluded participants reported experiencing significantly less negative emotion (M = 2.35, SD = 1.57) than non-excluded participants (M = 3.58, SD = 2.90), $F(1,99) = 10.28$, $p < .001$, $\eta^2 = 0.09$. A reverse pattern was found for observer-reports, where excluded participants were rated as experiencing more negative emotion (M = 2.78, SD = 1.47) than non-excluded participants (M = 1.62, SD = 1.28), $F(1,97) = 13.32$, $p <$ .001, $\eta^2 = 0.12$. When looking at partner-reports, there were no significant differences between excluded (M = 3.63, SD = 1.60) and non-excluded (M = 3.75, SD = 1.69) participants for partner-reported negative emotion experience, $F(1,99) = .12$, $p = .72$, $\eta^2 = 0.00$. The self-reported negative emotion experience would suggest that non-excluded participants may have been lower on emotion regulation overall because they did not feel an emotion strong enough to regulate, and thus, failed the goal manipulation check. However, it is unclear why observers would rate negative emotion experience as being higher for excluded participants than non-excluded participants.

When examining impression management outcomes, non-excluded participants (M = 2.90, SD = 1.33) marginally rated themselves as making a poorer impression than excluded participants (M = 2.31, SD = 1.28), $F(1,99) = 3.84$, $p = .05$, $\eta^2 = 0.03$. However, as with observer-reported negative emotion experience, excluded participants were rated as making a poorer impression (M = 2.17, SD = 1.23) than non-excluded participants (M = 1.46 SD = 1.04), $F(1,97) = 7.41$, $p < .001$, $\eta^2 = 0.07$. Thus, once more with outcomes, participants and observers made opposite ratings. As with partner-reported negative emotion experience, there were no

significant differences between excluded (M = 1.46, SD = .90) and non-excluded (M = 1.72, SD = 1.26) participants for partner-reported negative emotion experience, $F(1,99) = .95$, $p = .33$, $\eta^2 = 0.00$.

Emotional experience during the experiment. T-tests were conducted to test whether the experience of negative emotion differed across the three time points (baseline, events of the day, and conflict).. This was tested using a measure of eight negative emotions on a scale of 1 (*not at all*) to 7 (*a lot*) at each time point during the study. The negative emotions – anxious, sad, angry, tired, bored, annoyed, frustrated, irritated, and tense – were averaged to form individual composite scores. $\alpha = .84$ at baseline, .79 during the events of the day discussion, and .89 during the conflict discussion.

Participants experienced significantly less negative emotion in the events of the day discussion (M = 1.82, SD = .71) than at baseline (M = 2.54, SD = .99), $t(76) = 7.60$, $p < .001$, $d = 0.86$. They also experienced significantly greater negative emotion during the conflict discussion (M = 3.58, SD = 1.74) than during the events of the day discussion, $t(76) = -9.27$, $p < .001$, $d = 1.05$, or at baseline, $t(76) = -5.32$, $p < .001$, $d = 0.60$. As expected, this demonstrates that negative emotion was effectively induced during the conflict discussion and that the events of the day discussion decreased the experience of negative emotion from baseline.

Analysis Plan

An ANOVA was conducted to examine whether self-reported emotion regulation strategy use differed by goal condition. Paired t-tests were also used to examine whether the use of suppression and reappraisal differed in each condition. To examine outcomes, an ANOVA was conducted to examine the effect of goal condition on self-reported, partner-reported, and

behavioral outcomes (see Table 3). Regression was used with suppression and reappraisal as simultaneous predictors to test the effect of strategy use on outcomes (see Table 3).

Main Analyses

Effect of emotion regulation goal condition on strategy use. There was not a significant effect of goal condition on suppression, $F(2,74) = 1.20$, $p = .31$, $\eta^2 = 0.03$, or reappraisal, $F(2,76) = .22$, $p = .81$, $\eta^2 = 0.00$. However, as expected, participants within the emotional condition used reappraisal ($M = 3.92$, $SD = 1.05$) significantly more than suppression ($M = 3.23$, $SD = 1.17$), $t(25) = -2.60$, $p = .01$, $\eta^2 = 0.51$. In contrast, in the impression management condition and the control condition participants did not show a preference for reappraisal over suppression (impression management condition: $M = 3.71$, $SD = 1.24$ versus $M = 3.48$, $SD = 1.19$, $t(29) = -.72$, $p = .48$, $d = 0.13$; control condition: $M = 3.85$, $SD = 1.40$ versus $M = 3.79$, $SD = 1.39$, $t(20) = -.16$, $p = .87$, $d = 0.03$). See Figure 2 for a graph of suppression and reappraisal use by condition.

Effect of emotion regulation goal condition on emotional- and impression management outcomes. There was not a significant effect of goal condition on self-reported ratings of negative emotional experience, $F(2,74) = 1.26$, $p = .29$, $\eta^2 = 0.03$. There was, however, a significant effect of goal condition on partner-reported ratings of negative emotional experience, $F(2,74) = 4.08$, $p = 02$, $\eta^2 = 0.10$. A post-hoc Tukey HSD revealed that participants in the impression management condition ($M = 3.33$, $SD = 1.69$) and participants in the emotional condition ($M = 3.54$, $SD = 1.45$) were seen by their interaction partner as experiencing less negative emotion than participants in the control condition ($M = 4.65$, $SD = 1.87$), HSD = 2.74, $p = .02$ and HSD = 2.26, $p = .07$, respectively. There was a also a significant effect of goal condition on observer-reported ratings of negative emotional experience, $F(2,72) = 4.96$, $p = 01$,

$\eta^2 = .12$. A post-hoc Tukey HSD revealed that observers rated participants in the impression management condition ($M = 1.55$, $SD = 1.37$) as experiencing marginally less negative emotion than participants in the control condition ($M = 2.29$, $SD = 1.49$), HSD = 2.14, $p = .09$) and rated participants in the emotional condition ($M = 1.16$, $SD = 1.28$) as experiencing significantly less negative emotion than participants in the control condition, HSD = 3.12, $p < .01$.

In terms of impression management, there was no significant effect of goal condition on self-reported ratings on making a bad impression, $F(2,74) = .84$, $p = .43$, $\eta^2 = 0.02$, or on partner-reported ratings on making a bad impression, $F(2,74) = 1.37$, $p = .26$, $\eta^2 = 0.03$. There was a marginal effect of goal condition on observer-reported impression management, $F(2,72) = 2.69$, $p = .07$, $\eta^2 = .06$, such that participants in the control condition ($M = 1.90$, $SD = 1.26$) were rated as marginally making a poorer impression on the confederate than participants in the impression management condition ($M = 1.31$, $SD = 1.07$) and participants in the emotional condition ($M = 1.28$, $SD = .68$).

Effects of strategy use on emotional- and impression management outcomes. Suppression was found to significantly predict increased self-reported negative emotional experience, ($\beta = .23$, $p = .04$, 95% CI[.002, .644]), but not partner-reported ($\beta = -.04$, $p = .71$, 95% CI[-.39, .27]) or observer-reported negative emotional experience ($\beta = .18$, $p = .13$, 95% CI[-.056, .422]). Reappraisal did not significantly predict self-reported ($\beta = -.07$, $p = .54$, 95% CI[-.431, .226]), partner-reported ($\beta = .09$, $p = .40$, 95% CI[-.193, .474]), or observer-reported negative emotional experience ($\beta = -.03$, $p = .78$, 95% CI[-.283, .216]).

Similarly, suppression predicted self-reported ratings of making a bad impression ($\beta = .29$, $p = .01$, 95% CI[.07, .55]), but did not predict partner-reported impression management ($\beta = -.12$, $p = .32$, 95% CI[-.36, .12]) or observer-reported impression management ($\beta = .17$, $p = .15$,

95% CI[-.051, .332]). Again, reappraisal did not significantly predict self-reported (β = -.12, *p* = .30, 95% CI[-.38, .117]), partner-reported, (β = -.01, *p* = .93, 95% CI[-.26, .23]), or observer-reported impression management, (β = .16, *p* = .18, 95% CI[-.07, .34]).

Discussion

Study 2 showed that pursuing an emotional goal did not lead to increased reappraisal and that pursuing an impression management goal did not lead to increased suppression. However, people pursuing an emotional goal used reappraisal more than suppression. In terms of outcomes, participants pursuing an emotional or impression management goal experienced less negative emotion (as reported by partners and observers) and made a better impression than participants in the control condition (as reported by observers). Whereas the effects of goal condition on outcomes were only seen in the ratings made by confederates and observers (not self-reported outcomes), the effects of emotion regulation strategy use were only found for self-reported outcomes.

Spontaneous use of suppression during the conflict discussion predicted increased self-reported negative emotion experience, which supports previous research showing that suppression can be linked to increased negative emotion experience (e.g., Gross & John, 2003) and demonstrate that it has low utility in achieving an emotional goal. In terms of impression management, participants who used increased suppression during the conflict discussion also thought they made a worse impression on confederates. On the other hand, partner- nor observer-reported impression management was not associated with suppression, demonstrating that even though participants may have thought they made a poor impression, suppression did not necessarily have low utility. This is contrary to what was expected showing negative consequences of suppression in zero-acquaintance dyads such as low partner-reported rapport

and affiliation (Butler et al., 2003). One explanation for this finding however may be that suppression does not have negative consequences for all aspects of social functioning. For instance, while habitual suppression has been linked to low peer-reported interpersonal warmth and closeness, it has not been linked to decreased peer-reported socio-metric standing (English et al., 2012) or liking (Gross & John, 2003).

Unlike suppression, reappraisal did not predict any self-, partner-, or observer-reported outcomes. Considering past research showing the benefits of reappraisal for emotional experience (e.g., Gross, 2002), it is surprising that reappraisal was not associated with better emotional outcomes. One reason for this may have been that the situation evoked intense levels of negative emotion that made reappraisal ineffective. As mentioned in the introduction, reappraisal can be ineffective in situations of high emotional intensity (Thiruchselvam et al., 2011). In terms of social benefits, research has consistently shown that habitual reappraisal is associated with positive social consequences (e.g., Gross & John, 2003; English et al., 2012), but has been less consistent in the context of zero-acquaintance dyads (Butler et al., 2003). It may be that reappraisal needs to be used in more long-term relationships to have social benefits.

A key strength of Study 2 is that it manipulated goals, allowing for a stronger test of the effects on strategy use than Study 1. However, a limitation of Study 2 is that the specific method used may not have been strong enough to adequately influence goal pursuit. This is evident in the large number of participants who were not included in the final analyses because they reported not pursuing their assigned goal at all. Thus, future research could benefit from strengthening the goal manipulation where participants are more motivated to pursue their assigned goal. Another limitation of the study comes from the use of a confederate, which creates an unusual situation, as well as the concern that participants will be removed from the

analyses for suspecting the use of a confederate. Additionally, since a confederate was used, the partner-report differed from a usual partner-report in a non-acquaintance dyad. Future studies could consider using partner-reports from non-confederates. In this study, confederates went against their normal behavior by being unfriendly and arguing for positions they would normally be against. Perhaps confederates sympathized with participants for deceiving them, and as a result, found it difficult to accurately rate impression management. Thus, a partner-report by a non-confederate may provide a more accurate rating of impression management.

General Discussion

How are emotion regulation strategies associated with distinct emotion regulation goals? And how do emotion regulation strategies differ in terms of goal achievement? Drawing on the process model (Gross, 1998b) and previous research on the consequences of different emotion regulation strategies, it was hypothesized that goals would be an important factor for the use of suppression and reappraisal and that these strategies would differ in their utility. Results from Study 1 indicated that more emotional goals were pursued in instances of reappraisal than in instances of suppression in daily life. There was some evidence to suggest that people have a similar preference for using suppression and reappraisal when pursuing instrumental goals, but not necessarily for all goals (i.e., impression management and conflict avoidance goals). In terms of utility, there was evidence for higher utility of reappraisal than suppression for emotional goals. However, there was no evidence for lower utility of suppression than reappraisal in achieving instrumental goals.

As a follow-up to Study 1, Study 2 directly tested the effect of goal pursuit on strategy use and outcomes. Results from Study 2 supported the hypothesis that reappraisal is a preferred strategy when pursuing an emotional goal. However, they did not support the hypothesis that

suppression is used more than reappraisal when pursuing an impression management goal. Unlike Study 1, pursuing an emotional or instrumental goal did not influence emotional experience when reported by participants. However, pursuing either goal led to decreased negative emotion experience and a positive impression relative to control participants, when reported by partners and observers. Reappraisal was not associated with self-, partner-or observer-reports of emotion experience, demonstrating that it did not have utility in achieving an emotional goal. This does not fit with past research showing the emotional benefits of reappraisal (e.g., Gross, 2002). However, as mentioned in the discussion section of Study 2, this may have been due to the high emotional intensity of the situation. It may be that emotional benefits of reappraisal were only found in Study 1 because people wrote about situations that varied in levels of emotional intensity and were not all high in emotional intensity. In contrast to reappraisal, suppression was associated with increased self-reported negative emotion experience and poorer self-reported impression management, but suppression did not predict partner- or observer-rated outcomes. This self-other discrepancy suggests that suppressors may have a negatively distorted perception of their social interactions. Together these studies demonstrate that emotion regulation strategy selection may play an important role in pursuing emotional goals, but not necessarily in pursuing instrumental goals. They also suggest that the utility of a strategy may be influenced by the context (i.e., low versus high emotional intensity, close others versus non-close others) and on method of assessment (i.e., self- versus partner-report).

Theoretical and Clinical Implications

The present research highlights how people can regulate their emotions for different reasons. Whereas past research identified categories of goals that may be relevant to emotion regulation, the current work expanded on it by examining how people's preferred strategy

selection may depend on their goals. Thus, while there are likely to be many factors that influence emotion regulation strategy selection, this research highlights the way in which goals are important for determining the strategies people use. Although findings from Study 1 and Study 2 are inconsistent in terms of the relationship between suppression and instrumental goals, they demonstrate that there is a preference for reappraisal over suppression when pursuing emotional goals. This suggests that people do not have a similar preference for strategies when focusing on emotional experience. It may be that consistent relationships between suppression and instrumental goals were not found because of the differing contexts between Study 1 and 2 or the weak manipulation of goals in Study 2. However, it may also be that goals do not play a major role in the use of suppression. It may be that other features of a situation play a more important role in determining the use of suppression. For instance, suppression may be preferred over reappraisal if it is too difficult to reappraise a situation or when there is a short amount of time to use reappraisal. In such instances, suppression may be used as a quick default strategy, rather than a strategy that is used to achieve a particular goal.

In addition to highlighting the importance of goals in strategy selection, this research also highlights the importance of taking a multi-method approach. Study 2 showed that there was a discrepancy in outcomes depending on whether they were reported by participants, partners, or observers. This finding demonstrates that the use of different methods can demonstrate how the utility of strategy differs depending on whether outcomes are reported by oneself versus others. For example, as seen in Study 2, high suppression use was linked to making a bad impression when reported by participants. However, neither partner- nor observer-ratings showed that suppression use was associated with making a bad impression. One reason for this may be because suppression use truly is not associated with making a bad impression. However, this

finding may also be due to the situation itself. Confederates and observers often shared similar views as participants and thus, may have sympathized with them and rated most participants' impression management as being positive. Thus, suppression may only predict poor partner- and observer-reported impression management in situations involving someone who is not a confederate. Given that first impressions may have a long-lasting impact on how one views a person, it may also be easier to detect a relationship between impression management and suppression with non-close others than with close others whom one already shares a history with.

Lastly, this research has importation implications for clinical interventions. Rather than targeting the emotion regulation strategies that people use, clinicians may also want to consider patients' goals. For example, a patient may be taught to use reappraisal rather than suppression when pursuing an emotional goal. Thus, targeting patients' goals may help patients understand when the use of different strategies is adaptive or maladaptive. Researchers have found that adjusting to the demands of a situation by regulating an individual's emotions flexibly is successful adaptation (Bonanno, Papa, O'Neill, Westphal, & Coifman, 2004; Gupta & Bonanno, 2011). Since goals are important features of a situation (Thompson, 1994), flexibly adjusting an individual's regulation strategies to meet his or her goals is likely to also be adaptive.

Limitations and Future Directions

One important limitation of the present research is that it did not assess the role of consciousness in pursuing emotion regulation goals. The literature on goals suggests that goal pursuit can be conscious and deliberate (i.e., explicit) or unconscious and automatic (i.e., implicit; Bargh, Gollwitzer, Lee-Chai, Barndollar, & Troetschel, 2001). For example, Bargh and colleagues (2001) found that priming participants with the intention to work with others motivated them to pursue that goal without being conscious of their behavior. There is additional

work showing that emotion regulation goals can also occur explicit or implicitly (Egloff, Wilhelm, Neubauer, Mauss, & Gross, 2002; Mauss et al., 2007). Thus, it may be beneficial for future research to examine whether the relationship between strategy use and goals differ depending on whether the goal is explicit or implicit.

In addition to examining the role of consciousness in emotion regulation goals and strategy selection, it may also be helpful to examine the role of consciousness in strategy utility. People's perceptions of the utility of engaging in certain types of behaviors (Carver & Scheier, 2000; Mischel, Cantor, & Feldman, 1996) may or may not be conscious to them. However, there is some research to suggest that people can learn either implicitly or explicitly of the utility associated with different behaviors (Ajzen & Fishbein, 2000). An instance of explicit learning is being told that exercise is beneficial, which leads to weight loss. In contrast to explicit learning, an instance of implicit learning is consistently losing weight after exercising over time. While implicit learning relies on learning contingencies that happen multiple times (Strack & Deutsch, 2004) and are outside of conscious awareness, explicit learning relies on knowledge that is accessible to awareness. Future research can examine whether people would be more or less likely to use a certain strategy, depending on whether their knowledge of the strategy's utility in achieving various goals is implicit or explicit. Rather than assessing outcomes to discern utility, future studies can also ask participants directly about whether or not they found a strategy useful.

Another limitation of this research is that the utility of each strategy was examined in a small scope. Participants in both studies were asked about outcomes directly related to the goals they pursued. This makes it difficult to understand how a strategy may have positive consequences for a domain linked to achieving an individual's goal, but still produces negative consequences in other domains. For example, while suppression was not associated with poor

partner- or observer-reported impression management in Study 2, it may still have had negative consequences for other aspects of social functioning, such as low closeness. On a similar note, future research could also examine how people value different outcomes. For instance, it may be that even if suppression creates low closeness in the long-term, it may be more important for the regulator to avoid making a bad impression in the moment. In other cases though, people may also place greater weight on long-term outcomes rather than short-term outcomes. Research in self-regulation has suggested that people sometimes need to prioritize long-term utility over short-term utility (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Mischel, Shoda, & Rodriguez, 1989). For instance, an individual may want to express anger as a boss criticizes him or her. However, he or she may suppress anger and deal with the short-term consequence of feeling negative emotion to keep his or her job. This demonstrates that people may consider the positive consequences of a goal before pursuing it (Custers & Aarts, 2010).

An important next step will be to examine the role of individual differences in emotion regulation goals and strategy selection. Not only may individuals place a different value on different outcomes, but individual differences in emotion regulation may be associated with the habitual pursuit of certain goals. For instance, are people who use reappraisal habitually also more likely to pursue emotional goals than people who use suppression habitually? In addition to habitual pursuit of goals, researchers could also test whether individuals who use a certain strategy more habitually are also more successful in pursuing certain goals. For instance, people high in suppression may be more successful in achieving impression management goals than people high in reappraisal, while people high in reappraisal may be more successful in achieving emotional goals than people high in suppression.

Conclusion

Emotion regulation strategies can have important consequences for affect and social functioning. Thus, it is crucial to understand why certain regulation strategies are used in the first place and when they can be most adaptive. Testing the hypothesis that people will ideally use strategies that have helped them achieve their goal in the past, the present research tested whether people use strategies to pursue distinct goals and whether these strategies have utility in achieving distinct goals. The findings from two studies suggest that emotion regulation strategy preference may be influenced by pursuit of an emotional goal, but not an instrumental goal. They also suggest that the perceived utility of a strategy may differ from its actual utility.

Footnotes

1. There were no significant interactions between gender and condition for goal pursuit (*ps* > .38) or outcomes (*ps* > .57). However, there were a few significant interactions between gender and goals for outcomes: emotional goal on the impression management outcome ($p = .02$), which made the effect of goal nonsignificant ($p = .63$); conflict avoidance goal on the impression management outcome ($p = .02$), but the effect of goal remained nonsignificant ($p = .23$); emotional goal on the conflict avoidance outcome ($p < .001$), which made the effect of goal nonsignificant ($p = .58$); social maintenance goal on the conflict avoidance outcome ($p < .01$), but the effect of remained significant ($p < .001$); prosocial goal on the conflict avoidance outcome ($p = .01$), which made the effect of goal nonsignificant ($p = .16$); emotional goal on the social maintenance outcome ($p = .02$), which made the effect of goal nonsignificant ($p = .89$); impression management goal on the social maintenance outcome ($p = .01$), but the effect of goal remained nonsignificant ($p = .06$); conflict avoidance goal on social maintenance outcome ($p = .01$), but the effect of goal remained significant ($p < .001$).

There were no significant interactions between age and condition for goal pursuit (*ps* > .08) or outcomes (*ps* > .10). However, there were some significant interactions between age and goals for outcomes: impression management goal on emotional outcome ($p = .03$), but the effect of goal remained significant ($p = .03$); social maintenance goal on emotional outcome ($p = .03$),which made the effect of goal nonsignificant ($p = .47$); impression management goal on the impression management outcome ($p = .02$), but the effect of goal remained significant ($p < .001$); emotional goal on the conflict avoidance outcome ($p = .01$), which made the effect of goal nonsignificant ($p = .11$); and the social maintenance goal on the social maintenance outcome ($p < .001$), which made the effect of goal nonsignificant ($p = .73$).

2. There were no significant interactions between the wave of participants and condition in pursuit of most goals (*ps* >.20) or in the experience of most outcomes (*ps* > .37). There was a significant interaction in the pursuit of a prosocial goal ($p < .001$) and in the experience of a prosocial outcome ($p = .01$), but the effect of condition on both the prosocial goal and outcome remained nonsignificant ($p = .08$ and $p = .12$, respectively). There were some significant interactions between wave and goals for outcomes: conflict avoidance goal on the conflict avoidance outcome ($p = .02$), but the effect of goal remained significant ($p < .001$); impression management goal on the social maintenance outcome ($p = .04$), which made the effect of goal nonsignificant ($p = .18$); conflict avoidance goal on the social maintenance outcome ($p = .04$), but the effect of goal remained significant ($p < .001$); impression management goal on the prosocial outcome ($p < .01$), which made the effect of goal nonsignificant ($p = .98$).

3. There were no significant interactions between relationship status and condition in the pursuit of goals (*ps* >.20) or in the experience of most outcomes (*ps* > .22). There were a few significant interactions between relationship status and goals in the experience of outcomes: impression management goal on the impression management outcome ($p = .01$), but the effect of goal remained significant ($p < .001$); conflict avoidance goal on the conflict avoidance outcome ($p < .001$), but the effect of goal remained significant ($p < .001$); social maintenance goal and the conflict avoidance outcome ($p < .01$), but the effect of goal remained significant ($p < .001$); and the prosocial goal and the social maintenance outcome ($p < .01$), but the effect of goal remained significant ($p < .001$).

4. Initially, “feel more negative emotion” was one of the emotional goals. However, we excluded it from our analyses because it was not highly pursued ($M = 2.08$, $SD = 1.47$ in the family situation; $M = 1.97$, $SD = 1.43$ in the friend situation; $M = 2.03$, $SD = 1.61$ in the romantic

partner situation). It was also excluded because its correlation with "feel more positive emotion" was weak across all situations (r = -.10, p = .32, in family situation; r = -.27, p < .01, in friend situation; r = -.27 p < .01, in romantic partner situation). Thus, the paper focused on the up-regulation of positive emotion instead.

5. As with the "feel more negative emotion" goal, "felt more negative emotion" was initially an emotional outcome. However, it was excluded from the analyses because it was not highly pursued (M = 2.77, SD = 2.03 in the family situation; M = 3.30, SD = 2.00 in the friend situation; M = 2.67, SD = 1.89 in the romantic partner situation). It also had a weak correlation with the "felt more positive emotion" outcome (r = -.38 p < .001, in family situation; r = -.55, p < .001, in friend situation; r = -.35, p < .001, in romantic partner situation).

6. In each of the analyses, relationship type was initially included. However, since there was no significant effect of relationship type on goals (ps < .36) or outcomes (ps < .08), or a significant interaction between relationship type and condition in predicting goal pursuit (ps < .05) or outcomes (p < .06), it was dropped from the final analyses.

7. Semi-partial R^2 values were computed as effect sizes for each mixed model. First, the within-groups degrees of freedom was divided by the product of the between-groups degrees of freedom and the F-statistic. Then that value was divided by one plus that value.

8. The events of the day and conflict discussions were not counterbalanced based on previous research, which has found that negative affect from the conflict discussion can persist throughout the baseline discussion (Gottman & Levenson, 1983). Additionally, the events of the day discussion was used as a way to get participants acclimated to the context before introducing the manipulation.

9. There were no significant differences between races for suppression (p = .43) or reappraisal (p = .83) use during the conflict discussion. There were also no significant differences in self-reported (ps > .17), confederate-reported (ps > .23), or observer-reported outcomes (ps > .07).

10. A total of six confederates were used in the study, with each serving as a confederate for 10-23% of the study. Preliminary analyses testing for effects of confederate did not reveal significant effects on emotion regulation or moderation of goal condition on strategy use or outcomes.

11. Rating controversial moral and political issues (e.g., abortion) was also considered. However, there was a concern that people might not feel anger towards others who disagree with them, with the belief that neither would change their position any way.

12. Two participants did not have observer ratings because they did not want to be video-recorded.

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Tables and Figures

Table 1.

Predicting Goal Pursuit from Strategy Use in Daily Life (Study 1)

	Estimate (*SE*) of Fixed effects
Goal	Condition
Emotional goals	
Feel more positive emotion	-1.20 (.28)*
Instrumental goals	
Impression management	.48 (.28)†
Conflict avoidance	.55 (.28)†
Social maintenance	.15 (.25)
Prosocial	.14 (.31)

Notes. Condition was coded as 0 = Reappraisal and 1 = Suppression.

† $p < .10$, * $p < .05$.

Table 2.

Predicting Outcomes from Strategy Use in Daily Life (Study 1)

		Estimate (*SE*) of Fixed effects				
	Condition	Goal				
Outcome		Emotional	Impression management	Conflict avoidance	Social maintenance	Prosocial
Emotional						
Felt more positive emotion	-1.55 (.30)*	.54 (.05)*	.03 (.07)	.09 (.05)†	.24 (.05)*	.28 (.06)*
Instrumental						
Impression management	.47 (.29)	.11 (.05)*	.83 (.03)*	.02 (.04)	.01 (.06)	.07 (.04)
Conflict avoidance	.32 (.28)	.24 (.06)*	-.00 (.07)	.72 (.03)*	.63 (.04)*	.30 (.05)*
Social maintenance	.22 (.28)	.18 (.05)*	.01 (.06)	.36 (.04)*	.59 (.04)*	.37 (.06)*
Prosocial	.14 (.32)	.28 (.06)*	.20 (.07)*	.26 (.06)*	.37 (.05)*	.81 (.03)*

Notes. Condition was coded as 0 = Reappraisal and 1 = Suppression. The effects of condition and goals were tested separately and each goal was tested in a separate model.

† $p < .10$, * $p < .05$.

Table 3.

Predicting Outcomes from Goal Condition and Strategy Use (Study 2)

	Goal condition	Suppression	Reappraisal
Outcome	*F*	β	β
Negative emotion			
Self-reported	.29	.23*	-.07
Partner-reported	4.08*	-.04	.09
Observer-reported	4.96*	.18	-.03
Impression management			
Self-reported	.44	.29*	-.12
Partner-reported	1.37	-.12	-.01
Observer-reported	2.69†	.17	.16

Notes. ANOVAs were conducted to test the effect of goal condition on outcomes. Regression analyses were conducted to test the effects of suppression and reappraisal on outcomes.

† $p < .10$, * $p < .05$.

Figures

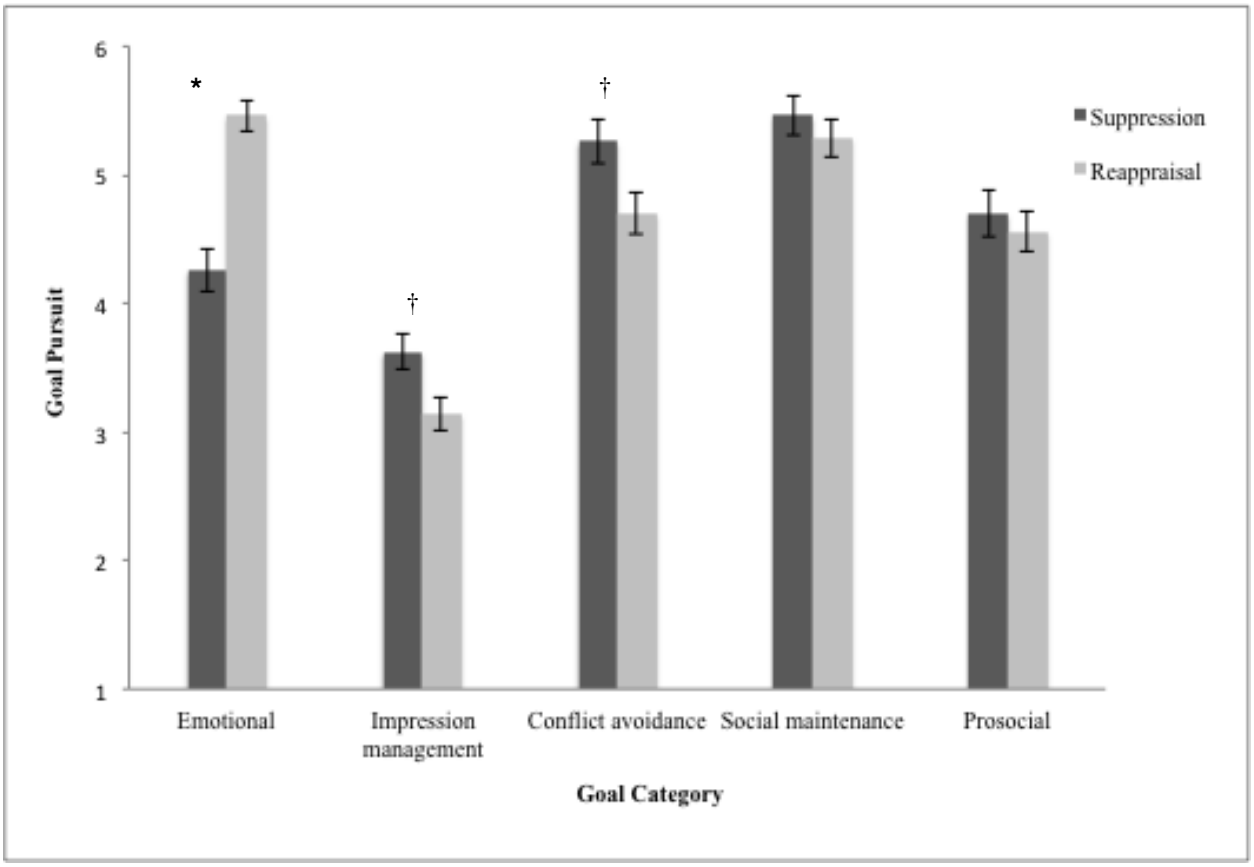

Figure 1. Emotion regulation strategy use by goal type in daily life (Study 1). This figure illustrates suppression and reappraisal use across the emotional and instrumental goal categories.

Note. † $p < .10$, * $p < .05$.

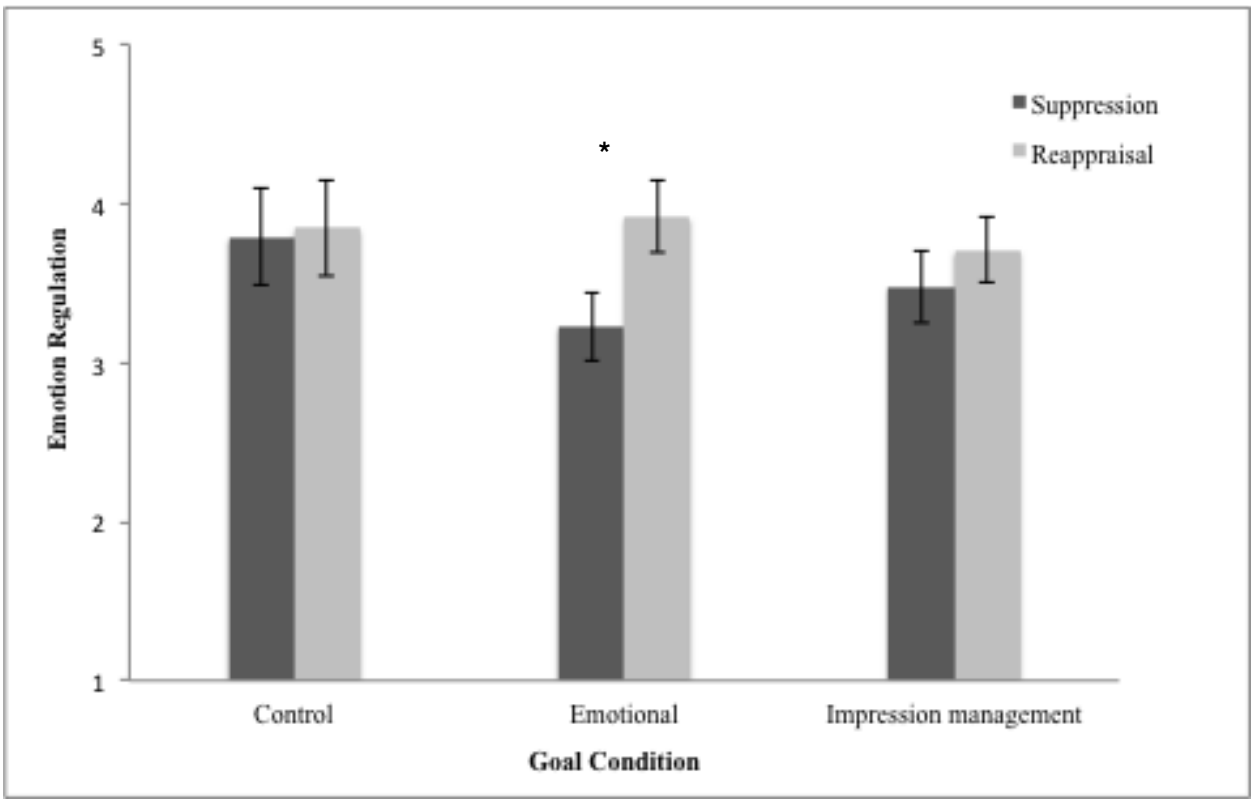

Figure 2. Emotion regulation strategy use by goal condition (Study 2). This figure illustrates suppression and reappraisal use across the control, emotional goal, and impression management goal conditions.

Note. * $p < .05$.

Appendix

COLLEGE ISSUES

Instructions: This form contains a list of statements regarding issues that many college students encounter.

In the **How much do you agree?** column, please rate your **AGREEMENT** with the following statements on a scale of 0 (strongly disagree) to 100 (strongly agree).

0----------50----------100

Strongly Disagree **Neutral** **Strongly Agree**

In the **How important this is to you?** column, please rate how **PERSONALLY IMPORTANT** the following statements are to **YOU** on a scale of 0 (not very important) to 100 (very important).

0----------50----------100

Not Very Important **Neutral** **Very Important**

Statement	**How much?**	**How important?**
1. Students of the opposite sex should be able to dorm in a double room together on campus.		
2. Students should be given special consideration for their religious needs and events (e.g., holidays).		
3. Students should be able to openly discuss diversity issues on campus (e.g., race).		
4. Students should be able to speak at normal conversation level in the library.		
5. Students should be required to participate in class.		
6. Professors should be able to openly state and discuss their opinions when teaching a course.		
7. There should be stricter alcohol and partying policies on campus.		

8. The university should increase its efforts in recruiting students from different socio-economic backgrounds.		
9. The university should improve its treatment and consideration of students who identify as LGBT (lesbian, gay, bisexual, transgender).		
10. The university should invest more time and money in improving its athletics department.		
11. The university has a large responsibility in fixing problems in the greater St. Louis area.		
12. Students should not be allowed to park their cars on campus.		
13. The university should guarantee housing to students for all four years of their undergraduate degree.		
14. The university should invest more time and money in increasing its world-wide recognition and prestige.		