Manuscript version of

Managing Emotions in the Face of Discrimination: The Differential Effects of Self-Immersion, Self-Distanced Reappraisal, and Positive Reappraisal

Ajua Duker, Dorainne J. Green, Ivuoma N. Onyeador, Jennifer A. Richeson

CHORUS *Advancing Public Access to Research*

Managing Emotions in the Face of Discrimination: The Differential Effects of Self-Immersion,

Self-Distanced Reappraisal, and Positive Reappraisal

Ajua Duker[a*], Dorainne J. Green[b*], Ivuoma N. Onyeador[c], & Jennifer A. Richeson[a,d]

[a]Department of Psychology, Yale University

[b]Department of Psychology, Indiana University

[c]Kellogg School of Management, Northwestern University

[d]Institution for Social and Policy Studies, Yale University

Please send correspondence to Ajua Duker, Department of Psychology, Yale University, Kirtland Hall, 2 Hillhouse Ave, New Haven, CT 06520 (e-mail: ajua.duker@yale.edu).

Study materials, additional measures, data and syntax are available at https://osf.io/ve2jm/.

*Ajua Duker and Dorainne J. Green share primary authorship as they contributed equally to this article.

Abstract

Contending with sexism is associated with negative affective outcomes, including increased anger, anxiety, and depression. Prior research demonstrates that the use of emotion regulation strategies, such as self-distanced reappraisal, when contending with general negative interpersonal experiences, can help people manage their emotions, attenuating the associated negative affect. The present research considers whether the affective benefits of reappraisal extend to past experiences of discrimination. Specifically, we examine whether using self-distanced reappraisal (Studies 1 & 2) or positive reappraisal (Study 2) when contending with sexism yields more positive and less negative affective outcomes, relative to engaging in self-immersion. Contrary to previous research examining more general negative interpersonal experiences, we find limited evidence that self-distanced reappraisal is an effective emotion regulation strategy for women contending with sexism ($N = 1236$). The present work offers preliminary evidence, however, that positive reappraisal may be a promising emotion regulation strategy that reduces the negative affective consequences associated with reliving past instances of sexism, compared with either self-immersion or self-distanced reappraisal. We discuss the implications of these findings for understanding the efficacy of different emotion regulation strategies in the context of discrimination.

Keywords: discrimination, emotions, emotion regulation, affect, sexism

186 words

Managing Emotions in the Face of Discrimination: The Differential Effects of Self-Immersion,

Self-Distanced Reappraisal, and Positive Reappraisal

> If we're too composed, we're cold and fake. But if we say what we think
>
> without caution, we get slammed for it. Can you blame us for feeling like we
>
> can't win, no matter what we do?
>
> – Hillary Clinton

Sexism is a widespread phenomenon. Forty-two percent of women in the United States

report experiencing sexism in the workplace (Parker & Funk, 2017) and female college students

report an average of one to two sexist experiences every week (Swim et al., 2001; see, also,

Kuchynka et al., 2017). Sexism can also be observed in pay disparities (e.g., Alkadry & Tower,

2006). For instance, a player on the US Women's National Soccer Team – the most successful

team in international soccer – can expect to earn approximately 38% of the pay a similarly

situated men's team player would if both teams (whose pay structures differ) played 20

exhibition games in a year. And, as suggested by the sentiment expressed by Hillary Clinton in

the epigraph, even the most successful female leaders in US society face biased expectations and

standards, compared to male leaders.

Experiences of sexism, and other forms of discrimination, can have significant

consequences for individuals' psychological and physical health (e.g., Borrell et al., 2010;

Zucker & Landry, 2007). Everyday experiences of discrimination, for instance, have been linked

to elevated levels of anxiety, anger, and psychological distress (Banks et al., 2006;

Hatzenbuehler et al., 2009; Pascoe & Richman, 2009), which in turn, can lead to adverse health

behaviors, such as substance use (Borrell et al., 2010; Zucker & Landry, 2007). Further,

experiencing discrimination can trigger psychological and physiological processes that lead to

negative physical health outcomes (e.g., hypertension; Clark, et al., 1999; Pascoe & Richman,

2009; Zilioli, et al., 2017).

People can contend with discrimination in a myriad of ways, such as by confronting the

discrimination (e.g., Wang & Dovidio, 2017) or using disengagement coping strategies

(Szymanski & Lewis, 2015). In the present research, we focus on one type of coping strategy –

emotion regulation – and whether the manner in which people manage their emotions in the face

of discrimination alters the affective consequences associated with it. People's emotional

responses (Borrell et al., 2010; Zucker & Landry, 2007) and the ways in which people manage

their emotions in response to discrimination (Zilioli et al., 2017) serve as pathways through

which discrimination can lead to ill health. Therefore, identifying ways that individuals can

adaptively manage their emotions in the face of discrimination is essential.

Emotion Regulation

Experiences of discrimination are consistently linked to negative emotional outcomes

(Pascoe & Richman, 2009). For instance, women exposed to gender discrimination in the

workplace reported experiencing greater levels of anxiety and depression compared to women in

a control condition (Pacilli et al., 2019; Spaccatini & Roccato, 2020). The emotion regulation

strategies used when contending with discrimination can subsequently exacerbate or attenuate its

adverse emotional outcomes. Specifically, these strategies can subsequently lead to positive or

negative emotional responses (Hatzenbuehler, 2009; Hoggard et al., 2019). Emotion regulation

involves both controlled and automatic processes that individuals use to influence which

emotions they experience, as well as how they experience and express them (Gross, 1998; Webb,

et al., 2012). In the present work, we examine the effects of two classes of emotion regulation

strategies: concentration and reappraisal.

Concentration strategies— self-immersed responses to distress— are often triggered in

the wake of negative emotional experiences. When individuals engage in self-immersion, they

attend to and focus on the concrete details of their experience, such as their feelings and what

caused them, from a first-person perspective (Webb, Miles, & Sheeran, 2012). Self-immersed

processing of negative events often and/or typically involves rumination, since directed attention

towards specific details of one's experience can lead to repetitive, intrusive thoughts about the

negative event and a fixation on negative feelings associated with the event (Nolen-Hoeksema,

1991; Webb et al., 2012). Research demonstrates that members of stigmatized social groups

(e.g., women, racial/ethnic minorities, sexual minorities) often engage in self-immersion in

response to discrimination, compared to other stressors that are unrelated to discrimination

(Borders & Liang, 2011; Fox & Tang, 2017; Hatzenbuehler et al., 2009). In an experience

sampling study, for instance, Hatzenbuehler and colleagues (2009) found that on days when

African American and sexual minority participants reported experiencing stigma-related

stressors, they also tended to engage in more self-immersed reflection. Although self-immersed

responses to distress are common, they are associated with the maintenance of negative affect

(Hatzenbuehler et al., 2009; Nolen-Hoeksema, 1991) and increases in negative physiological

arousal (McIsaac & Eich, 2004), anxiety, and depression (Nolen-Hoeksema, 2000; Webb et al.,

2012). In response to negative experiences, therefore, self-immersion is typically considered a

maladaptive emotion regulation strategy.

Reappraisal strategies, in contrast, involve efforts to modify one's assessment of a situation in order to alter its emotional impact (Gross, 1998). According to recent theoretical models, people can engage in several different types of reappraisal (Webb et al., 2012). For instance, self-distanced reappraisal is a process by which the meaning of an event is altered by reconstruing it from a different vantage point (Ross & Wilson, 2003; Wilson & Ross, 2003). This can involve taking a detached, third-person perspective when contending with a negative emotional experience (Ochsner et al., 2004; Ray et al., 2008; Shiota & Levenson, 2009, 2012). Self-distanced reappraisal, that is, involves stepping outside oneself when recalling one's own past experiences, focusing less on the concrete aspects of negative experiences, and taking a bird's eye view of them (Ayduk & Kross, 2008). This allows individuals to make sense of their negative experiences without the risk of engaging in self-immersed reflection. Research outside of the domain of discrimination suggests that self-distanced reappraisal is associated with better emotional (e.g., decreased anger, increased positive affect) and physiological (e.g., lower blood pressure) well-being, compared with self-immersion (Ayduk & Kross, 2008). Kross and colleagues (2014) found, for instance, that participants who engaged in self-immersed processing of their emotions (e.g., self-talk using first-person pronouns) prior to an anxiety-provoking interaction reported experiencing more anxiety after the interaction compared to participants who engaged in self-distanced reappraisal (e.g., self-talk using their name, or third person pronouns). Relative to self-immersion, therefore, self-distanced reappraisal is considered to be a more adaptive emotion regulation strategy.

People can also engage in *positive reappraisal*. Positive reappraisal involves attending to the positive aspects of a stimulus and/or potential positive outcomes of even negative life events (Folkman & Moskowitz, 2000). One type of positive reappraisal strategy that people can engage

in is "benefit finding," which involves thinking about the potential benefits that can or may have followed a past adverse event, such as one's family having grown closer due to the death of a shared loved one (Davis et al., 1998; Rusting & DeHart, 2000; Webb et al., 2012). Positive reappraisal in the form of benefit finding has been found to be adaptive in the face of chronic stressors, such as caring for a family member that is critically ill or debilitated (Folkman, 1997; Sears et al., 2003). Davis and colleagues (1998) found, for instance, that benefit finding, compared to simply making sense of a traumatic event, predicted success in recovering from the event. More specifically, compared to sense-making, benefit finding was linked to less negative affect, reduced depressive symptoms, better perceived situational outcomes, and better psychological adjustment for those who experienced the death of a loved one (Davis et al., 1998).

Taken together, this research, almost exclusively conducted outside the discrimination domain, suggests that self-immersion in response to negative events is a maladaptive emotion regulation strategy, compared with either self-distanced reappraisal or positive reappraisal. Discrimination on the basis of membership in a stigmatized social group certainly leads to increases in negative emotions like anger and anxiety, and, thus, its targets may also benefit from self-distanced and/or positive reappraisal (cf. Soto, Armenta, et al., 2012; Yoo & Lee, 2005). The primary purpose of the present work was to examine this question. Specifically, we considered the relative affective outcomes of reappraisal compared with self-immersion for women when processing past incidents of sexism.

The Present Research

The primary goal of the present research was to examine whether engaging in reappraisal strategies when contending with sexism leads women to experience better affective outcomes

relative to self-immersion. Studies 1A and 1B examined the effects of self-distanced reappraisal compared with self-immersion, whereas Study 2 examined the efficacy of positive reappraisal compared with both self-distanced reappraisal and self-immersion. Based on previous research conducted outside of the domain of discrimination (e.g., Ayduk & Kross, 2008; Davis et al., 1998), we predicted that women who engaged in reappraisal (i.e., self-distanced reappraisal or positive reappraisal) when reliving past experiences with sexism would report less negative (and more positive) affect than those who engaged in self-immersion.

Study 1

Study 1A compared the emotional consequences of contending with a past experience of sexism using either self-immersion or self-distanced reappraisal. Study 1B was a direct replication of Study 1A. For both, we predicted that self-distanced reappraisal, compared to self-immersion, would result in lower negative affect and greater positive affect.

Method

Participants

For Study 1A, we recruited 317 self-identified women (248 White, M_{age} = 36.2 years, SD = 11.72) via Mechanical Turk for Study 1A. An *a priori* power analysis (G*Power; Faul et al., 2007) to detect a medium effect size (η^2_p = .0417) based on prior work[1] indicated the need for 300 participants in order to attain power of .95.

For Study 1B, we recruited 447 self-identified women via Mechanical Turk, however the responses of 5 were excluded for not writing about sexism, reducing the sample to 442 women

---

[1]Levy (2016) included several studies that were designed to examine the cognitive consequences of these emotion regulation strategies, but some also included affect measures. The average effect sizes of findings on the affective outcomes from this paper was η^2_p = .0417. Because of the null effects that emerged in Study 1A, however, we deliberately increased the sample size for Study 1B to enable us to observe even an even smaller effect of the manipulation.

(360 White, M_{age} = 23.5 years, SD = 13.18). We enrolled a larger sample in this replication effort

to be able to detect a smaller effect size. This sample size was sufficient to detect an effect size

of η^2_p = .02 at 80% power. The methods and materials for Study 1 were approved by the

Institutional Review Board at Yale University. Study materials, additional measures, data and

syntax are available at https://osf.io/ve2jm/.[2]

Manipulation & Measures

Sexism Reliving Task

Participants were asked to recall a time when they believed that someone discriminated

against them because of sexism. They were given examples of scenarios that might fit the bill

(e.g., "derogatory comments and slights, poor treatment during interactions at work, or

restaurants, or other public spaces") to prompt idea generation, and were instructed to take a few

moments to bring an appropriate scenario or situation back to mind. They were given space to

write a few brief sentences about the sexist event of their choosing.

Emotion-regulation manipulation. Participants were randomly assigned to reflect on the

experience they brought to mind using one of two emotion regulation strategies: a) self-

immersion or b) self-distanced reappraisal. Similar to methods used in previous research (e.g.,

Ayduk & Kross, 2010; Grenell et al., 2018; White et al., 2016), participants in the self-immersed

condition were instructed to reflect on their experience from a first-person perspective by using

the pronouns "I" and "me" as much as possible. They were told:

---

[2] We asked participants to rate several aspects of the discrimination experiences they wrote about; specifically, how *severe* it was, how *frequently* they experience similar events, and how *long ago* it occurred. None of these ratings differed as a function of participants' emotion-regulation condition. And, although event severity and frequency predicted participants' affective outcomes independent of emotion-regulation condition, all of the results reported in the main text are robust to their inclusion as covariates in the analyses. We report the results of these analyses in the Supplemental Materials.

"As you continue to relive this situation, please try to understand why you felt the way you did in the experience you just recalled using the pronouns 'I' and 'me' as much as possible. In other words, ask yourself 'Why did I feel this way? What are the underlying causes and reasons for my feelings? How did I respond to the situation?'"

Participants in the self-distanced condition were instructed to reflect on their experiences from a third-person perspective by using their name or third-person pronouns. They were told:

"As you continue to relive this situation, please try to understand why you felt the way you did in the experience you just recalled using '[your own name]' as much as possible, In other words, if your name was Jane, you would ask yourself, 'Why did Jane feel this way? What were the underlying causes and reasons for Jane's feelings? How did Jane respond to the situation?'"

Participants were given up to 5 minutes to write about their experiences from their randomly assigned perspective.

Manipulation check. In order to assess whether participants sufficiently engaged in the strategy to which they were randomly assigned, we asked them to respond to two items: 1) "Please indicate the extent to which you saw the event play out through your own eyes vs. you watched the event unfold as an observer" and 2) "Please indicate how far away from the scene you were as you analyzed your feelings." Each item was scored on a 0-10 scale, with 0 indicating full self-immersion and 10 indicating fully self-distanced reappraisal.

Primary Affective Outcomes

Self-Assessment Manikin (SAM; Bradley & Lang, 1994). Participants were presented with a nonverbal pictographic 9-point scale that depicted a series of figures ranging in illustration

from frowning to smiling on which they rated how they felt on a scale from 1 (*very unpleasant*)

to 9 (*very pleasant*).

Positive & Negative Affect (adapted from Watson et al., 1988). Participants also rated

the extent to which they felt five positive emotions (excited, proud, joyful, relieved, calm) and

five negative emotions (afraid, upset, distressed, angered, irritated) on a scale of 1 (*not at all*) to

7 (*extremely*). Participants made these ratings both before and after the reliving task and they

were averaged to create composite measures of positive affect (PA; 1A: α_{Time1} = .85; α_{Time2} = .84;

1B: α_{Time1} = .83; α_{Time2} = .85) and negative affect (NA; 1A: α_{Time1} = .90; α_{Time2} = .89; 1B: α_{Time1} =

.90; α_{Time2} = .89).

Reliving Task Experience Measures

Emotional Reliving. Similar to Ayduk and Kross (2010), participants responded to the

following two items to assess the extent to which they reexperienced the emotions and affect

they felt during the discrimination event as they wrote about it: "I re-experienced the emotions I

originally felt during my experience with discrimination when I think about it now" and "As I

think about my experience with discrimination now, my emotions and physical reactions to the

conflict are still pretty intense." Participants made their ratings on 1 (*strongly disagree*) to 7

(*strongly agree*) scales. Responses were averaged to assess the extent of their *emotional reliving*

(1A α = .70; 1B α = .73).

Thought Content. Consistent with Ayduk and Kross (2010), participants reported on

how much *recounting* (i.e., focusing on specific details) and *reconstruing* (i.e., generating new

insights) the discriminatory event they relived. In previous work, those who used self-distanced

reappraisal when reliving their negative autobiographical experiences reported recounting their

experiences less, and reconstruing their experiences more, than those who did so using self-

immersion, which led to reduced negative emotional outcomes (Kross & Ayduk, 2008; Kross et al., 2005). Recounting was assessed with the following statement: "My thoughts focused on the specific chain of events—the sequence of events, what happened, what was said and done – as I thought about my experience." Reconstruing was assessed with the following three statements: 1) "As I thought about my experience with discrimination, I had a realization that made me experience a sense of closure," 2) "Thinking about my experience with discrimination led me to have a clearer and more coherent understanding of the experience," and 3) "As I thought about my experience with discrimination, I had a realization that caused me to think differently about the experience." All items were rated on 1 (*strongly disagree*) – 7 (*strongly agree*) Likert scales. Responses to the three reconstruing statements were averaged to form a composite (1A: $\alpha = .85$; 1B: $\alpha = .80$).

Procedure

After providing informed consent, participants first completed the SAM measure, and the positive and negative affect measures. Next, participants were asked to identify an experience of sexism and write 2-3 sentences about it. They were directed to a new page where they were asked to write about the experience they had just recalled for up to five minutes. Prior to writing, based on random assignment, participants were prompted to use either self-immersion or self-distanced reappraisal while reliving their sexism experience. After completing the reliving task, participants completed the thought content measures, followed by the SAM valence scale and the affect measure for the second time. Participants next completed the emotional reliving measure,

CONTENDING WITH DISCRIMINATION

the manipulation check items, a number of potential moderator and/or unrelated variables,[3] prior

to being debriefed and compensated for their participation.

Results

Descriptive Statistics and Correlations

The descriptive statistics and zero-order correlations among the dependent variables for

Study 1A and 1B are provided in Table 1.

Manipulation Checks

In Study 1A, participants who were randomly assigned to relive their experiences of

sexism using self-immersion ($M = 2.47$, $SD = 3.18$, 95% CI [1.98, 2.96]), reported that they saw

the event play out through their own eyes to a greater extent than those instructed to do so using

self-distanced reappraisal ($M = 4.15$, $SD = 3.24$, 95% CI [3.64, 4.67], $t(314) = -4.67$, $p < .001$, d

$= .53$, 95% CI [-2.40, -.98]). Further, participants in the self-immersion condition ($M=2.53$, $SD =$

2.79, 95% CI [2.10, 2.96]) reported that they felt closer to the scene as they analyzed their

feelings than those in the self-distanced reappraisal condition ($M=4.30$, $SD = 2.80$, 95% CI [3.85,

4.74], $t(314)= -5.62$, $p < .001$, $d = .63$, 95% CI [-2.38, -1.15]).

Similarly, Study 1B participants who relived their experiences of sexism using self-

immersion ($M=2.42$, $SD = 2.83$, 95% CI [2.04, 2.79]) also reported they saw the event unfold

through their own eyes to a greater extent than those who did so using self-distanced reappraisal

($M=3.68$, $SD = 3.07$, 95% CI [3.28, 4.09], $t(435) = -4.50$, $p < .001$, $d =.43$, 95% CI [-1.82, -.71]).

And, Study 1B participants who engaged in self-immersion reported that they felt closer to the

---

[3]In addition to the measures reported in the manuscript, Study 1A & 1B also included measures of gender group identification (i.e., private regard and identity centrality subscales of the collective self-esteem scale, Luhtanen & Crocker, 1992) and the Ambivalent Sexism Inventory (Glick & Fiske, 2001). These were examined as potential moderators of the emotion-regulation manipulation and as outcome variables; however, no significant effects emerged. Participants also completed the Dutch Restrained Eating Scale (Van Strien et al., 1986) and a number of exploratory health choice measures. These outcomes were unrelated to the primary hypotheses and did not differ by condition.

scene (M=2.24, SD = 2.49, 95% CI [1.91, 2.57]), $t(438)$ = -5.47, $p < .001$, $d = .52$, 95% CI [-1.79, -.84] than those who engaged in self-distanced reappraisal (M=3.56, SD = 2.57, 95% CI [3.21, 3.90]) as they analyzed their feelings. Taken together, these findings suggest that the manipulation of emotion regulation strategy was successful in both studies.

Affective Outcomes

The means and standard deviations for the affective measures for both Study 1A and 1B are provided in Table 2.

Study 1A

We first examined whether the emotion regulation strategy women used when contending with past experiences of sexism affected their *SAM valence scores* after, compared with before, the reliving task. We submitted participants' SAM scores to a 2 (Emotion Regulation condition: self-immersion vs. self-distanced reappraisal) x 2 (Time point: before vs. after the reliving task) mixed-model ANOVA with repeated measures on the second factor. Analyses revealed a significant main effect of time point, $F(1, 315) = 280.84$, $p < .001$, $\eta^2_p = .47$; compared to baseline (i.e., before the reliving task), such that participants reported less positive affect after engaging in the reliving task. Contrary to predictions, however, this effect was not moderated by participants' emotion regulation condition, $F(1, 315) = 0.88$, $p = .348$, $\eta^2_p = .00$.

We next examined participants' *positive and negative affect ratings* with the same mixed-model ANOVA. Analyses, once again, revealed the main effect of time point for both positive affect, $F(1, 315) = 193.10$, $p < .001$, $\eta^2_p = .38$, and negative affect, $F(1, 315) = 175.46$, $p < .001$, $\eta^2_p = .36$. Neither effect was moderated by emotion regulation condition [PA interaction $F(1, 315) = .00$, $p = .952$, $\eta^2_p = .00$; NA interaction $F(1, 315) = .05$, $p = .825$, $\eta^2_p = .00$].

Study 1B

Replicating Study 1A, analyses revealed a significant main effect of time point on the SAM, $F(1, 439) = 343.36$, $p < .001$, $\eta^2_p = .44$. Similarly, the main effect of time point was significant for both *positive affect*, $F(1, 439) = 279.40$, $p < .001$, $\eta^2_p = .39$, and *negative affect*, $F(1, 438) = 313.15$, $p < .001$, $\eta^2_p = .42$. Importantly, and replicating the null effects from Study 1A, none of these effects was moderated by participants' emotion regulation condition (all $ps >$ .55).

Emotional Reliving

Study 1A

Consistent with hypotheses, results revealed that women who used self-distanced reappraisal (M=4.74, $SD = 1.35$, 95% CI [4.52, 4.95]) reported less emotional reliving than those who engaged in self-immersion (M=5.05, $SD = 1.24$, 95% CI [4.86, 5.24]); $t(310)$= 2.15, $p =$ .032, $d = .24$.

Study 1B

This effect did not replicate in Study 1B. Participants in the self-distanced reappraisal condition ($M = 4.74$, $SD = 1.32$, 95% CI [4.57, 4.92]) did not report significantly less emotional reliving compared to those participants in the self-immersion condition ($M = 4.82$, $SD = 1.32$, 95% CI [4.64, 4.99]); $t(439) = 0.60$, $p = .547$, $d = .06$.

Thought Content

Analyses did not reveal the expected differences between emotion-regulation conditions for either recounting [$t(315) = .39$, $p = .698$, $d = .04$] or reconstruing [$t(315) = .62$, $p = .537$, $d =$ .07] in Study 1A. Similarly, no differences emerged on either the recounting [$t(439) = 1.13$, $p =$ .26, $d = .11$] or reconstruing [$t(436) = .31$, $p = .76$, $d = .03$] measures in Study 1B. The condition means for these measures for both studies are provided in Table 3.

Discussion

Studies 1A and 1B examined the affective consequences of using self-distanced reappraisal, compared to self-immersion, when contending with past experiences of sexism. Similar to findings from previous research (e.g., Gibbons et al., 2010), results revealed that reliving an experience of sexism was sufficient to reduce participants' positive affect and increase their negative affect. Contrary to predictions, however, we found little evidence in either study to suggest that self-distanced reappraisal alleviates the affective burden of reliving sexist events. Specifically, neither study revealed evidence that self-distanced reappraisal during the reliving task resulted in better affective outcomes on either the SAM or in their positive and negative emotion ratings, compared with self-immersion. In other words, contrary to previous research (Ayduk & Kross, 2008), the results of these two studies do not indicate that engaging in self-distanced reappraisal when recalling an experience with sexism provides affective relief relative to self-immersion.

Although it is difficult to interpret any null result with confidence, one potential explanation is that the previous research demonstrating affective as well as other benefits of self-distanced reappraisal compared with self-immersion has largely considered the processing of interpersonal stressors (e.g., Kross et al., 2005). Perhaps the psychological harm associated with group-level stressors, such as group-based discrimination, is less amenable to repair through self-distanced reappraisal (e.g., Ford & Troy, 2019). Specifically, reappraising a discrimination experience may lead individuals to focus on the lack of controllability of the situation (i.e., they cannot simply refrain from possessing a devalued social identity to prevent future harms), which may increase the experience of negative affect (e.g., Major & O'Brien, 2005; Pascoe & Richman, 2009; Zeiders et al., 2012). Further, for at least some members of societally

stigmatized groups, discrimination may be a chronic and pervasive source of stress (e.g., Clark et al., 1999; Richman et al., 2007), unlike many types of acute interpersonal stressors (e.g., anxiety about an upcoming exam, or a fight with one's romantic partner). Because self-distanced reappraisal requires people to adopt a third-person perspective about their experience, it may actually remind members of stigmatized social groups of how common such discriminatory events are (Libby & Eibach, 2011), which is unlikely to blunt any negative affect. Self-distanced reappraisal, in other words, might not be as useful at reducing negative affect when individuals are contending with stressful events that are perceived to be less controllable and/or due to group-level characteristics such as discrimination, compared with interpersonal stressors due to individual-level characteristics or behaviors (e.g., Gonzales et al., 2001; Smith et al., 2007; Soto et al., 2012; Wadsworth & Berger, 2006). Future research is necessary to examine these possibilities directly.

Even without clear understanding of why self-distanced reappraisal was not beneficial for the participants in our studies, it is important to identify emotion-regulation strategies that may be effective at reducing some of the negative affect that stems from reliving discriminatory events. To that end, Study 2 explored whether a different type of reappraisal; namely, positive reappraisal, may be effective at reducing negative affect in the wake of discrimination.

Study 2

The previous two studies investigated whether engaging in self-distanced reappraisal compared to self-immersion while contending with past experiences of sexism produced less negative (and more positive) affect. In both studies, we found that reliving past incidents of sexism is not only distressing, but equally so when processed with self-distanced reappraisal, compared to self-immersion. These null results are especially disappointing, given the body of

evidence that self-distanced reappraisal can relieve psychological stress, at least in many

circumstances (Orvell et al., 2019). Given the burden that experiencing discrimination can place

on members of stigmatized groups, however, we thought it essential to test the efficacy of a third

emotion regulation strategy — positive reappraisal, or focusing on the positive aspects or

outcomes of a specific situation (Shiota & Levenson, 2012).

  Relative to self-distanced reappraisal (and, presumably, self-immersion as well), positive

reappraisal may be able to blunt the negative affective outcomes that emerge when contending

with chronic and often uncontrollable stressors, such as group-based discrimination. Specifically,

because positive reappraisal requires people to reconstrue the negative event, for instance, by

engaging in benefit-finding, it may be a more effective emotion-regulation strategy than

distancing from the event (i.e., distanced reappraisal; Shiota & Levenson, 2012). Indeed, Rood

and colleagues (2011) found that adolescents who engaged in benefit-finding (i.e., thinking about

what they learned from the event or how it made them stronger) when reflecting on a recent

stressful event such as the death of a loved one, reported more positive (and less negative) affect,

relative to adolescents who engaged in either self-distanced reappraisal or self-immersion (i.e.,

rumination). Study 2 tested whether this may also be the case for experiences of sexism.

  One form of positive reappraisal that is thought to be especially effective in terms of

leading to an array of adaptive outcomes is the generation of *redemption narratives*. In his life

story model of identity, Dan McAdams (2001) posits that people construct integrative narratives

regarding their identity that involve reimagined events from the past, which help them to

understand the present and inform the future. Redemption narratives involve (re)construing past

negative life events in ways that connect them to positive outcomes/states in the present

(McAdams, 2001; 2006). Redemption narratives include, for instance, stories about overcoming

adversity and growing from negative life experiences and hardships. Among a sample of middle-aged adults and college students, McAdams and colleagues (2001) found that individuals who generated redemption narratives about their lives were also higher in self-esteem and life satisfaction, and less likely to suffer from depression. Further, these positive outcomes are thought to emerge because individuals are able to grow and learn from their negative life experiences, rather than getting proverbially stuck in the past or derailed by them (Affleck & Tennen 1996; Taylor, 1983). Generating redemption narratives, therefore, may be an especially adaptive form of positive reappraisal that members of stigmatized groups can use to cope with past discrimination experiences.

Recent research suggests that individuals can be prompted to create a redemption narrative regarding a negative past event and, further, that doing so can result in positive outcomes in intergroup contexts, such as engendering more prosocial orientations regarding outgroups (Rotella et al., 2015). Finding or even seeking redemption while reliving past experiences of discrimination, for instance by linking those experiences to increased resilience to cope with future incidents of unfair treatment (McAdams & Bowman, 2001; Rusting & DeHart, 2000; Webb et al., 2012), may similarly result in downstream positive affective outcomes for members of stigmatized groups. In other words, it is possible that attempting to engage in positive reappraisal through the generation of a redemption narrative regarding a past discrimination experience could result in less negative affective outcomes than reliving it from either a self-distanced or self-immersed perspective. The aim of Study 2 was to test this possibility.

Method

Participants

We recruited 472 participants via Mechanical Turk. Thirteen participants were excluded for self-identifying as male, and another 5 were excluded because they did not write about an instance of sexism. Data from one additional participant, who attempted to take the study twice, was excluded, resulting in final sample of 453 women (322 White, M_{age} = 39.7 years, SD = 13.19).[4] The methods and materials for Study 2 were approved by the Institutional Review Board at Yale University. Study materials, additional measures, data and syntax are available at https://osf.io/ve2jm/.[5]

Manipulation & Measures

Sexism Reliving Task

Participants were asked to recall a time when they believed that someone discriminated against them because of sexism. They were given examples of scenarios that might fit the bill (e.g., "derogatory comments and slights, poor treatment during interactions at work, or restaurants, or other public spaces") to prompt them, and were instructed to take a few moments to bring something to mind. They were given space to write a few brief sentences about the past sexist event that they called to mind.

Emotion-Regulation Manipulation. Participants were randomly assigned to reflect on their experience using one of three emotion regulation conditions: a) self-immersion, b) self-distanced reappraisal, or c) positive reappraisal via generating redemption narratives. Participants

---

[4]We conducted *a priori* power analysis (G*Power; Faul et al., 2007) to detect a medium effect size, based again on the average effect sizes of findings from Levy et al., 2016 (η^2_p = .0417). Four-hundred and fifty participants were required to attain power of .80. We reduced the power level to the more-conventional .80 for this study due to affordability concerns stemming from the addition of a new experimental condition, which made a more strongly-powered study less feasible for this initial test.

[5]Participants responded to the same event-related questions described in Studies 1A-1B, which, again, did not differ as a function of experimental condition. Moreover, analyses with these items included as covariates did not meaningfully differ from those reported in the main text. We also asked participants how *resolved* the experience was. Perhaps not surprisingly, participants who generated a redemption narrative subsequently rated their discrimination experiences as more resolved than participants in the other two conditions, who did not differ from one another. This and the other results of analyses of these items are provided in the Supplemental Materials.

in the self-immersion and self-distanced reappraisal conditions were given the same instructions as described in Studies 1A & 1B. Those in the redemption narrative condition were asked to write about their experience with a particular focus on what they learned or how they grew from it. They were instructed as follows:

"As you re-live this experience, please try to understand why you felt the way you did in the experience you just recalled by describing what lessons you learned, or how you grew from your experience with discrimination. Please describe how this experience has shaped how you feel, think, or even, who you are."

To help participants understand better how to implement the emotion-regulation strategy to which they had been assigned prior to engaging in the reliving task themselves, participants were shown an excerpt from a sample essay, ostensibly written by a participant in a previous study. Each participant read about the same incident— a female truck driver sharing an experience with a male colleague who undermined her. However, the essay was composed to conform to the emotion regulation strategy to which the participant had been assigned. For example, participants assigned to the self-immersion condition saw an essay written from a first-person perspective. Those assigned to the self-distanced reappraisal condition saw the same essay written from a third-person perspective. Participants in the redemption narrative condition saw the same essay as those in the self-immersion condition, however, a few sentences were added to the end, wherein the writer connects positive personal growth in the present to her past discrimination experience. Importantly, the redemption narrative instructions and sample essay were presented in the first-person, similar to the self-immersed condition essay and in contrast to the self-distanced reappraisal essay (see Supplemental Materials for more information).

Manipulation Checks. Participants completed the same two manipulation check questions described in Studies 1A & 1B to capture the extent to which they engaged in self-immersion vs. self-distanced reappraisal. In addition, they responded to a third question to assess the extent to which they complied with the instructions in the redemption narrative condition: "To what extent did you try to imagine how you were affected or transformed by the experience you mentioned during the five-minute writing exercise?" Participants made their responses to this and the other items on 1 (*not at all*) – 7 (*extremely*) scales.

Affective Outcomes

As in Studies 1A & 1B, the SAM valence scale measured affect before and after the reliving task. Participants also completed the same 10-item scale that assessed their positive (α=.86) and negative (α=.90) affect, but in the present study, they did so only after the reliving task.[6]

Reliving Task Experience Measures

Emotional Reliving. Participants responded to the same items to assess their extent of emotional reliving (α = .75) described in Studies 1A & 1B.

Thought Content. The same items described in Studies 1A and 1B were used to assess recounting and reconstruing (α=.76).

Procedure

After providing informed consent, participants completed the SAM valence scale to assess their baseline positive affect. Participants were next asked to identify a past experience of

---

[6]In addition to these items, participants also indicated the extent to which they experienced an additional 9 items that have been found to be triggered by discrimination experiences in particular (e.g., outraged, annoyed) in past research (Jetten et al., 2013). These items are not included in the positive and negative affect composites reported in the main text, however, so we can better compare the results of this study to those observed in Study 1A & 1B. When included in the composites, however, the results reported in the main text did not change in terms of their direction and results remained significant at *p*<.05.

sexism and write two to three sentences about it. After, participants advanced to a new page where they were asked to relive their experience by writing a short essay about it. Prior to doing so, participants were randomly assigned to process their experience using one of the 3 emotion regulation strategies. To facilitate their doing so, they first read a sample essay written according to the emotion regulation strategy to which they had been assigned. Participants were given up to 5 minutes to write their essays. After, participants completed the SAM a second time, followed by the measures of positive and negative affect. They next completed the manipulation checks, emotional reliving, and thought content measures. Last, participants completed a brief demographic survey prior to being debriefed and compensated for their participation.[7]

Results

Descriptive Statistics and Correlations

Descriptive statistics and zero-order correlations for variables in Study 2 are provided in Table 4.

Manipulation Checks

Participants' scores on each of the manipulation check items were submitted to a one-way ANOVA. As expected, participants in the self-immersion condition ($M = 2.78$, $SD = 2.26$, 95% CI [2.41, 3.14]) reported that they saw the event unfold through their own eyes to a greater extent than those in the self-distanced reappraisal condition ($M = 3.85$, $SD = 2.67$, 95% CI [3.43, 4.28], $p < .001$, $d = .43$), or those in the redemption narrative condition ($M = 3.47$, $SD = 2.58$, 95% CI [3.05, 3.88], $p = .028$, $d = .28$), $F(2, 450) = 7.12$, $p < .001$, $\eta^2_p = .03$. Also, as expected,

---

[7]In Study 2, participants, again, completed the Private Regard and Centrality to Identity subscales of the Collective Self-Esteem Scale (Luhtanen & Crocker, 1992), as well as the same questions about pertaining to the event they wrote about as in Studies 1A & 1B. Participants were also asked to answer a series of questions that assessed the extent to which they believed sexism to be fixed versus malleable (adapted from Neel & Shapiro, 2012; α=.85). These measures were exploratory, did not vary as a function of condition, nor did they moderate the effects of the manipulation. Hence, they are not reported in the manuscript.

participants in the self-distanced reappraisal condition ($M = 4.03$, $SD = 2.68$, 95% CI [3.60, 4.45]) reported that they felt further away from the scene as they analyzed their feelings than did participants in the self-immersed condition ($M = 3.20$, $SD = 2.57$, 95% CI [2.79, 3.62]), $p = .018$, $d = .31$), however, they did not differ on this item from participants in the redemption narrative condition ($M = 3.69$, $SD = 2.57$, 95% CI [3.27, 4.11], $p = .26$, $d = .13$), $F(2, 450) = 3.83$, $p = .022$, $\eta^2_p = .01$. Surprisingly, participants' emotion-regulation condition did not lead to differences in the extent to which they reported imagining how they were transformed by their experience, $F(2,450) = 1.04$, $p = .35$, $\eta^2_p = .00$.

Affective Outcomes

SAM Valence Scale

We next examined whether participants' affective responses to the reliving task differed based on their emotion-regulation strategy. Because participants recorded their SAM scores twice (i.e., before and after the reliving task), we submitted the SAM scores to a 3 (Emotion Regulation Condition: self-immersion, self-distanced reappraisal, redemption narrative) x 2 (Time point: before vs. after the reliving task) ANOVA, with repeated measures on the second factor. Replicating the prior studies, analyses revealed significant main effect of time point for SAM scores, $F(1, 451) = 239.22$, $p < .001$, $\eta^2_p = .35$. Indeed, suggesting that they effectively generated and processed an experience of sexism, participants reported less positive affect on the SAM after engaging in the reliving task ($M = 5.19$, $SD = 2.03$, 95% CI [5.00, 5.37]), compared to baseline ($M = 6.46$, $SD = 1.59$, 95% CI [6.31, 6.61]).

Unlike in Studies 1A and 1B, however, analyses also revealed that this decline in positive affect was moderated by emotion regulation condition, $F(2, 450) = 21.86$, $p < .001$, $\eta^2_p = .09$. Importantly, participants' baseline levels of affect as measured by the SAM did not differ by

condition (all $p's > .29$). Similar to findings from our prior studies, no differences emerged in

SAM affect after the reliving task between participants in the self-immersion and self-distanced

reappraisal conditions ($p = .18$, $d = .15$). But, as depicted in Figure 1, participants who generated

a redemption narrative reported more positive affect on the SAM after engaging in the reliving

task compared with participants who engaged in self-immersion ($p < .001$, $d = .57$) and

participants who engaged in self-distanced reappraisal ($p < .001$, $d = .42$). The full set of

condition means at each time point are provided in Table 5.

Positive and Negative Affect

We subjected participants' positive and negative affect ratings to one-way ANOVAs. As

depicted in Figure 2, results revealed a significant effect of emotion-regulation condition on

positive affect, $F(2, 450) = 14.87$, $p < .001$, $\eta^2_p = .06$. Similar to the results for the SAM, women

who generated a redemption narrative ($M = 3.87$, $SD = 1.44$, 95% CI [3.64, 4.11]) while reliving

their experiences of sexism reported more positive affect compared with women who relived

their experiences of sexism using either self-immersion ($M = 3.07$, $SD = 1.22$, 95% CI [2.87,

3.27]; $p < .001$, $d = .60$) or self-distanced reappraisal ($M = 3.20$, $SD = 1.42$, 95% CI [2.98, 3.43];

$p < .001$, $d = .47$). Replicating Studies 1A & 1B, the positive affect reported by participants in

self-immersion and self-distanced reappraisal conditions after the reliving task did not differ ($p =

.39$, $d = .10$).

Emotion-regulation condition also moderated participants' experiences of negative affect

after the reliving task, $F(2, 450) = 14.91$, $p < .001$, $\eta^2_p = .06$ (see again Fig. 2). Participants who

generated a redemption narrative while reliving an incident of sexism reported experiencing less

negative affect ($M = 2.53$, $SD = 1.41$, 95% CI [2.30, 2.76]) than participants who used self-

immersion ($M = 3.43$, $SD = 1.44$, 95% CI [3.20, 3.66]; $p < .001$, $d = .63$) or self-distanced

reappraisal ($M = 3.08$, $SD = 1.43$, 95% CI [2.85, 3.30]; $p = .001$, $d = .39$) to relive an incident of sexism. Contrary to the findings of Studies 1A & 1B, but consistent with previous work (e.g., Ayduk & Kross, 2008), participants who engaged in self-distanced reappraisal also reported experiencing less negative affect than participants who engaged in self-immersion ($p = .031$, $d = .25$).

Emotional Reliving

There was no significant effect of condition on emotional reliving, $F(2, 450) = 1.87$, $p = .15$, $\eta^2_p = .01$. That is, participants who generated a redemption narrative ($M = 4.58$, $SD = 1.31$, 95% CI [4.37, 4.79]) reported the same amount of emotional reliving as participants who engaged in self-immersion ($M = 4.89$, $SD = 1.41$, 95% CI [4.66, 5.11]) and participants who engaged in self-distanced reappraisal ($M = 4.72$, $SD = 1.34$, 95% CI [4.51, 4.93]) during the reliving task.

Thought Content

Analyses revealed no significant effects of condition on recounting, $F(2, 450) = .67$, $p = .51$, $\eta^2_p = .00$. We did observe, however, a significant effect of condition on the extent to which participants reconstrued their experiences of sexism, $F(2, 450) = 8.09$, $p < .001$, $\eta^2_p = .04$. There was no significant difference in reported reconstruing between participants in the self-immersion ($M = 3.80$, $SD = 1.29$, 95% CI [3.59, 4.01]) and self-distanced reappraisal ($M = 3.76$, $SD = 1.29$, 95% CI [3.56, 3.97], $p = .82$, $d = .03$) conditions. But, participants who generated redemption narratives ($M = 4.30$, $SD = 1.31$, 95% CI [4.09, 4.51]) reported reconstruing their experiences to

a greater extent than participants in either the self-immersion ($p = .001$, $d = .39$) or the self-distanced reappraisal ($p < .001$, $d = .41$) conditions.[8]

Discussion

The primary finding of Study 2 is that engaging in positive reappraisal by generating a redemption narrative when contending with a past experience of sexism resulted in more positive and less negative affective outcomes, compared with either self-distanced reappraisal or self-immersed processing of the event. Interestingly, participants who generated a redemption narrative reported that they reconstrued the event more than did participants in the other two conditions. Consequently, this study suggests that positive reappraisal through the generation of redemption narratives may be a promising route through which people can mitigate the affective strain associated with reliving past experiences of discrimination. Of course, future research will need to examine the robustness of these findings and ascertain the mechanisms through which positive reappraisal in general and, perhaps, redemption narratives in particular, are effective. However, the present study suggests that the benefits of positive reappraisal may indeed transfer from more general interpersonal life stressors to the context of discrimination.

General Discussion

The present research investigated the differential effects of three emotion regulation strategies (self-immersion, self-distanced reappraisal, and positive reappraisal via generating redemption narratives) on subsequent emotional outcomes when contending with past experiences of discrimination. First, we observed that contending with sexism, no matter which emotion regulation strategy is used, is upsetting. Contrary to the predictions based on past

---

[8]We conducted analyses in all three studies both controlling for participant race and examining it as a potential moderator of the effects of emotion regulation condition on all of the primary outcome variables. Across all studies, we found no evidence of moderation by participant race. In addition, when participant race was included as a covariate, results remained significant at $p<.05$ and the results did not change in direction.

research (Ayduk & Kross, 2008), we found little evidence that self-distanced reappraisal when contending with discrimination results in less negative affective outcomes, compared with self-immersion. Indeed, given past research on the benefits of self-distanced processing of negative interpersonal events (e.g., Kross & Ayduk, 2011, 2017), the absence of any consistent palliative effects of self-distanced reappraisal when reliving experience of discrimination is noteworthy.

Study 2 considered the potential affective outcomes associated with a different type of reappraisal strategy; namely, positive reappraisal through the generation of redemption narratives regarding past incidents of discrimination. Our findings offer initial evidence that this form of positive reappraisal may reduce the deleterious affective consequences of contending with discrimination, compared with either self-immersion or self-distanced reappraisal. Future research is needed, of course, to examine this promising possibility.

Implications

The present work sought to replicate and extend prior research demonstrating that various reappraisal strategies are differentially effective at promoting favorable emotional outcomes (Rood et al., 2011; Shiota & Levenson, 2012; Webb et al., 2012), by examining their efficacy in the domain of discrimination. The findings suggest that although using self-distanced reappraisal when reflecting on stressful interpersonal experiences promotes positive psychological and physiological outcomes (e.g., Ayduk & Kross, 2010; Kross et al., 2014) its benefits might not extend to stressful group-based experiences, such as discrimination. Across three studies, that is, the palliative effects of self-distanced reappraisal on emotional responses to discrimination experiences that emerged were, at best, small and inconsistent. In order to better represent the effect of self-distanced reappraisal, compared to immersion, in mitigating the affective strain that accompanies contending with discrimination experiences, we conducted an internal meta-

analysis (Goh, Hall, & Rosenthal, 2016). Specifically, for each of the three studies, we calculated

Cohen's *d* for the effect of self-immersion compared with self-distanced reappraisal on the

difference between SAM affect from Time 1 and Time 2. (Note: the SAM measure was the only

affective outcome collected twice across all three studies). Analyses revealed no significant

effect of self-distanced reappraisal, compared to self-immersion, on mitigating the decline in

global positive affect that occurs during the reliving task ($d = -0.08$, $Z = -1.234$, $p = .109$).

Although a full and convincing explanation for this null effect requires additional research, it is

notable that participants in the self-distanced reappraisal condition did not report reconstruing the

discriminatory event they relived any more than participants in the self-immersion condition. In

other words, the very process by which prior work (e.g., Kross & Ayduk, 2008) suggests self-

distanced (and other forms of) reappraisal will improve affective and other outcomes—i.e., the

reconstrual of the event— was no more prevalent among participants in the self-distanced

reappraisal condition than those in the self-immersed condition. It is possible that self-distanced

reappraisal may promote the reconstrual of discrimination experiences less effectively than is the

case for other types of stressful interpersonal events. Again, future research is necessary to test

this possibility, and, perhaps, identify why this may be the case.

The results of Study 2 reveal the promise of redemption narratives for managing

emotions regarding past instances of discrimination. We found that these narratives did engender

more reconstruing of the event relative to self-immersion *and* self-distanced reappraisal.

Directing participants to think of the possible benefits of their past experiences with sexism, in

other words, appears to have facilitated the reconstrual process that is vital to successful

reappraisal, thereby resulting in more positive emotional outcomes. It is important to note that

the redemption instructions we used did not direct participants to adopt the goal of achieving a

positive mood (e.g., McRae et al., 2012), nor did the instructions of the self-immersion or self-distanced reappraisal conditions. Consequently, we believe the present findings emerged through the process of reappraising the negative event so as to connect it to positive outcomes in the present, rather than resulting from participants' intentional efforts to feel better. Indeed, as noted previously, participants in the positive reappraisal condition reported reconstruing the event more, and feeling more resolved about their experiences, than participants in the other two conditions. No such reconstrual, and further, perceived event resolution, would be required of an intervention that encourages individuals to adopt the explicit goal of feeling better. Taken together, then, this research suggests the need to consider the contexts in which different emotion regulation strategies are situated and deployed when assessing their efficacy (Aldao, 2013; Aldao & Nolen-Hoeksema, 2012), especially in intergroup contexts (e.g., Goldenberg et al., 2016; Halperin, 2014; Juang et al., 2016; Perez & Soto, 2011; Soto et al. 2012).

Limitations & Future Directions

Although the findings from the present work are compelling, they are limited in a number of ways. First, we exclusively used self-report measures of affect in the present research. While understanding targets' perceptions of their emotions using subscales of the PANAS and the SAM is a crucial first step towards understanding how contending with discrimination influences stigmatized individuals' emotional experiences, it is by no means comprehensive. Future research that captures other dimensions of emotional responses is needed to investigate whether our results generalize beyond these self-report measures. For instance, future research should examine whether these emotion-regulation strategies result in differential physiological responses such as blood pressure reactivity, which would also better connect the present research

to the health outcomes associated with contending with discrimination (e.g., Pascoe & Richman, 2009).

A second limitation of the present work is that we only considered the effects of self-distanced reappraisal, redemption narratives, and self-immersion when *reliving* experiences with *gender discrimination*. Although we decided to use reliving tasks (i.e., tasks where an autobiographical memory is brought back to mind) in the present work because they have been used in the most relevant prior research (Ayduk & Kross, 2008; 2010; Inzlicht & Kang, 2010), it is possible that the reappraisal strategies and self-immersion could yield different affective outcomes when individuals are exposed to discrimination in other ways (e.g., reading a newspaper article or watching a news story about a discriminatory event). For instance, self-distanced reappraisal might lead to better affective outcomes than self-immersion when stigmatized individuals are exposed to a report in the news about discrimination that other group members have faced (e.g., a being denied a promotion due to one's gender), or when experiencing discrimination *in vivo*, rather than reliving a personal experience of discrimination. Future research is needed to investigate these intriguing possibilities.

Third, while we found evidence for the potential efficacy of positive reappraisal via redemption narratives in Study 2, this finding needs to be replicated and the pathways through which it appears to buffer individual affect need to be elucidated. Because we had participants immediately process their past experiences of sexism using redemption narratives, compared to self-distanced reappraisal and self-immersion, without spending time reliving their past experience beforehand, it is not clear whether redemption exerts a reparative effect on affect, or that it simply thwarts experiences of negative affect that follow contending with a past discrimination experience. Future studies that test the effectiveness of redemption narratives

after participants relive past discrimination experiences might be useful in teasing these mechanisms apart.

It is also currently unknown whether this form of positive reappraisal is also effective at reducing negative affect when women are processing a new compared to a past discrimination experience. In other words, does generating a redemption narrative when experiencing discrimination *in vivo*, rather than reliving a past experience of discrimination also attenuate negative affect? Emotion regulation strategies may be differentially effective if they are implemented at the time of the stressful event rather than when people make sense of past stressful events. Future research, therefore, is needed to examine whether varying the timing of the deployment of these emotion regulation strategies shapes the pattern of results observed in the present research. Last, because all of the present studies focused on women reliving their experiences of sexism, future work should investigate whether the emotion regulation strategies examined in the present research are differentially effective when members of other socially stigmatized groups contend with relevant forms of discrimination (e.g., racial minorities reliving experiences of racism).

Conclusion

Women continue to face sexism and these experiences are associated with negative psychological and physical health. Although, ultimately, the best remedy for these negative outcomes is the reduction if not elimination of sexism and other forms of group-based oppression, gaining a better understanding of the role of emotion-regulation in the promotion of psychological well-being in the wake of discrimination may offer another place in which to intervene. It is important, in other words, to examine strategies that can mitigate the adverse effects of contending with discrimination. Understanding which emotion regulation strategies are

effective in alleviating the negative affective implications of contending with discrimination (and which are not effective) is an important step toward improving the well-being of members of stigmatized social groups.

References

Aldao, A. (2013). The Future of Emotion Regulation Research: Capturing Context. *Perspectives on Psychological Science*, *8*(2), 155–172. https://doi.org/10.1177/1745691612459518

Aldao, A., & Nolen-Hoeksema, S. (2012). When are adaptive strategies most predictive of psychopathology? *Journal of Abnormal Psychology*, *121*(1), 276–281. https://doi.org/10.1037/a0023598

Alkadry, M.G., & Tower, L. E. (2006). Unequal pay: The role of gender. *Public Administration Review, 66*(6), 888-898.

Ayduk, Ö., & Kross, E. (2008). Enhancing the pace of recovery: Self-distanced analysis of negative experiences reduces blood pressure reactivity. *Psychological Science, 19*(3), 229-231.

Ayduk, Ö., & Kross, E. (2010). From a Distance: Implications of Spontaneous Self-Distancing for Adaptive Self-Reflection. *Journal of Personality and Social Psychology*, *98*(5), 809–829. https://doi.org/10.1037/a0019205

Banks, K. H., Kohn-Wood, L. P., & Spencer, M. (2006). An examination of the African American experience of everyday discrimination and symptoms of psychological distress. *Community Mental Health Journal*, *42*(6), 555-570.

Borders, A., & Liang, C. T. H. (2011). Rumination Partially Mediates the Associations Between Perceived Ethnic Discrimination, Emotional Distress, and Aggression. *Cultural Diversity and Ethnic Minority Psychology*, *17*(2), 125–133. https://doi.org/10.1037/a0023357

Borrell, L. N., Diez Roux, A. V., Jacobs, D. R., Shea, S., Jackson, S. A., Shrager, S., & Blumenthal, R. S. (2010). Perceived racial/ethnic discrimination, smoking and alcohol

consumption in the Multi-Ethnic Study of Atherosclerosis (MESA). *Preventive Medicine*,

51(3–4), 307–312. https://doi.org/10.1016/j.ypmed.2010.05.017

Bradley, M. M., & Lang, P. J. (1994). Measuring emotion: the self-assessment manikin and the

semantic differential. *Journal of Behavior Therapy and Experimental Psychiatry*, *25*(1),

49-59.

Clark, R., Anderson, N. B., Clark, V. R., & Williams, D. R. (1999). Racism as a stressor for

African Americans: A biopsychosocial model. *American psychologist, 54*(10), 805.

Davis, C. G., Nolen-Hoeksema, S., & Larson, J. (1998). Making sense of loss and benefiting

from the experience: two construals of meaning. *Journal of personality and social

psychology*, *75*(2), 561.

Denny, B. T., & Ochsner, K. N. (2014). Behavioral effects of longitudinal training in cognitive

reappraisal. *Emotion*, *14*(2), 425–433.

Duker, A., Green, D., Onyeador, I. N., & Richeson, J. (2021, April 2). Managing Emotions in the

Face of Discrimination: Differential Effects of Self-Immersion, Self-Distanced Reappraisal,

and Positive Reappraisal. Retrieved from osf.io/ve2jm.

Ford, B. Q., & Troy, A. S. (2019). Reappraisal reconsidered: A closer look at the costs of an

acclaimed emotion-regulation strategy. *Current Directions in Psychological Science, 28*(2),

195-203.

Fox, J., & Tang, W. Y. (2017). Women's experiences with general and sexual harassment in

online video games: Rumination, organizational responsiveness, withdrawal, and coping

strategies. *New Media and Society*, *19*(8), 1290–1307.

https://doi.org/10.1177/1461444816635778

Gibbons, F. X., Etcheverry, P. E., Stock, M. L., Gerrard, M., Weng, C. Y., Kiviniemi, M., &

O'Hara, R. E. (2010). Exploring the link between racial discrimination and substance use: *What mediates? What buffers? Journal of Personality and Social Psychology, 99*(5), 785.

Glick, P., & Fiske, S. T. (2001). An ambivalent alliance: Hostile and benevolent sexism as complementary justifications for gender inequality. *American Psychologist, 56*(2), 109.

Goldenberg, A., Halperin, E., van Zomeren, M., & Gross, J. J. (2016). The process model of group-based emotion: Integrating intergroup emotion and emotion regulation perspectives. *Personality and Social Psychology Review*, *20*(2), 118-141.

Gonzales, N. A., Tein, J.-Y., Sandler, I. N., & Friedman, R. J. (2001). On the Limits of Coping. *Journal of Adolescent Research*, *16*(4), 372–395.

Grenell, A., Prager, E. O., Schaefer, C., Kross, E., Duckworth, A. L., & Carlson, S. M. (2019). Individual differences in the effectiveness of self-distancing for young children's emotion regulation. *British Journal of Developmental Psychology, 37*(1), 84-100.

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

Halperin, E. (2014). Emotion, emotion regulation, and conflict resolution. *Emotion Review, 6*(1), 68-76.

Hatzenbuehler, M. L. (2009). How does sexual minority stigma "get under the skin"? A psychological mediation framework. *Psychological Bulletin, 135*(5), 707.

Hatzenbuehler, M. L., Nolen-Hoeksema, S., & Dovidio, J. (2009). How does stigma "get under the skin"? The mediating role of emotion regulation. *Psychological Science*, *20*(10), 1282-1289.

Hoggard, L. S., Powell, W., Upton, R., Seaton, E., & Neblett Jr, E. W. (2019). Racial

discrimination, personal growth initiative, and African American men's depressive

symptomatology: A moderated mediation model. *Cultural Diversity and Ethnic Minority*

Psychology, 25(4), 472.

Kross, E., Ayduk, O., & Mischel, W. (2005). When asking "why" does not hurt distinguishing

rumination from reflective processing of negative emotions. *Psychological*

Science, *16*(9), 709-715.

Kross, E., & Ayduk, O. (2008). Facilitating adaptive emotional analysis: Distinguishing

distanced-analysis of depressive experiences from immersed-analysis and

distraction. *Personality and Social Psychology Bulletin*, *34*(7), 924-938.

Kross, E., & Ayduk, O. (2011). Making meaning out of negative experiences by self-

distancing. *Current Directions in Psychological Science*, *20*(3), 187-191.

Kross, E., & Ayduk, O. (2017). Self-distancing: Theory, research, and current directions.

In *Advances in experimental social psychology* (Vol. 55, pp. 81-136). Academic Press.

Kuchynka, S. L., Salomon, K., Bosson, J. K., El-Hout, M., Kiebel, E., Cooperman, C., &

Toomey, R. (2018). Hostile and benevolent sexism and college women's STEM

outcomes. *Psychology of Women Quarterly*, *42*(1), 72-87.

Jetten, J., Schmitt, M. T., & Branscombe, N. R. (2013). Rebels without a cause: Discrimination

appraised as legitimate harms group commitment. *Group Processes & Intergroup*

Relations, 16(2), 159-172.

Joormann, J., & Quinn, M. E. (2014). Cognitive processes and emotion regulation in depression.

Depression and Anxiety, 31(4), 308-315.

Juang, L. P., Moffitt, U., Kim, S. Y., Lee, R. M., Soto, J. A., Hurley, E., Weisskrich, R. S.,

Blozis, S. A., Castillo, L. G., Huynh, Q. & Whitbourne, S. K. (2016). Cognitive reappraisal and expressive suppression: Links to racial-ethnic discrimination and adjustment among Latino/a and Asian-heritage college students. *Journal of Adolescence, 53,* 21-33.

Libby, L. K., & Eibach, R. P. (2011). Visual perspective in mental imagery: A representational tool that functions in judgment, emotion, and self-insight. In *Advances in Experimental Social Psychology* (Vol. 44, pp. 185-245). Academic Press.

Luhtanen, R., & Crocker, J. (1992). A collective self-esteem scale: Self-evaluation of one's social identity. *Personality and Social Psychology Bulletin*, *18*(3), 302-318.

McAdams, D. P. (2001). The psychology of life stories. *Review of general psychology*, *5*(2), 100-122.

McAdams, D. P., Diamond, A., de St Aubin, E., & Mansfield, E. (1997). Stories of commitment: The psychosocial construction of generative lives. *Journal of personality and social psychology*, *72*(3), 678.

McAdams, D. P., Reynolds, J., Lewis, M., Patten, A. H., & Bowman, P. J. (2001). When bad things turn good and good things turn bad: Sequences of redemption and contamination in life narrative and their relation to psychosocial adaptation in midlife adults and in students. *Personality and social psychology bulletin*, *27*(4), 474-485.

McIsaac, H. K., & Eich, E. (2004). Vantage point in traumatic memory. *Psychological Science, 15* (4), 248-253.

McRae, K., Ciesielski, B., & Gross, J. J. (2012). Unpacking cognitive reappraisal: goals, tactics, and outcomes. *Emotion, 12*(2), 250.

Neel, R., & Shapiro, J. R. (2012). Is racial bias malleable? Whites' lay theories of racial bias

predict divergent strategies for interracial interactions. *Journal of Personality and Social Psychology*, *103*(1), 101.

Nolen-Hoeksema, S. (1991). Responses to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology*, *100*(4), 569.

Nolen-Hoeksema, S. (2000). The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. *Journal of Abnormal Psychology*, *109*(3), 504.

Orvell, A., Ayduk, Ö., Moser, J. S., Gelman, S. A., & Kross, E. (2019). Linguistic shifts: A relatively effortless route to emotion regulation?. *Current Directions in Psychological Science, 28*(6), 567-573.

Pacilli, M. G., Spaccatini, F., Giovannelli, I., Centrone, D., & Roccato, M. (2019). System justification moderates the relation between hostile (but not benevolent) sexism in the workplace and state anxiety: An experimental study. *The Journal of Social Psychology, 159*(4), 474-481.

Parker, K., & Funk, C. (2017, December 14). Gender discrimination comes in many forms for today's working women. Retrieved from: https://www.pewresearch.org/fact-tank/2017/12/14/gender-discrimination-comes-in-many-forms-for-todays-working-women/

Pascoe, Elizabeth A., & Richman, L.S. (2009). "Perceived discrimination and health: a meta-analytic review." *Psychological Bulletin,* 135(4), 531.

Perez, C. R., & Soto, J. A. (2011). Cognitive reappraisal in the context of oppression: Implications for psychological functioning. *Emotion, 11*(3), 675–680

Richman, L. S., Bennett, G. G., Pek, J., Siegler, I., & Williams Jr, R. B. (2007). Discrimination, dispositions, and cardiovascular responses to stress. *Health Psychology, 26*(6), 675.

Ross, M., & Wilson, A. E. (2003). Autobiographical memory and conceptions of self: Getting

better all the time. *Current Directions in Psychological Science, 12*(2), 66-69.

Rotella, K. N., Richeson, J. A., & McAdams, D. P. (2015). Groups' search for meaning:

Redemption on the path to intergroup reconciliation. *Group Processes & Intergroup

Relations*, *18*(5), 696-715.

Rusting, C. L., & DeHart, T. (2000). Retrieving positive memories to regulate negative mood:

Consequences for mood-congruent memory. *Journal of Personality and Social Psychology*,

78(4), 737–752. https://doi.org/10.1037/0022-3514.78.4.737

Smith, W. A., Allen, W. R., & Danley, L. L. (2007). Fit the description psychosocial

experiences and racial. *American Behavioral Scientist*, 551–579.

Spaccatini, F., & Roccato, M. (2020). *The Palliative Function of Sexism: Individual Sexism

Buffers the Relationship Between Exposure to Workplace Sexism and Psychological

Distress. Sexuality & Culture*, 1-19.

Soto, J. A., Armenta, B. E., Perez, C. R., Zamboanga, B. L., Umaña-Taylor, A. J., Lee, R. M.,

Schwartz, S., Park, I. J., Huynh, Q-L., Whitbourne, S., Le, T. N., & Ham, L. S. (2012).

Strength in numbers? Cognitive reappraisal tendencies and psychological functioning

among Latinos in the context of oppression. *Cultural Diversity and Ethnic Minority

Psychology*, *18*(4), 384.

Swim, J. K., Hyers, L. L., Cohen, L. L., & Ferguson, M. J. (2001). Everyday sexism Evidence

for its incidence, nature, and psychological. *Journal of Social Issues*, *57*(1), 31–53.

Szymanski, D. M., & Lewis, J. A. (2015). Race-related stress and racial identity as predictors of

African American activism. *Journal of Black Psychology, 41*(2), 170-191.

Travers-Hill, E., Dunn, B. D., Hoppitt, L., Hitchcock, C., & Dalgleish, T. (2017). Beneficial

effects of training in self-distancing and perspective broadening for people with a history of recurrent depression. *Behaviour Research and Therapy*, *95*, 19–28.

Van Strien, T., Frijters, J. E., Van Staveren, W. A., Defares, P. B., & Deurenberg, P. (1986). The predictive validity of the Dutch restrained eating scale. *International Journal of Eating Disorders*, *5*(4), 747-755.

Wadsworth, M. E., & Berger, L. E. (2006). Adolescents coping with poverty-related family stress: Prospective predictors of coping and psychological symptoms. *Journal of Youth and Adolescence*, *35*(1), 57–70. https://doi.org/10.1007/s10964-005-9022-5

Wang, K., & Dovidio, J. F. (2017). Perceiving and confronting sexism: The causal role of gender identity salience. *Psychology of Women Quarterly, 41*(1), 65-76.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063.

Webb, T. L., Miles, E., & Sheeran, P. (2012). Dealing with feeling: a meta-analysis of the effectiveness of strategies derived from the process model of emotion regulation. *Psychological Bulletin*, *138*(4), 775.

White, R. E., Prager, E. O., Schaefer, C., Kross, E., Duckworth, A. L., & Carlson, S. M. (2017). The "Batman Effect": Improving perseverance in young children. *Child development, 88*(5), 1563-1571.

Wilson, A., & Ross, M. (2003). The identity function of autobiographical memory: Time is on our side. *Memory, 11*(2), 137-149.

Zeiders, K. H., Doane, L. D., & Roosa, M. W. (2012). Perceived discrimination and diurnal

cortisol: Examining relations among Mexican American adolescents. *Hormones and*

   Behavior, 61(4), 541-548.

Zilioli, S., Imami, L., & Slatcher, R. B. (2017). Socioeconomic status, perceived control, diurnal

   cortisol, and physical symptoms: a moderated mediation model.

   Psychoneuroendocrinology, *75*, 36-43.

Zucker, A. N., & Landry, L. J. (2007). Embodied discrimination: The relation of sexism and

   distress to women's drinking and smoking behaviors. *Sex Roles*, *56*(3–4), 193–203.

   https://doi.org/10.1007/s11199-006-9163-3

CONTENDING WITH DISCRIMINATION

Table 1

Studies 1A & 1B: Descriptive Statistics and Zero-Order Correlations

				Study 1A									
	N	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Time 1 SAM	317	6.21	1.84	-										
2. Time 2 SAM	317	4.64	2.05	.64***	-									
3. Time 1 Pos Affect	317	3.47	1.51	.68***	.45***	-								
4. Time 2 Pos Affect	317	2.58	1.41	.49***	.66***	.70***	-							
5. Time 1 Neg Affect	317	1.73	1.13	-.57***	-.40***	-.30***	-.17**	-						
6. Time 2 Neg Affect	317	2.74	1.47	-.29***	-.68***	-.07	-.38***	.48***	-					
7. Emotional Reliving	317	4.90	1.30	-.03	-.32***	.09	-.14*	.09	.42***	-				
8. Recounting	317	5.25	1.34	.11*	-0.03	.16**	.00	-.09	.14*	.46***	-			
9. Reconstruing	317	3.47	1.62	.18**	.17**	.37***	.38***	-.00	-.10†	.09	.10†	-		
10. Disc Severity	317	4.13	1.65	.01	-.37***	.08	-.16**	.11*	.46***	.29***	.13*	-.06	-	
11. Disc Frequency	317	2.97	1.69	-.06	-.18**	-.08	-.12*	.06	.17**	.14*	-.06	-.09	.20***	-
12. Age of Event	317	4.43	1.72	.01	.04	.01	.04	-.04	-.11*	-.14*	.01	.04	.04	-.23***
				Study 1B									
1. Time 1 SAM	442	6.43	1.62	-										
2. Time 2 SAM	442	4.77	2.05	.49***	-									
3. Time 1 Pos Affect	442	3.59	1.38	.61***	.31***	-								
4. Time 2 Pos Affect	442	2.70	1.41	.49***	.65***	.67***	-							
5. Time 1 Neg Affect	442	1.58	0.96	-.48***	-.25***	-.24***	-.10*	-						
6. Time 2 Neg Affect	442	2.69	1.46	-.24***	-.67***	-.05	-.38***	.48***	-					
7. Emotional Reliving	442	4.78	1.32	.02	-.40***	.10*	-.20***	.05	.47***	-				
8. Recounting	442	5.38	1.17	.08†	-.05	.10*	.02	-.00	.16***	.44***	-			
9. Reconstruing	442	3.44	1.45	.12*	.20***	.28***	.26***	-.01	-.13**	.02	.01	-		
10. Disc Severity	442	4.17	1.60	.04	-.30***	.09†	-.14**	.07	.41***	.33***	.09†	.01	-	
11. Disc Frequency	442	3.03	1.64	-.16***	-.22***	-.05	-.12*	.15**	.20***	.20***	.01	-.05	.14**	-

| 12. Age of Event | 442 | 4.54 | 1.69 | .06 | .06 | .04 | .06 | .02 | -.01 | -.14** | .00 | .01 | .08† | -.38*** |

*† p < .10 * p < .05, ** p <.01   ***p < .001*

Table 2

Affect Measures in Studies 1A and 1B: Estimated Marginal Means.

	Study 1A (*n* = 317)			**Study 1B** (*n* = 442)		
	Mean	*SD*	95% CI	Mean	*SD*	95% CI
Pos Aff (T1)	3.47	1.51	[3.30, 3.63]	3.59	1.38	[3.46, 3.72]
Pos Aff (T2)	2.58	1.41	[2.43, 2.74]	2.70	1.41	[2.57, 2.83]
Neg Aff (T1)	1.73	1.13	[1.60, 1.85]	1.58	.96	[1.49, 1.67]
Neg Aff (T2)	2.74	1.47	[2.57, 2.90]	2.69	1.46	[2.55, 2.82]
SAM (T1)	6.21	1.84	[6.01, 6.42]	6.43	1.62	[6.28, 6.59]
SAM (T2)	4.64	2.05	[4.41,4.87]	4.77	2.05	[4.57, 4.96]

Note. CI = confidence interval.

CONTENDING WITH DISCRIMINATION

Table 3

Thought Content Measures in Studies 1A and 1B: Estimated Marginal Means by Condition

	Study 1A					
	Immersion Condition ($n = 162$)			Self-Distanced Condition ($n = 155$)		
	Mean	*SD*	95% CI	Mean	*SD*	95% CI
Recounting	5.28	1.35	[5.07, 5.49]	5.22	1.33	[5.01, 5.43]
Reconstruing	3.52	1.73	[3.25, 3.79]	3.41	1.49	[3.17, 3.64]
	Study 1B					
	Immersion Condition ($n = 223$)			Self-Distanced Condition ($n = 219$)		
	Mean	SD	95% CI	Mean	SD	95% CI
Recounting	5.45	1.16	[5.29, 5.60]	5.32	1.18	[5.16, 5.48]
Reconstruing	3.46	1.52	[3.26, 3.66]	3.42	1.38	[3.24, 3.60]

Note. CI = confidence interval.

Table 4

Study 2: Descriptive Statistics and Zero-Order Correlations

	N	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Time 1 SAM	453	6.46	1.59	-									
2. Time 2 SAM	453	5.19	2.03	.51***	-								
3. Positive Affect	453	3.38	1.41	.41***	.69***	-							
4. Negative Affect	453	3.01	1.47	-.28***	-.66***	-.44***	-						
5. Emotional Reliving	453	4.73	1.36	-.05	-.37***	-.28***	.50***	-					
6. Recounting	453	5.49	1.04	.03	-.11*	-.09†	.14**	.35***	-				
7. Reconstruing	453	3.95	1.32	.13**	.31***	.39***	-.20***	-.09*	-.03	-			
8. Disc Severity	453	4.25	1.62	-.06	-.25***	-.12**	.38***	.40***	.12*	-.05	-		
9. Disc Frequency	453	3.47	1.73	-.07	-.16***	-.14**	.25***	.31***	.09†	-.06	.19***	-	
10. Age of Event	453	4.66	1.73	.01	.02	.08†	-.07	-.15**	-.01	.09†	.06	-.32***	-
11. Event Resolution	453	4.75	2.00	.13**	.29***	.37***	-.31***	-.26***	-.06	.28***	-.15**	-.26***	.32***

*† p < .10 * p < .05, ** p <.01   ***p < .001*

Table 5

SAM Affect Measures in Study 2: Estimated Marginal Means by Condition.

| | **Study 2** | | | | | |
| | Time 1 SAM | | | Time 2 SAM | | |
	Mean	*SD*	95% CI	Mean	*SD*	95% CI
Immersion	6.57	1.57	[6.31, 6.82]	4.72	1.98	[4.39, 5.04]
Distancing	6.45	1.57	[6.20, 6.69]	5.02	2.01	[4.70, 5.34[
Redemption	6.37	1.63	[6.11, 6.64]	5.84	1.93	[5.52, 6.15]

Note. CI = confidence interval.

CONTENDING WITH DISCRIMINATION

Figure 1

Study 2 T1 and T2 SAM Scores by Emotion Regulation Condition
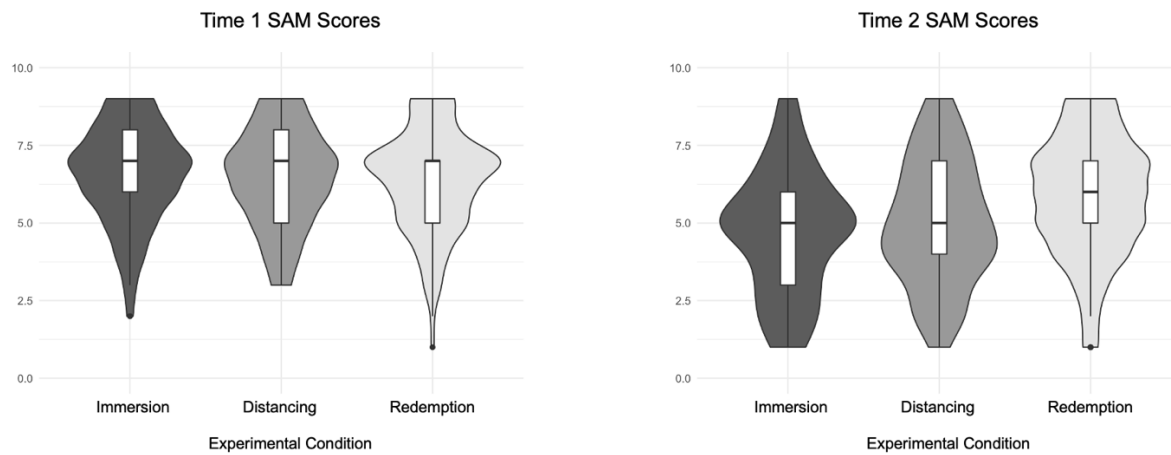
CONTENDING WITH DISCRIMINATION

Figure 2

Study 2 Positive and Negative Affect by Emotion Regulation Condition