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**STRENGTH IN NUMBERS: EMOTION REGULATION,
PSYCHOLOGICAL FUNCTIONING, AND THE CONTEXT OF OPPRESSION**

A Thesis in

Psychology

by

Christopher R. Perez

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The thesis of Christopher R. Perez was reviewed and approved* by the following:

José A. Soto
Assistant Professor of Psychology
Thesis Adviser

Janet K. Swim
Professor of Psychology

Stephen J. Wilson
Assistant Professor of Psychology

Melvin M. Mark
Professor of Psychology
Head of the Department of Psychology

*Signatures are on file in the Graduate School

ABSTRACT

Research on emotion regulation has shown that cognitive reappraisal predicts better psychological functioning (as measured by reports of depressive symptoms and life satisfaction) and expressive suppression indicates poorer psychological functioning. However, prior research has failed to account for contextual influences on these important relationships. This study utilized 389 European American, Latino American, and Puerto Rican college students in order to examine how these relationships unfold across three United States ethnic groups that represent different contexts of oppression: Puerto Ricans experiencing distal oppression (societal level) but not proximal oppression (immediate environment), Latino Americans experiencing both distal and proximal oppression, and European Americans experiencing neither. Furthermore, individual beliefs regarding oppression of one's group and implications of that oppression are captured by measuring oppressed minority ideology (OMI). As expected, results showed that when collapsing across the three groups reappraisal negatively predicted depression and positively predicted life satisfaction, while suppression positively predicted depression. Additionally, results confirmed the moderating role that differing contexts of oppression (as measured by ethnic group membership and OMI) play in the relationship between reappraisal and psychological functioning. For Latino Americans high on OMI, reappraisal was negatively associated with psychological functioning. For Puerto Ricans, regardless of OMI, this relationship remained positive, revealing the possible benefit of being surrounded by similar others. The findings highlight the importance and complexity of studying diverse contexts in understanding the relationship between emotion regulation and psychological functioning.

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Chapter 1

INTRODUCTION

Emotion regulation has been inseparably linked to the psychological functioning of individuals (Gross & John, 2003; McLaughlin, Mennin, & Farach, 2007; Salters-Pedneault, Roemer, Tull, Rucker, & Mennin, 2006). In fact, many of the disorders listed in the Diagnostic and Statistical Manual of Mental Disorders (*DSM-IV-TR*) include criteria reflective of difficulties or deficits in regulating emotion (American Psychiatric Association, 2000; Keltner & Kring, 1998; Mennin, Heimberg, Turk, & Fresco, 2005; Rottenberg, Kasch, Gross, & Gotlib, 2002). Recent empirical work has also demonstrated that typically using specific emotion regulation strategies is related to well-being, successful social interactions, and other measures of psychological functioning (Butler et al., 2003; Gross & John; McLaughlin et al.; Salters-Pedneault et al.). In particular, the regular use of cognitive reappraisal (henceforth reappraisal) has been linked to less depression and greater life satisfaction, while habitual use of expressive suppression (henceforth suppression) has been linked to more depression and lower life satisfaction (Gross & John).

Although researchers have paid some attention to contextual differences in emotion regulation (e.g., Cole & Tamang, 1998; Matsumoto, Yoo, Nakagawa, et al., 2008) and psychological functioning (e.g., Mendelson, Rehkopf, and Kubzansky, 2008) separately, few studies have adequately captured how the relationship between the two is affected by important contextual variables. Consedine, Magai, and Bonanno (2002), for example, have argued that future research on the relationship between emotion regulation (emotion inhibition, in particular) and health may be substantially influenced by multiple

contextual factors. They suggest three main classes of moderators for the regulation–health relationship: individual characteristics, social or cultural characteristics, and characteristics of the emotion being regulated. Similarly, Butler and Gross (2009) highlight the importance of understanding the role of group- and individual-level variables in relation to emotion regulation. The present study follows in the spirit of these recommendations by aiming to understand the impact of being an oppressed minority (sociocultural characteristic) and personally endorsing an oppressed minority ideology (individual characteristic) on the relationships between the use of reappraisal and suppression and measures of psychological functioning, such as depression and life satisfaction.

Emotion Regulation and Psychological Functioning

Emotion regulation can be described as the process of attempting to control what emotions one has and when and how one experiences and expresses those emotions (Gross, 1998b). This process can be both conscious and deliberate (Gross) or automatic (Mauss, Bunge, & Gross, 2007). Regulating one’s emotions (or failing to do so) has been directly implicated in a number of specific mental disorders. For instance, Major Depressive Disorder, the key features of which include chronic, depressed mood and the inability to experience pleasure (i.e., anhedonia), has been described as a disorder of emotion regulation (Gross & Muñoz, 1995). In regard to general emotion regulation, however, two strategies that appear particularly relevant to its relationship with psychological functioning are reappraisal and suppression.

Using reappraisal to regulate an emotional response refers to the process of altering what one thinks about an emotion-eliciting event before the emotion is fully

activated (Gross & John, 2003) such that the outcome is positive (e.g., a potentially anxiety provoking speech is construed as a helpful learning experience) or the event carries less personal relevance (Gross, 1998b). In the case of suppression, the intent is to hide one's emotional response from others after the emotion has already been elicited (Gross). In general, differences in emotion regulation usage have been found to be predictive of psychological distress (Gross & John; McLaughlin et al., 2007; Salters-Pedneault et al., 2006). As it has been described in the literature, the regular use of reappraisal appears to be a largely functional or adaptive emotion regulation strategy while the habitual use of suppression may be a largely dysfunctional or maladaptive strategy.

Using a multi-study design, Gross and John (2003) found that those who report greater use of reappraisal as an emotion regulation strategy generally experience more positive emotions and less negative emotions, have better interpersonal functioning (as measured by social sharing of emotions and peer-rated closeness), and are more likable than those who report lower usage. High reappraisers also tend to be more optimistic and have higher self-esteem than those who use reappraisal less frequently. Furthermore, reappraisal has been shown to correlate with better memory (Richards & Gross, 2000) and lower levels of subjective distress (Gross, 1998a) than suppression. Most importantly for the purposes of the present study, reappraisal has been shown to relate to psychological functioning such that high reappraisers endorse fewer symptoms of depression and greater life satisfaction when compared to low reappraisers.

Suppression, on the other hand, has been linked to increased signs of negative activation such as physiological (i.e., sympathetic) arousal, including higher skin

conductance and cardiovascular activity (Gross, 1998a; Gross & Levenson, 1993, 1997). Gross and John (2003) also found that individuals who report a greater likelihood to utilize suppression tend to experience and express less positive emotions, experience more negative emotions due to inauthentic self-presentations, and have greater difficulty sharing both negative and positive emotions than those who report being less likely to use this strategy. Additionally, high suppressors tend to have more discomfort in close relationships, have less social support, be less optimistic, and have lower self-esteem than those who report being less likely to use suppression. Of most importance to the present study, suppression was shown to relate to psychological functioning such that high suppressors tend to experience more symptoms of depression and have less life satisfaction than those who suppress less often.

Emotion Regulation and Culture

Although the outcomes associated with reappraisal and suppression are relatively robust, in that they have been shown across several domains of functioning, their generalizability has not been widely shown. Matsumoto and colleagues (Matsumoto, Nezlek, & Koopmann, 2007; Matsumoto et al., 2008) have theorized about the existence of cultural differences in emotion regulation due to differing norms and values that individual societies have in regards to certain emotions, their desirability, meaning, and expression. Additionally, studies have demonstrated cultural differences in the usage of emotion regulation strategies (Butler, Lee, & Gross, 2007; Matsumoto, 2006; Matsumoto et al., 2007; Matsumoto et al., 2008). In line with their predictions, for example, Matsumoto et al. (2008) found broad, country level differences in the usage of emotion regulation strategies and their correlates. Interestingly, they found reappraisal and

suppression to be negatively correlated in Mexico and Poland but positively correlated in Hong Kong, India, Japan, Nigeria, and the U.S. While these findings are useful in shedding light on the concept of cultural differences in emotion regulation, more relevant to the present study are findings regarding emotion regulation among ethnic minorities within the U.S.

Gross and John (2003) have found that Latino, Asian, and African Americans all tend to suppress the expression of their emotions more than European Americans. In contrast to the findings from Matsumoto discussed above, Gross and John also found reappraisal and suppression to be orthogonal in multiethnic American undergraduate samples. However, Matsumoto and colleagues (2008) speculate that these diverging results may be explained by some cultures utilizing one emotion regulation strategy in the service of another. For instance, one may suppress their expression while cognitively reappraising in order to find the most desirable emotion. Alternatively, one may reappraise an event in order to suppress their expression. These differences in emotion regulation across cultures or ethnic groups may be indicative of the role that divergent contexts can play in determining the effectiveness of certain emotion regulation strategies and, more importantly, the outcomes associated with the use of those strategies. One such context, ethnic minority oppression, may be especially important in understanding the relationship between emotion regulation and psychological functioning.

The Context of Oppression

Oppression can be defined as the exercise of power over a group by either force or deprivation (Hanna, Talley, & Guindon, 2000). The imposition of oppressive conditions can take the form of abusive messages, unsatisfying jobs or roles in society, or

negative media images perpetuating false beliefs about a group. Oppression by deprivation can include such things as preventing others from receiving adequate respect or dignity or denying others' basic needs or commodities such as food, housing, or a plot of land in a desirable area (Hanna et al.). I define a context of oppression as a set of living conditions in which any of these oppressive forces are regularly experienced.

Based on the above definition, research on ethnic minorities in the U.S. provides convincing evidence that they live within a context of oppression. For example, many European Americans continue to perceive African Americans, Latinos, and Asian Americans as more likely to prefer collecting welfare, more prone to violence, less intelligent, and lazier than themselves (Williams & Williams-Morris, 2000).

Furthermore, many ethnic minorities perceive discrimination in greater numbers and at a greater frequency than their European American counterparts (Fisher, Wallace, & Fenton, 2000; Green, Way, & Pahl, 2006; Kessler, Mickelson, & Williams, 1999; Klonoff & Landrine, 1999; Landrine & Klonoff, 1996; Swim, Hyers, Cohen, Fitzgerald, & Bylsma, 2003). In a nation-wide survey of American adults, Kessler and colleagues (1999) found that while many Americans reported experiencing some form of discrimination (33.5%), members of minority groups reported being the victims of discrimination much more often (48.9% – 50.2%) than members of the majority group (i.e., European Americans; 30.9%). When considering the experience of racial discrimination, per se, the gap between majority and minority groups is startling (7.8% vs. 40.6%, respectively; Soto, Dawson-Andoh, & BeLue, 2009).

The experience of discrimination and prejudice can itself be a stressful event (Major & O'Brien, 2005) while also adversely affecting other outcomes such as

education, employment/income, housing, health, and health care for ethnic minorities (Clark, Anderson, Clark, & Williams, 1999; U.S. Department of Health and Human Services, 2001). Indeed, reports from the National Center for Health Statistics (NCHS, 2008) point to the many disparities that still exist between minorities and non-minorities. This paints a bleak picture in the U.S. for ethnic minorities who are disproportionately affected by discrimination when compared to the majority group. Realities such as these suggest that U.S. ethnic minorities live in a context where oppression is salient, where the challenges and struggles associated with oppression are prominent (racism, discrimination, and their consequences), and where the actions exhibited by in- and out-group members can be poignant reminders of that oppression. Unfortunately, ethnic minorities are additionally confronted with the fact that expressing their frustrations may only serve to further the negative stereotypes concerning aggression and hostility.

In a context of oppression, dealing with negative emotions such as anger, anxiety, and resentment may be an important part of daily life (Swim et al., 2003). This suggests a vital role of emotion regulation in possibly moderating or mediating the relationship between the experience of oppression and psychological outcomes (Hatzenbuehler, Nolen-Hoeksema, & Dovidio, 2009; Miller & Kaiser, 2001). Given the established link between oppression and depression (Finch, Kolody, & Vega, 2000; Kessler et al., 1999; Noh, Beiser, Kaspar, Hou, & Rummens, 1999), emotion regulation may be crucial to understanding the psychological repercussions for ethnic minorities. This is particularly true given the findings that reappraisal is related to less symptoms of depression than other emotion regulation strategies (Garnefski & Kraaij, 2006) and that suppression is related to more symptoms of depression (Gross and John, 2003). In this regard,

reappraisal may be the logical strategy to use given the usual positive outcomes associated with it.

A context of oppression, however, may drastically change the “adaptive” qualities of reappraisal and “maladaptive” qualities of suppression for ethnic minorities. That is, in contexts associated with varying experiences of oppression, reappraisal and suppression may not be associated with the same benefits or costs that they might carry for members of the majority group. For example, research has shown that reappraisal in the context of stigmatized groups might be either protective or harmful depending on the resulting attribution (Crocker & Major, 1989). As the target of a racial slur, for instance, trying to reframe the comment as simply rude or their angry reaction as being overly sensitive may run counter to their personal experience of the comment as an occurrence of unfair oppression. Thus, for those who typically rely on reappraisal to deal with negative emotions, an oppressive context may provide quite a challenge given the limited number of interpretations for consequences of an oppressive context (e.g., discrimination, prejudice). Likewise, suppressing strong negative emotions in a context of oppression may be beneficial both in the short and long terms (e.g., to avoid being seen as threatening or as a troublemaker, respectively) as well as beneficial for one’s in-group (to minimize stereotypes of one’s group, etc.). In the case of strong negative emotions such as anger, suppression may also have health benefits (Bonanno, Keltner, Holen, & Horowitz, 1995) rather than the health costs suggested by Gross & John (2003). While these findings have not been studied in diverse samples, and thus their generalizability is unclear, Bonanno and colleagues have suggested that it is the chronic experience and expression of negative affect that may be deleterious to one’s health, not the inhibition of

these negative emotions. In fact, there is evidence suggesting that the experience and expression of anger or hostility are significant risk factors for illnesses and poor health outcomes (e.g., decreased immune system functioning, increased lipid levels, increased pain, and increased risk of death from cardiovascular disease; Miller, Smith, Turner, Guijarro, & Hallet, 1996; Suinn, 2001).

Ultimately, the utility of emotion regulation strategies for cultural minorities is still unknown; the strategies typically used by minorities may be very different, with equally different outcomes, from those employed by their European American counterparts. Even if the same strategies are utilized, the context in which cultural minorities exist likely affects the functionality of those strategies. In sum, there are as of yet no clear answers to how the relationship between emotion regulation and psychological functioning is affected by a context of oppression.

Distal and Proximal Oppression and Oppressed Minority Ideology

A central argument of this paper is that a multi-level analysis is needed in order to adequately capture the experience of oppression for members of ethnic minority groups. For example, individuals of the same ethnicity may have vastly different experiences with oppression depending on their socioeconomic status, place of residence, type of work, or a number of other factors. As Hanna et al. (2000) specify, “To imply that all minority group members are oppressed is, of course, inaccurate and overstated” (p. 431). Thus, inferring oppression solely from group membership may be too simplistic to represent the range of experiences within ethnic groups. Yet, as described above, there are shared experiences common to members of an ethnic group that likely play a role in their overall view of themselves as oppressed or not (e.g., views on immigration,

experiences of discrimination or deprivation, etc.). I argue that a multi-level analysis is needed in order to adequately capture the experience of oppression for members of ethnic minority groups. A useful heuristic for considering how oppression might influence the individual is to consider both the distal and proximal levels of oppression associated with an individual's ethnic group membership as well as their individual ideology about being an oppressed minority.

Distal oppression refers to the extent to which one's ethnic group is in a position of less power relative to the majority/dominant group in a given societal structure. In the U.S., any non-White ethnic group can be considered to experience distal oppression. In this sense, distal oppression is assumed, implied, or recognized by virtue of group membership and the power dynamics between groups in a society. *Proximal oppression* refers to the extent to which an individual is likely to be exposed to or affected by oppression in their immediate surroundings. This level of oppression captures qualities about one's cultural milieu that may protect or predispose individuals to direct experiences of oppression. These qualities could include the extent of minority representation in one's community or cultural sensitivity of community members. *Oppressed minority ideology* (OMI) captures individual beliefs regarding the oppression faced by one's ethnic group and the implications of that oppression. As construed here, OMI reflects an individual difference variable whereas distal and proximal oppression reflect group-level variables. Therefore, the consideration of all three of these levels of analysis in determining an individual's level of oppression can provide critical differentiation in assessing how one's context of oppression influences one's psychological functioning.

The Present Study

A typical limitation of cultural research is that divergent findings between members of different ethnocultural groups based solely on U.S. samples may reflect either cultural effects, effects of being an oppressed minority, or any combination of the two. In other words, the question of whether found differences are driven by culture (values, beliefs, and practices of a group) or variables associated with culture (e.g., SES, living environment, experiences of oppression/discrimination) is left unanswerable.

In the present study, I focus on the experience of oppression as an important contextual variable and study three ethnic groups that allow us to more systematically examine the effects of experiencing varying levels of oppression (i.e., distal oppression, proximal oppression, and oppressed minority ideology). European Americans represent the current majority group within the U.S. and are generally accepted as the ethnic group that possesses the most power and privilege. Thus, European Americans likely experience little, if any, distal or proximal oppression as a function of their ethnicity. Puerto Ricans living in Puerto Rico represent an interesting juxtaposition of privilege and oppression. While they enjoy the benefits of their own “homeland” and U.S. citizenship, they also continue to struggle with being one of the last vestiges of imperialism and subsequent inequities that come with that distinction (e.g., inability to vote in presidential elections; Torres & Velázquez, 1998). As a result of their relative position of less power, I argue that Puerto Ricans experience distal but not proximal oppression because their immediate context is one surrounded by similar others and therefore they are unlikely to experience oppression on a day-to-day basis. Finally, I believe Latinos in the U.S. represent the dual experience of distal *and* proximal oppression given their minority

status in the country and greater frequency of daily interaction with members from the majority group, especially for Latino Americans living in communities of little diversity, such as those represented in the present study's sample.

The individuals in these groups were conceptualized as capturing a range of different oppression experiences based on their unique social, contextual, and personal circumstances. In addition, I measure the belief that members of each subsample hold regarding being a member of an oppressed group. By so doing, it is possible to unpack the unique role of each dimension of oppression on the relationships between emotion regulation and psychological functioning. The consideration of all three levels of analysis in determining an individual's experience of oppression can provide critical differentiation in assessing how oppressed status impacts other psychological functions.

Hypotheses

Hypothesis 1. In line with previous research findings that have not examined contextual variables (Gross & John, 2003; McLaughlin et al., 2007; Salters-Pedneault et al., 2006), I hypothesize that:

- a.** greater usage of reappraisal will predict lower levels of depression;
- b.** greater usage of reappraisal will predict higher levels of life satisfaction;
- c.** greater usage of suppression will predict higher levels of depression; and
- d.** greater usage of suppression will predict lower levels of life satisfaction.

Hypothesis 2. The relationships between emotion regulation (i.e., reappraisal and suppression) and psychological functioning (i.e., depression and life satisfaction) will be doubly moderated by the interaction of ethnic group membership and oppressed minority ideology (OMI). I expect this moderation effect to occur because experiencing

oppression across multiple levels of analysis may alter the utility of emotion regulation strategies for members of ethnic minority groups in this unique context. Specifically, for Puerto Ricans, thought to experience relatively less proximal oppression, I do not predict OMI to moderate the relationship between emotion regulation and psychological functioning. However, for Latino Americans, supposed to experience relatively greater proximal oppression, I expect that endorsing high levels of OMI will be associated with an inverse relationship from the main effects predicted in hypotheses 1a-1d such that:

- a.** greater usage of reappraisal will predict higher levels of depression;
- b.** greater usage of reappraisal will predict lower levels of life satisfaction;
- c.** greater usage of suppression will predict lower levels of depression; and
- d.** greater usage of suppression will predict higher levels of life satisfaction.

Chapter 2

METHOD

Participants

Participants were 389 college students recruited from the psychology subject-pool at The Pennsylvania State University (PSU; $n = 125$) and University of Puerto Rico, Mayagüez (UPR; $n = 264$). Participants from PSU self-identified as either Latino ($n = 49$) or European American ($n = 76$) and all participants from UPR self-identified as Puerto Rican. The following is an approximate representation of the PSU Latino participants: 29% Puerto Rican, 12% Mexican, 12% Colombian, 6% Ecuadorian, 6% Peruvian, 4% Spanish, and 12% other South American; 20% did not report cultural heritage.

All participants were over 18 years of age (European American: $M = 19.2$, $SD = 1.26$; Latino American: $M = 18.85$, $SD = 1$; Puerto Rican: $M = 20.38$, $SD = 2.1$). Gender percentages for the ethnicities were 53% female and 47% male in the European American subsample, 55% female and 45% male in the Latino subsample, and 56% female and 43% male in the Puerto Rican sample (1% did not respond). Participants from PSU were given course credit for their participation and participants from UPR were paid eight dollars as incentive for their participation.

Measures

An online questionnaire consisting of three parts was used in this study. The first section consisted of an informed consent statement which gave a brief description of the study and required students to verify their age (i.e., above 18 years) and consent. The second part was a demographics form assessing parents' ethnicities, grandparents'

ethnicities, age, gender, religion, income, highest education attained by parents, and primary language spoken at home. The final section consisted of questionnaires measuring the following constructs:

Emotion regulation. I used the Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) to assess one's usage of cognitive reappraisal and expressive suppression as emotion regulation strategies. This 10-item scale is comprised of 7-point, Likert-type scales (1 = *strongly disagree*; 7 = *strongly agree*). Adequate internal reliability was shown across four sub-samples with average alpha coefficients of .79 and .73 for the reappraisal and suppression subscales, respectively (Gross & John). Reappraisal alpha coefficients were .83, .82, and .80 for the European American, Latino American, and Puerto Rican subsamples, respectively. Suppression alpha coefficients for the European American, Latino American, and Puerto Rican subsamples were .83, .90, and .81, respectively. Three-month test-retest reliability for both subscales was shown with coefficients of .69 and adequate convergent and discriminant validity were established (see Gross & John for a full description). Furthermore, this measure's two-factor structure tends to remain stable across cultures, countries, and languages (Matsumoto et al., 2008).

Psychological functioning. The Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) was used to measure depressive symptomatology. Respondents are asked to answer the extent to which they have experienced a total of 20 symptoms in the past week using a 4-point Likert scale (0 = *rarely or none of the time [less than 1 day]*; 3 = *most or all of the time [5-7 days]*). The results are a sum score in which higher scores indicate a greater likelihood for the presence of depression. General

population means for the CES-D ranged from 7.94 ($SD = 7.53$) to 9.25 ($SD = 8.58$) with scores above 16 believed to suggest the presence of depression (Radloff). Internal consistency was shown with alpha coefficients ranging from .84 to .90 among the four samples used to develop this measure (Radloff); Cronbach's alphas for the European American, Latino American, and Puerto Rican subsamples used in this study were .92, .92, and .90, respectively. Further descriptions of the psychometric information for the CES-D can be found in the original publication (Radloff).

The 5-item, self-report scale Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), utilizing a 7-point, Likert-type scale (1 = *strongly disagree*; 7 = *strongly agree*) was used to measure the degree of satisfaction as a single global factor. Reliability of the SWLS was supported with test-retest correlation coefficients of .84 at two weeks, .84 at one month (Pavot, Diener, Colvin, & Sandvik, 1991), and .82 at two months (Diener et al.). Adequate internal consistency was also shown as alpha coefficients ranged from .83 to .85 (Pavot et al.) to .87 (Diener et al.). This study found Cronbach's alphas of .88, .90, and .86 for the European American, Latino American, and Puerto Rican subsamples, respectively. Convergent validity was supported by significant correlations between the SWLS and other common measures of well-being (Diener et al.; Pavot et al.).

Oppressed minority ideology. Utilizing a 7-point scale (1 = *strongly disagree*; 7 = *strongly agree*), the Multidimensional Inventory of Black Identity (MIBI; Sellers, Rowley, Chavous, Shelton, & Smith, 1997) assesses three dimensions of an individual's level of racial identity (proposed by Sellers, Smith, Shelton, Rowley, & Chavous, 1998) using 51 self-report items. Cronbach's alphas ranging from .60 to .79 demonstrate

adequate internal consistency for the six subscales. For the present study, I used only the 7-item Oppressed Minority ideology subscale to measure the extent to which individuals believe (a) their ethnic group faces oppression, (b) this oppression is similar to that faced by other minority groups, and (c) it is important for oppressed groups to unite to support each other. Because the MIBI was originally designed for use with Black individuals, I implemented a modified version replacing the word “Black” with “my racial group” (e.g., “The racism *my racial group* has experienced is similar to that of other minority groups”). Similar modifications have been utilized in prior research (Johnson, Robinson Kurpius, Dixon Rayle, Arredondo, & Tovar-Gamero, 2005) and alpha coefficients for the Latino American and Puerto Rican subsamples were .73 and .86, respectively. For methodological equivalence, European Americans completed the Oppressed Minority subscale; however, because the measure is based on oppression at the hands of Whites, the scale was not interpretable for this group and their scores were not analyzed.

Procedure

Participants from PSU were recruited from among a subject-pool of registered psychology students and participants from UPR were recruited using email announcements sent to various listservs. All participants were provided with a link to the online survey (hosted via SurveyMonkey.com or PsychData™) which they could complete at their convenience. Upon giving their informed consent, PSU participants received one point of class credit, in line with their course syllabus. Participants from UPR received eight dollars via mail as compensation for completing the study. The questionnaires took approximately one hour to complete. Upon completion of the questionnaires, all participants were debriefed and thanked for their help.

Data Analysis

For the overall sample of European Americans, Latino Americans, and Puerto Ricans, simple regression analyses were used to test the relationships between both cognitive reappraisal and expressive suppression (the predictor variables) and psychological functioning (depression and life satisfaction; the criterion variables). In order to test whether group membership alone would sufficiently explain differences in these relationships, hierarchical regression analyses were performed assessing moderation by group. An alpha level of .05 was used for all statistical analyses in this study.

Because of the inability to interpret OMI in European Americans (see Method section), this group was not included in any of the moderation analyses. In order to control for multicollinearity, all continuous variables used to create interaction terms were first centered to zero (i.e., by subtracting the mean of each variable from each data point within that variable). Participant group membership (i.e., Latino American and Puerto Rican) was dummy-coded in line with Cohen, Cohen, West, and Aiken (2003). As outlined by Aiken and West (1991), interaction terms were created by multiplying centered versions of both continuous predictor variables (i.e., emotion regulation and OMI) with one another as well as with the dummy-coded group membership variable. Moderation analyses utilized guidelines set forth by Baron and Kenny (1986).

Each emotion regulation strategy was first independently entered as a predictor variable in the multiple regression analysis. The second step of the regression analysis contained the OMI variable (a moderator variable), the dummy-coded variable of group membership (a moderator variable), and all possible two-way interaction terms. Finally,

the third step of the hierarchical regression contained the three-way interaction term.

Follow up analyses tested whether slopes were significantly different from one another in line with Dawson and Richter (2006).

Chapter 4

RESULTS

Descriptive statistics, provided in Table 1, show that the only difference between the groups was Puerto Ricans reported greater use of reappraisal than Latino Americans. The Latino American and Puerto Rican subsamples endorsed similar levels of oppressed minority ideology (OMI), further bolstering the conceptualization that Puerto Ricans, as a group, experience themselves as oppressed minorities (distal oppression).

Table 1

Mean (SD) Scores on Predictor and Criterion Variables by Ethnic Group

Construct	Ethnic group		
	European American	Puerto Rican	Latino American
Emotion regulation			
Cognitive reappraisal	29.26 _{ab} (5.14)	30.96 _a (6.92)	28.53 _b (6.75)
Expressive suppression	13.21 _a (4.71)	13.54 _a (5.83)	13.14 _a (5.74)
Psychological functioning			
Depression	15.26 _a (10.74)	16.01 _a (11.09)	18.16 _a (11.11)
Life satisfaction	23.71 _a (5.79)	23.38 _a (7.02)	22.10 _a (6.64)
Oppressed minority ideology		34.72 (8.47)	33.22 (5.50)

Note. Means in the same row that do not share subscripts differ at $p < .05$ in the Tukey honestly significant difference comparison.

Before conducting the primary analyses, I first examined the bivariate correlations between reappraisal and suppression. Prior research has shown these variables to be orthogonal in American students (Gross & John, 2003) while researchers have shown these constructs to be related in some cultures (Matsumoto et al., 2008). Across the whole sample, reappraisal ($M = 30.09$, $SD = 6.36$) was not significantly related to suppression ($M = 13.38$, $SD = 5.42$), $r(389) = .02$, $p = .38$ (one-tailed). Likewise, the relationship between reappraisal and suppression did not differ across groups: European Americans, $r(76) = -.14$, $p = .11$ (one-tailed); Latino Americans, $r(49) = -.05$, $p = .36$ (one-tailed); and Puerto Ricans, $r(264) = .06$, $p = .19$ (one-tailed).

Emotion Regulation and Psychological Functioning

Results from a simple regression analysis supported Hypothesis 1a in that reappraisal was a significant negative predictor of depression, $F(1, 387) = 15.22$, $\beta = -.32$, $p < .001$, accounting for 3.8% of the variance ($R^2 = .04$). This relationship was not moderated by group, $F(2, 383) = 1.22$, $p = .3$, $R^2 = .05$, $\Delta R^2 = .006$. Likewise, a regression analysis revealed that reappraisal was a significant positive predictor of life satisfaction, $F(1, 387) = 24.36$, $\beta = .24$, $p < .001$, accounting for 5.9% of the variance ($R^2 = .06$) in support of Hypothesis 1b. There was no moderation of this relationship by group, $F(2, 383) = 0.81$, $p = .45$, $R^2 = .07$, $\Delta R^2 = .004$. In support of Hypothesis 1c, results from a simple regression analysis revealed that suppression was a significant positive predictor of depression, $F(1, 387) = 12.95$, $\beta = .35$, $p < .001$, accounting for 3.2% of the variance ($R^2 = .03$). The relationship was not moderated by group, $F(2, 383) = 1.07$, $p = .34$, $R^2 = .05$, $\Delta R^2 = .005$. Contrary to Hypothesis 1d, however, a simple regression analysis revealed that suppression was not a significant predictor of life

satisfaction, $F(1, 387) = 2.43$, $\beta = -.09$, $p = .12$, accounting for only 0.6% of the variance ($R^2 = .01$). Additionally, this relationship was not moderated by group, $F(2, 383) = 1$, $p = .37$, $R^2 = .02$, $\Delta R^2 = .005$.

Emotion Regulation, Psychological Functioning, and the Context of Oppression

The first step of this analysis again showed reappraisal to be a significant negative predictor of depression, $F(1, 311) = 10.74$, $p < .01$, $R^2 = .03$, when including only the Latino American and Puerto Rican subsamples. In support of Hypothesis 2a, the only significant interaction was the three-way interaction between reappraisal, group membership, and OMI, $F(1, 305) = 9.33$, $p = .002$, accounting for an additional 2.8% of the variance in depression, $R^2 = .07$, $\Delta R^2 = .03$. A comparison of slopes revealed that for Latino Americans the relationship between reappraisal and depression was significantly different depending on high versus low levels of OMI, $t = 3.03$, $p = .003$. Specifically, under high levels of OMI the relationship between reappraisal and depression was positive, whereas under low levels of OMI this relationship was negative. For Puerto Ricans, usage of reappraisal was more negatively related (i.e., in the same direction) to depression under higher than lower levels of OMI, $t = -2.88$, $p = .004$. In sum, reappraisal was associated with decreased depression for Puerto Ricans, but this relationship reversed for Latino Americans high on OMI. For ease of interpretation, this three-way interaction is shown in Figure 1 as two, two-way interactions, one for each group.

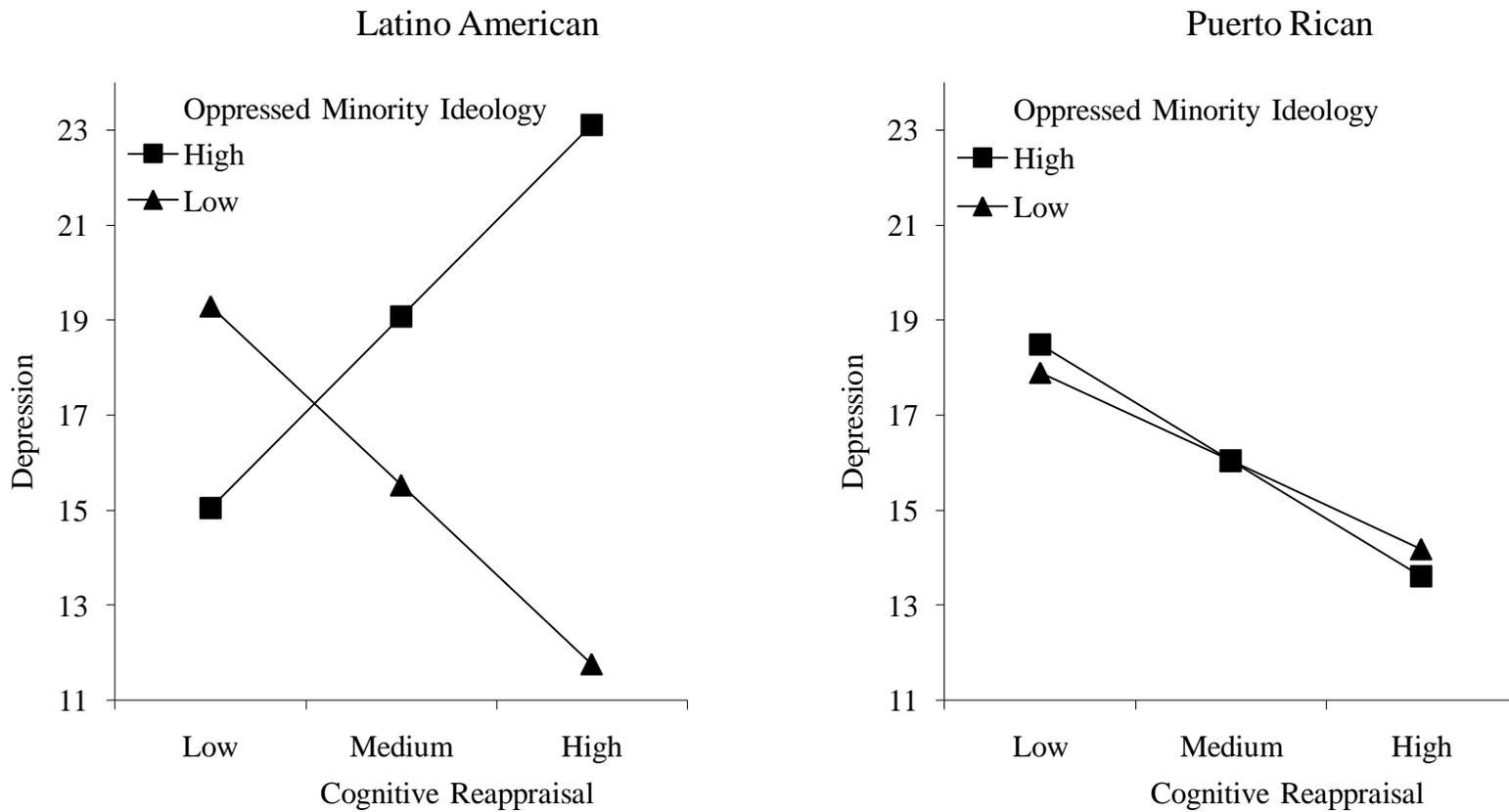


Figure 1. Relationship between cognitive reappraisal and depression under high and low levels of Oppressed Minority Ideology in Latino Americans and Puerto Ricans.

Next, we tested for the same double-moderation effect of group membership and OMI on the relationship between reappraisal and life satisfaction. The first step in the model again revealed that among Latino Americans and Puerto Ricans, reappraisal was a significant positive predictor of life satisfaction, $F(1, 311) = 17.26, p < .01, R^2 = .05$. The next step in the hierarchical regression supported Hypothesis 2b by revealing that only the same three-way interaction of reappraisal, group membership, and OMI was significant, $F(1, 305) = 8.33, p = .004$, accounting for an additional 2.5% of the variance in life satisfaction, $R^2 = .10, \Delta R^2 = .03$. A comparison of slopes revealed that the relationship between reappraisal and life satisfaction significantly differed for Latino Americans depending on high versus low levels of OMI, $t = -3.05, p = .003$. Specifically, under high levels of OMI the relationship between reappraisal and life satisfaction was negative, whereas under low levels of OMI this relationship was positive. For Puerto Ricans, usage of reappraisal was more positively related (i.e., in the same direction) to life satisfaction under higher than lower levels of OMI, $t = 2.61, p = .01$. Thus, reappraisal was associated with increased life satisfaction for Puerto Ricans; however, this relationship reversed for high OMI Latino Americans. For ease of interpretation, the three-way interaction results are shown in Figure 2 a as two, two-way interactions.

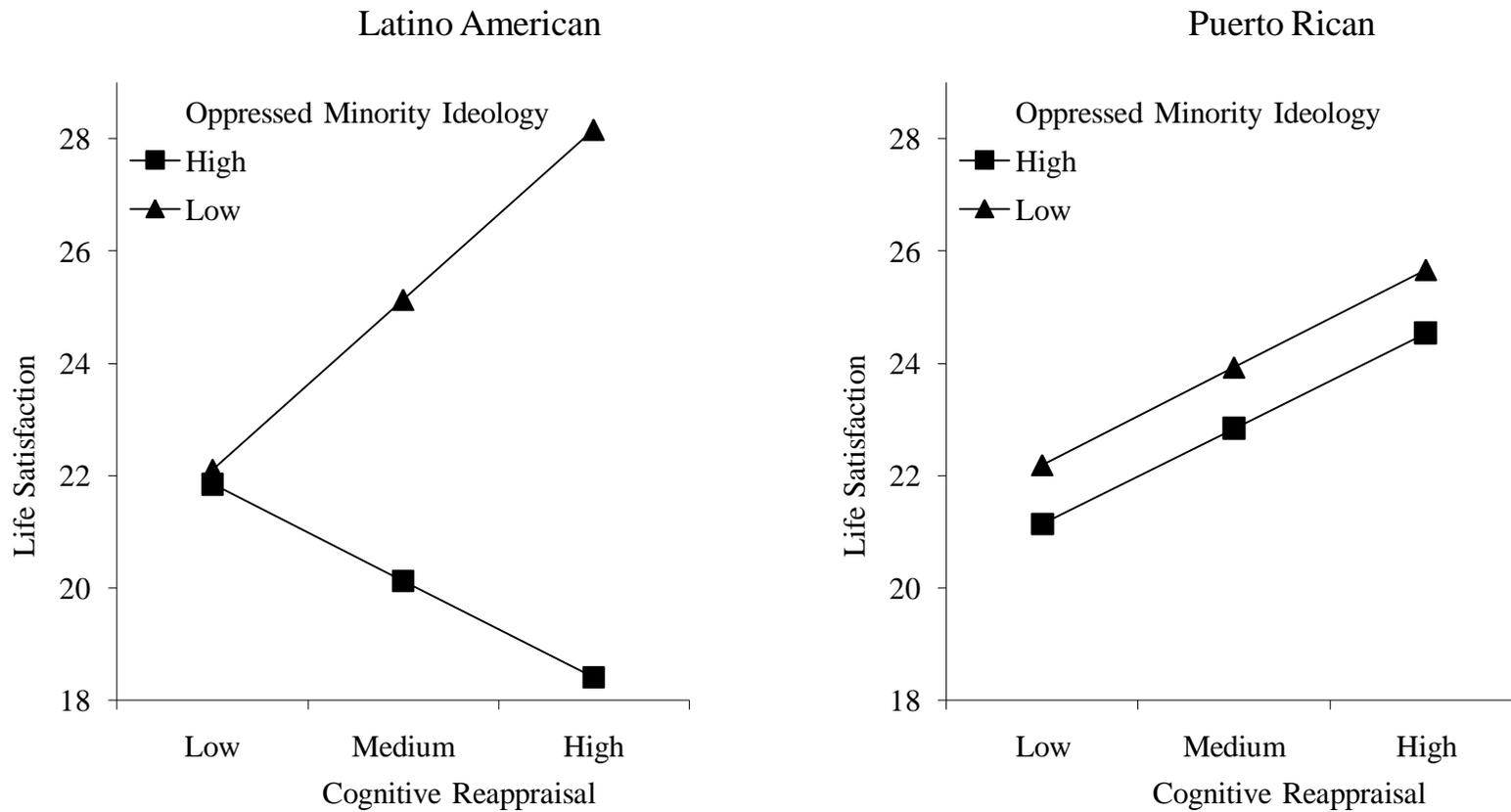


Figure 2. Relationship between cognitive reappraisal and life satisfaction under high and low levels of Oppressed Minority Ideology in Latino Americans and Puerto Ricans.

When suppression was used as the criterion variable it proved to be a significant positive predictor of depression among Puerto Ricans and Latino Americans, $F(1, 311) = 15.21, p < .001, R^2 = .05$. Contrary to Hypothesis 2c, however, results from a hierarchical regression did not reveal a significant three-way interaction of suppression, group membership, and OMI, $F(1, 305) = 3.15, p = .08$, accounting for only an additional 1% of the variance in depression, $R^2 = .07, \Delta R^2 = .01$. All lower-order interactions were also non-significant. Because suppression was not a significant predictor of life satisfaction, follow-up moderation analyses testing the effects of OMI on this relationship (i.e., Hypothesis 2d) were not conducted.

Chapter 5

DISCUSSION

The general usage of emotion regulation strategies has received much attention in the past decade in regard to the influence of emotion regulation on psychological functioning. As such, emotion regulation has been consistently linked to a number of outcomes in a number of important domains of psychological functioning (Gross & John, 2003). Reappraisal has typically been held as the strategy most predictive of better psychological functioning while suppression is typically viewed as maladaptive. The principal aim of this study was to investigate whether the relationships between emotion regulation (i.e., reappraisal and suppression) and psychological functioning are moderated by differing contexts of oppression. Psychological functioning was operationalized using measures of depression and life satisfaction. I conceptualized a context of oppression as having multiple levels of analysis; these were captured by ethnic group membership as well as personal endorsement of an oppressed minority ideology (OMI). In regards to reappraisal, this study revealed a double moderation effect, suggesting that for individuals who experience greater proximal oppression and identify highly with an OMI, the benefits of cognitive reappraisal may be undone.

It was first hypothesized that reappraisal would be indicative of lower levels of depression and higher life satisfaction. Regression analyses supported both hypotheses, replicating previous findings regarding emotion regulation and psychological functioning (e.g., Gross & John, 2003; McLaughlin et al., 2007; Salters-Pedneault et al., 2006) when context was not factored into the analyses. That is, across the entire sample, greater use of reappraisal predicted lower levels of depression and higher levels of life satisfaction,

supporting Hypotheses 1a and 1b. I next hypothesized that suppression would be related to higher levels of depression and lower reported life satisfaction. Regression analyses supported the hypothesis that suppression is indicative of higher levels of depression (Hypothesis 1c) but did not support the hypothesis that suppression is a significant predictor of life satisfaction (Hypothesis 1d). While these findings mostly mirror previous work linking positive outcomes with habitual reappraisal and negative outcomes with suppression (discussed later), they fail to take into account various contextual factors that may influence these relationships.

The primary purpose of this study was to examine the emotion regulation–psychological functioning relationship in different contexts of oppression. Given the unique intersections of these dimensions of oppression for different members of ethnic minority groups, the consideration of all of these facets of oppression were expected to affect the relationships between emotion regulation and depression and life satisfaction. This involved hypothesizing a three-way interaction between emotion regulation strategy, group membership, and personal ideology (OMI) in predicting depression and life satisfaction (Hypotheses 2a through 2d). It is important to note that as the constructs are used here, contextual oppression and OMI only make sense within the context of societal oppression; thus, the European American subsample was not included in further analyses.

Results supported both reappraisal hypotheses. Strikingly, for Latino Americans high on OMI, greater use of reappraisal was associated with higher levels of depression and lower life satisfaction. This relationship was the opposite for Latino Americans low on OMI and Puerto Ricans, regardless of OMI. Thus, in a context of multiple facets of oppression, reappraisal may take on quite a different function. However, analyses did not

reveal significant moderation of the relationship between suppression and depression, as was hypothesized in both Hypotheses 2c and 2d. While greater use of suppression was predictive of higher levels of depression, the three-way interaction of suppression, group membership, and OMI did not appear to affect one's reported experience of depression. That is, suppression may serve to exacerbate depression, or vice versa, but this does not seem related to one's group membership or OMI.

Although on the surface reappraisal may seem to be an ever-adaptive strategy, this study hypothesized that high oppressive contexts may lead to greater experiences of "failed" reappraisal among individuals accustomed to regularly utilizing reappraisal as an emotion regulation strategy. For example, a Latino American who experiences rude or discriminatory treatment at the hands of someone from the majority group may have few positive appraisals given their greater context of oppression. In situations such as these, attempts at a "healthier" interpretation of the realities associated with oppression may be impossible or inadvisable. I suggest that this constant search for a new solution to the same problem may quickly emulate the process of depressive rumination, possibly explaining the particularly negative relationship between reappraisal and psychological functioning for high OMI Latino Americans (see Hatzenbuehler et al., 2009).

Ultimately, these data suggest that living within a multi-layered context of oppression (i.e., experiencing oppression at the distal and proximal levels while endorsing an OMI) may not allow rethinking the experiences associated with being a part of an oppressed group. In this regard, Latino Americans (high distal oppression) living in a predominantly European American context (high proximal oppression) who also have an OMI (high personal salience) face a triple threat of sorts. In such a context, the typical

benefits associated with reappraisal may be overshadowed by the difficult realities of these individuals. Notably, Puerto Ricans (high on distal oppression), surrounded by similar others (low on proximal oppression), who endorsed an OMI showed the same relationship between reappraisal and psychological functioning as European Americans. This highlights the possible protective role one's immediate environment can play in the psychological health of ethnic minority group members.

In regards to expressive suppression, the interaction between suppression, group membership, and OMI did not affect the relationship between suppression and depression as anticipated. Initially, I expected suppression (typically related to an increase in depressive symptoms) to serve as a buffer against depression for Latino Americans who identified highly with an OMI. As contextual minorities highly identifying as oppressed, these individuals might find it helpful to suppress their emotional expressions more often than European Americans to avoid being seen as threatening or a troublemaker or for the greater good of the in-group, which is especially relevant given the pressure Latino cultures tend to place on behaving positively (Triandis, Marín, Lisansky, & Betancourt, 1984). The findings suggest that regardless of the context in which one lives, suppressing one's emotional response may always be detrimental to one's psychological health. As mentioned earlier, Gross and John (2003) found that high suppressors' negative emotions are due to inauthenticity, that is, "the tendency to present oneself in ways that are discrepant from one's inner self to avoid disapproval or social rejection" (p. 352). In the context of oppression, suppression may feel very much like denying one's own experience and, in some ways, may rob the experience of its true meaning, having a harmful impact on the individual.

In contrast to previous findings (Gross & John, 2003), this study did not find a significant relationship between suppression and life satisfaction. Although I initially expected suppression to be negatively related to life satisfaction, post-hoc considerations may reveal why this relationship was not observed. First, the questionnaire used to capture suppression (i.e., ERQ) measures an individual's likelihood to suppress both positive and negative emotions; thus, high scorers are likely those who suppress both positive and negative emotions. Next, as mentioned previously, Triandis and colleagues (1984) report the high normative pressure Latino cultures place on emphasizing positivity while deemphasizing negativity. Indeed, Murillo (1976) stated in regard to Mexican American culture, "It is through... an ability to experience, in response to environment, emotional feelings *and to express these to one another* [italics added] and share them that one experiences the greatest rewards and satisfactions in life" (p. 100). Because of the normative nature in Latino cultures to openly express positive emotions but suppress negative emotions, and given this study's sample, one might not expect to observe a relationship between suppression and life satisfaction.

Limitations and Future Directions

Though the study was successful in investigating some of the ways that existing within certain contexts may influence the utility of emotion regulation strategies, a number of limitations are nonetheless worth mentioning. For instance, the nature of self-report data raises the question of whether it is possible that individuals who report a greater tendency to reappraise are in fact less likely to reappraise than those who do not endorse this tendency. That is, mastering reappraisal may be associated with an automaticity that does not allow the individual conscious awareness of their tendency to

reappraise (Mauss, Cook, Cheng, & Gross, 2007). However, those who consciously notice their tendency to reappraise, or deliberately attempt to reappraise, may be more susceptible to “failed” reappraisals as they may be less practiced. Ultimately, while this study investigated the extent to which participants endorsed reappraisal, it still leaves open the issue of how individuals are reappraising. For instance, items measuring reappraisal in the ERQ which ask about changing what one thinks about, thinking about situations as unimportant, or considering them as learning experiences could also be interpreted as avoidance, denial, or more traditional reappraisal. Therefore, future studies will need to explicitly outline and measure specific processes of reappraisal in order to fully understand its impact on psychological functioning.

As is the case with cross-sectional studies, we cannot infer causation from these findings. Future research will need to include experimental designs in order to delineate the impact emotion regulation has in direct relation to oppression. Additionally, the constructs of distal and proximal oppression were inferred from group membership and knowledge about the make-up of the immediate environment for the members of these groups. While these data provide support that the particular groups adequately captured the constructs intended, devising a measure to explicitly assess these two levels of oppression will be an important future direction. Lastly, my measure of personal ideology (OMI) was derived from a subscale originally intended to measure Black ideology. Although similar modifications of the MIBI have been used to apply to non-Black groups (Johnson et al, 2005), studies had not yet done so with the Oppressed Minority subscale—in fact, studies have not used any of the MIBI ideology subscales with non-Black ethnic groups. Because indications from the data presented here suggest

adequate internal reliability for Latino Americans and Puerto Ricans, future researchers may want to look at the potential impact of other types of ethnic minority ideologies measured by the MIBI. Alternatively, future researchers may choose to investigate separate constructs such as race-based rejection sensitivity (Ayduk et al., 2000) which may be related conceptually to the notion of an oppressed minority ideology.

Conclusion

These findings have significant implications for psychologists in multiple arenas. Certainly for social psychologists interested in the study of oppression, racism, and discrimination, current findings point to important real-world consequences for individuals existing in contexts where these factors are prevalent. For clinicians with patients acknowledging an oppressive context to their lives, suggesting a blanket reappraisal approach may be more harmful than helpful. Researchers recently found that individuals with low self-esteem who were instructed to simply repeat positive self-statements or focus on how it might be true reported feeling worse about themselves and being in a worse mood than before they began (Wood, Perunovic, & Lee, 2009). Likewise, having a distorted view of one's own social standing has been linked to emotional distress from negative social feedback (Thomaes, Reijntjes, Orobio de Castro, & Bushman, 2009) suggesting "...that distorted self-views promote emotional vulnerability and that realistic self-views promote emotional resilience" (p. 1080).

Given the findings above, clinicians may be better advised to provide empathy and foster and endorse acceptance to help minimize the development of a distorted self-view which, as stated above, has been linked with greater emotional vulnerability. In so doing, clients might be motivated by their acceptance to "prove society wrong," fight

against oppressive injustice, or cope in other effective ways. After all, it would be difficult to believe that one is an oppressed minority living within an oppressed context and simultaneously try to find ways in which that fact is less personally relevant or hurtful. Additionally, clinicians may want to encourage activities that promote one's cultural group and surround the individual with members of their culture (e.g., ethnic-centered organizations, cultural celebrations, etc.). By taking part in activities that surround the individual with similar others, they may be able to ameliorate the psychological distress related to living in oppressive contexts and identifying as oppressed.

Lastly, I propose that even for societal minorities who highly identify as an oppressed minority, such as the Puerto Rican subsample, simply being in a context surrounded by others similar to oneself buffers against the deleterious outcomes associated with being a contextual minority. Indeed, research on a sample of 3,400 Southern Californian employees found that racial/ethnic minorities feel more excluded in the workforce and that this exclusion seems indicative of poorer job satisfaction and less well-being (Mor Barak & Levin, 2002). The findings fall in line with research on ethnic minorities in business settings, pointing to the benefit of increased diversity in the workplace (Herring, 2009). These studies have shown that diversity increases productivity and may promote "thinking outside the box." I suggest that increasing diversity also simultaneously contributes to better psychological health for ethnic minorities, which can also lead to increases in productivity. Thus, simply increasing immediate contextual diversity may change the entire dynamic for Latinos (and possibly other contextual minorities), suggesting there really is strength in numbers.

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