



The effect of suppressing and not accepting emotions on depressive symptoms: Is suppression different for men and women?

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ABSTRACT

Suppression of emotional expression has been associated with depressive symptoms. However, men suppress emotions more than women but women experience more symptoms of depression. The present study examined gender and emotional non-acceptance (thinking of emotions as bad and to be avoided) as moderators of the suppression–depression relationship. Participants were males ($n = 118$) and females ($n = 210$) aged 17–24. As expected, men reported suppressing emotions more than women and women reported more depressive symptoms. However, suppression was only related to depression in men and not women. Hierarchical regressions revealed a 3-way interaction among gender, suppression, and non-acceptance. Lower acceptance of emotions was associated with the highest depressive symptoms regardless of suppression or gender. With greater acceptance of emotions, suppression was related to more depressive symptoms in men but fewer depressive symptoms in women. These findings suggest that suppressing emotions may have different functions and may be more useful for understanding depressive symptoms in men rather than women.

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1. Introduction

Based on his model of emotional regulation (Gross, 1998, 2007), James Gross and colleagues have examined the functions and associations of two strategies: *expressive suppression*, or inhibiting outward expression when emotionally aroused (e.g., not crying when sad), and *cognitive reappraisal*, or reframing an emotional situation as less emotional (e.g., thinking of a performance as a learning opportunity rather than a potential failure; Gross, 2008a, 2008b; Gross & John, 2003). On the one hand, reappraisal is associated with positive outcomes such as low levels of negative emotions and high levels of well-being (Gross & John, 2003; John & Gross, 2004). On the other hand, suppression is related to negative outcomes such as depression (Gross & John, 2003; John & Gross, 2004), negative social consequences (Butler et al., 2003; Gross & John, 2003) and greater experience of negative emotions (Butler, Lee, & Gross, 2007). Although Gross and colleagues are careful not to conclude that one strategy is necessarily better than the other, reappraisal is generally thought of as an adaptive emotion regulation strategy and suppression as a maladaptive emotion regulation strategy.

1.1. Gender differences in the suppression–depression link

Research in western societies has revealed many gender differences in how men and women experience and express emotions. For example, women express more emotion than men (Gross & John, 1995, 1997; Kring & Gordon, 1998), women ruminate more than men (Butler & Nolen-Hoeksema, 1994), men tend to display more anger-related emotions and women tend to display more dysphoric and self-conscious emotions than men (Brody, 1993). Thus, women experience greater levels of negative emotionality in the form of depressive symptoms (Kessler et al., 1994; Nolen-Hoeksema, 2001; Regier et al., 1993; Young, Fogg, Scheftner, Keller, & Fawcett, 1990), yet men suppress emotions more than women (Gross & John, 2002, 2003). This reveals a previously unexamined conundrum: if men suppress emotions more than women and suppression is related to depression then why is it that men do not experience higher levels of negative affect or depressive symptoms than women? This conundrum suggests that when men suppress emotions it may not have effects that are as deleterious as those for women; hence, gender may moderate the relationship between suppression and depression. The present study was designed to address this conundrum by considering the moderating effects of gender and then to try to explain these differences in terms of how men and women approach or process emotional experiences. Specifically, we considered whether accepting versus rejecting

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emotions was a key factor in the suppression–depression connection.

1.2. Non-acceptance

Emotional acceptance is the willingness to fully experience all emotions, even negative ones (Campbell-Sills, Barlow, Brown, & Hoffman, 2006; Eifert & Heffner, 2003; Hayes et al., 1999; Levitt, Brown, Orsillo, & Barlow, 2004). Non-acceptance manifests as not wanting to feel any emotion appraised as “bad” (Gratz & Roemer, 2004) and is positively associated with suppression as well as symptoms of depression (Campbell-Sills et al., 2006; Gratz & Roemer, 2004; Hayes et al., 1999). Thus, non-acceptance may also affect how suppression relates to depression. In fact, some researchers seem to equate suppression and non-acceptance (Campbell-Sills et al., 2006; Cioffi & Holloway, 1993; Masedo & Esteve, 2007). However, we argue that non-acceptance and suppression are distinct because: (1) non-acceptance is a value judgment about the experience of emotions whereas suppression is an act taken to control the expression of emotion, (2) it is possible to accept one’s emotions but choose to suppress their expression for other reasons (e.g., social desirability) and (3) suppression can be theoretically assumed to have positive outcomes in some contexts (Butler et al., 2003; Elias, 1978) whereas non-acceptance has only been associated with negative outcomes (Bach & Hayes, 2002; Hayes, Strosahl, & Wilson, 1999; Heffner, Eifert, Parker, Hernandez, & Sperry, 2003; McCracken, 1998). Thus, non-acceptance is a good candidate to explain the moderation of gender on the suppression–depression link.

1.3. The present study

The first objective of the present study was to replicate the gender differences found in previous studies of the suppression–depression link by testing the following hypotheses: (a) suppression will be positively related to symptoms of depression, (b) women will have more symptoms of depression than men, and (c) men will suppress more than women. The second objective was to examine the moderating effects of non-acceptance and gender on the relationship between suppression and symptoms of depression. We expected both gender and non-acceptance would moderate this relationship.

2. Method

2.1. Participants and procedure

Participants were 328 undergraduate students aged 17–24 ($M = 19.29$), 64% female. Ethnic backgrounds were European–Canadian (67%), East Asian (20%), Other (7%), South Asian (5%) or African or First Nations Canadian (<1%). Participants were recruited from undergraduate classes at a university in southern Ontario, Canada. Participants completed a questionnaire booklet taking ~25 min and were compensated with \$5.

2.2. Measures

2.2.1. Emotion Regulation Questionnaire (ERQ; Gross & John, 2003)

Participants indicate agreement with items on a scale from 1 (strongly disagree) to 7 (strongly agree). The 4-item Suppression scale (Cronbach’s $\alpha = .78$) includes items such as “I control my emotions by not expressing them.” The 6-item Reappraisal scale (Cronbach’s $\alpha = .83$) includes items such as “When I want to feel less negative emotion (such as sadness or anger), I change what

I’m thinking about”. The square root of Reappraisal was used in analyses to correct for skewness.

2.2.2. Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004)

The 6-item subscale measuring “Non-Acceptance of Emotional Responses” reliably differentiates those who accept negative emotions from those who do not. Participants report the frequency of Non-Acceptance for statements beginning with the phrase: “When I’m upset” followed by six different ways of feeling about being upset such as “I feel like I am weak” and “I feel embarrassed for feeling that way” on a 5-point scale from “almost never” to “almost always” (Cronbach’s $\alpha = .81$). The log of Non-Acceptance was used in analyses to correct for skewness.

2.2.3. Mood and Anxiety Symptom Questionnaire (MASQ; Keogh & Reidy, 2000)

For the 12-item General Distress: Depressive Symptoms subscale, respondents indicated how much during the past seven weeks they experienced symptoms (e.g., “I felt like a failure”) on a 5-point scale from “not at all” to “extremely” (Cronbach’s $\alpha = .93$). Levels of Depressive Symptoms were below the clinical range in this sample. The log of Depressive Symptoms was used in analyses to correct for skewness.

3. Results

Means and correlations are displayed in Table 1. As predicted, Reappraisal was negatively related to Depressive Symptoms and Non-Acceptance was positively related to Depressive Symptoms. Unexpectedly, in the full sample, Suppression was not related to Depressive Symptoms. *t*-Tests were conducted on all variables (Table 2) to test for expected gender differences. Reappraisal was not different by gender. As expected, women reported more Depressive Symptoms and Non-Acceptance, whereas men reported greater Suppression. It was also expected that the processes of suppression would be different in men and women, thus correlations among Suppression and Non-Acceptance within each gender were calculated separately (Table 3). For men, Suppression and Non-Acceptance were positively related to Depressive Symptoms. However, in women, Suppression was not related to Depressive Symptoms and Non-Acceptance was positively related to Depressive Symptoms. Thus, unexpectedly, Suppression was related to Non-Acceptance only in women but not in men.

To examine the second objective of this study, hierarchical regression analyses were performed on the dependent variable (Depressive Symptoms) using Suppression, Non-Acceptance and Gender as independent variables. All interaction variables were created with standardized variables. As shown in Table 4, the main effects of Gender, Suppression and Non-Acceptance accounted for 21% of the variance in Step 1. Surprisingly, there was not a significant amount of unique variance of Suppression associated with

Table 1
Correlations among all variables with means (and standard deviations) on diagonal.

	Suppression	Reappraisal	Non-acceptance	Depressive symptoms
Suppression	3.43 (1.21)			
Reappraisal	.04	–1.38 (.41)		
Non-acceptance	.20***	–.01	2.17 (.87)	
Depressive symptoms	.10	–.17**	.44***	.35 (.15)

** $p < .01$.

*** $p < .001$.

Table 2
t-Test comparison by gender with means (and standard deviations).

	<i>t</i>	df	Men	Women
Suppression	4.52***	273.96 ^a	3.80 (1.07)	3.21 (1.25)
Reappraisal	.63	325	4.91 (.96)	4.93 (1.10)
Non-acceptance	-2.17*	325	2.02 (.76)	2.26 (.93)
Depressive symptoms	-2.50*	326	2.23 (.86)	2.45 (.86)

Note: All means are reported as raw values but tests were run on transformed variables.

^a Df adjusted for unequal variances.

* $p < .05$.

*** $p < .001$.

Table 3
Correlations among all variables for men (top right) and women (bottom left).

	Suppression	Reappraisal	Non-acceptance	Depressive symptoms
Suppression		.02	.07	.19*
Reappraisal	.06		-.08	-.10
Non-acceptance	.31***	.02		.51***
Depressive symptoms	.11	-.22**	.39***	

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 4
Hierarchical regression results.

Step	Predictors	Total R^2	R^2 change	<i>b</i>	se	β
1	Gender	.21***	.21***	.03 ^a	.02	.09
	Suppression			.01	.01	.03
	Non-accept			.07***	.01	.44
2	Gender	.24***	.03*	.03	.02	.08
	Suppression			.03 ^a	.02	.17
	Non-accept			.08***	.02	.55
	Gender × suppression			-.03 ^a	.02	-.16
	Gender × non-accept			-.03	.02	-.13
	Suppression × non-accept			.02*	.01	.11
3	Gender	.26***	.02**	.02	.02	.06
	Suppression			.02	.02	.13
	Non-accept			.11***	.02	.69
	Gender × suppression			-.03	.02	-.14
	Gender × non-accept			-.05*	.02	-.25
	Suppression × non-accept			-.03 ^a	.02	-.22
	Gender × suppression × non-accept			.06***	.02	.35

^a $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Depressive Symptoms when Gender and Non-Acceptance were included. All the 2-way interactions were added in Step 2 and accounted for an additional 3% of the variance in Depressive Symptoms. This increase in prediction appeared to be driven by the interaction between Suppression and Non-Acceptance. Finally, with the addition of the 3-way interaction in Step 3, the final model accounted for an additional 2% of the variance in Depressive Symptoms. To probe this three-way interaction, the regression model was restructured on high (one standard deviation above) and low values (one standard deviation below) of Suppression

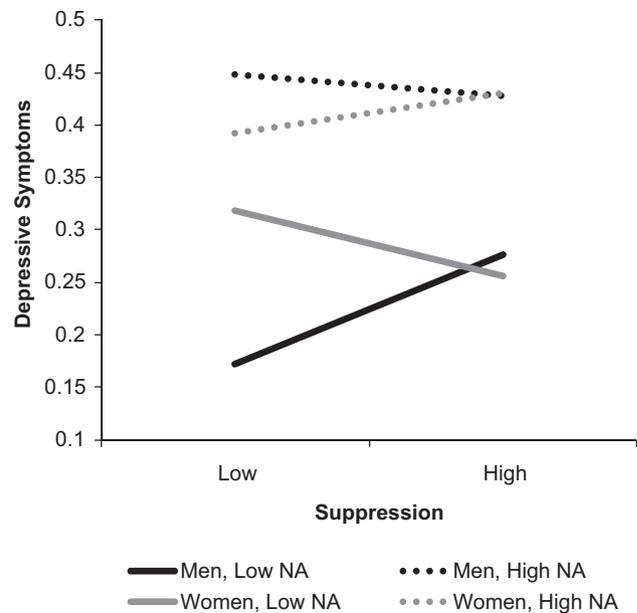


Fig. 1. Display of the 3-way interaction between gender, suppression and non-acceptance on depressive symptoms. Note: NA = Non-acceptance.

and Non-Acceptance (Aiken & West, 1991). This interaction is illustrated in Fig. 1.

4. Discussion

The goals of this study were to: (1) replicate gender differences in suppression and (2) examine gender and non-acceptance as moderators of the relationship between suppression and depression. Some gender differences in our sample were consistent with previous research: men suppressed more than women (Gross & John, 1995, 1997, 2002, 2003; Kring & Gordon, 1998) and women reported more depressive symptoms than men (Kessler et al., 1994; Nolen-Hoeksema, 2001; Regier et al., 1993; Young et al., 1990). However, the suppression–depression association was not present for women or the full sample but it was present for men. Previous research has not reported separate associations for men and women, but instead on the full sample regardless of gender (Gross & John, 2003). Thus, it is possible that the males were driving those positive bivariate correlations. This further implicates emotion suppression as an important factor in male depression (Addis, 2008). Given the stark contrast between depressive affect and cultural norms of masculinity, suppression may be a consequence of depressive symptoms as men try to avoid rejection for being unable to “take it like a man” (e.g., Joiner, Alfano, & Metalsky, 1992). This may also help to explain the strong correlation between non-acceptance of emotions and depressive symptoms for men.

Our moderation analyses illuminated these relations further. Suppression was only related to depressive symptoms when moderated by gender and/or non-acceptance. These results further implicated separate emotional processes for men and women. Lower acceptance of emotions in both men and women was associated with more symptoms of depression and suppression had little effect on this association. However, for women who accept their emotions, more expressive suppression was associated with lower depressive symptoms. Thus, these emotion-accepting women may be constraining their emotional responses for more prosocial reasons, rather than trying to stifle or deny painful emotional states. Butler et al. (2007), for example, found that culturally-mediated norms of emotional expressivity differentiated women’s suppres-

sion as either an act of prosocial self-regulation associated with positive outcomes (with norms dictating low expressivity) or an ironic process of unsuccessful regulation associated with elevated negative affect and poor outcomes (with norms of high expressivity). In contrast, depressive symptoms in men who accept their emotions appear to be exacerbated by suppression. When these results are taken together with those of the current study, different patterns of emotion regulation by gender seem to be associated with healthy outcomes (i.e., low depressive symptoms). The healthiest outcomes for women were associated with accepting and suppressing emotions and for men with accepting and not suppressing emotions.

There is a strong theoretical and empirical basis for the role of cognitive processes, such as negative schemas and dysfunctional attitudes, in the onset and maintenance of depression (Beck, 1967). There is a less comprehensive understanding of the patterns of emotional responding and expression associated with both these cognitive patterns and symptoms of depression. Depression has been associated with a rigid pattern of emotional expression (i.e., suppression; Gross & John, 2003) and a flattening of emotional responding (e.g., Rottenberg, Gross, & Gotlib, 2005). However, other research has shown that suppression is not always related to negative outcomes (Butler et al., 2007). Thus, the present results confirm the complex interactions among negative emotionality, emotion regulation habits, and various aspects of the social context (e.g., cultural norms, social goals, expectations). Instead of being a maladaptive strategy of emotional expression, suppression may be one of many emotion regulation techniques whose outcomes depend on other factors.

The present study was only preliminary. The next step is to go beyond self-report to examine these emotional processes in vivo. For any study of emotion regulation, it is most useful to be able to distinguish emotional arousal processes from regulatory efforts to decrease that arousal (Cole, Martin, & Dennis, 2004). Experimental manipulation of social goals and interaction partners may help to disentangle these processes. From our data, for example, it is not clear whether those who accept their emotions do so because their emotions are less intense. Thus, suppression and low acceptance of emotions may be functional or adaptive for those who experience intense emotions. It could also be argued that because patterns of emotion experience and expression are constrained by social and gender norms (e.g., Brody, 1993) that these same forces also affected the self-report of emotional experience and expression in this study. Although this is possible, it does not preclude the possibility that these results accurately represent emotional responding. However, studies with experimental manipulation of strategies by sex will provide a stronger evidence base for the conclusions of this paper. Furthermore, instead of measuring suppression and non-acceptance of emotions vaguely identified by valence, it would be useful in future studies to distinguish between different emotional states. Perhaps women are more likely to suppress socially accepted emotions of men (e.g., anger) while men would suppress socially accepted emotions of women (e.g., sadness).

The impetus of this study was to resolve a conundrum. If men suppress more than women and suppression is associated with depressive symptoms, then why do women have more depressive symptoms than men? Our results did not unequivocally resolve this conundrum but instead indicated the possibility that the suppression-depression link is more relevant for men than for women.

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