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# Negative mood regulation expectancies moderate the association between happiness emotion goals and depressive symptoms

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## ABSTRACT

Research suggests that happiness emotion goals (i.e., cognitive representations that happiness is the desired emotional endpoint) may confer risk for depression. Based upon prior speculations that emotion regulation could be important for understanding the association between happiness emotion goals and depression, in Study 1, we examined whether expressive suppression moderated the association between happiness emotion goals and depressive symptoms using a sample of community adults located in the United States ( $N = 465$ ). Contrary to study predictions, expressive suppression did not moderate that association. In Study 2, we proposed and examined whether negative mood regulation (NMR) expectancies moderated the association between happiness emotion goals and depressive symptoms among an independent sample of community adults located in the United States ( $N = 439$ ). Along with replicating Study 1 findings, we found support for the proposed moderating effect of NMR expectancies in Study 2. Happiness emotion goals were only associated with depressive symptoms when individuals held low NMR expectancies. Conceptual and therapeutic implications are discussed.

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## 1. Introduction

The purpose of this two-part study was to extend preliminary findings linking happiness emotion goals to depressive symptoms (Ford, Shallcross, Mauss, Floerke, & Gruber, 2014). Mauss and Tamir (2014) defined an emotion goal “as the cognitive representation of a particular emotional state that is the desired endpoint” (p. 361). Whereas individuals in the United States strongly value happiness (Gruber, Mauss, & Tamir, 2011), some individuals hold unrealistic happiness emotion goals (e.g., “I value things in life only to the extent that they influence my personal happiness;” Mauss, Tamir, Anderson, & Savino, 2011). Mauss et al. (2011) developed a seven-item self-report measure to assess individual differences in happiness emotion goals, titled the Valuing Happiness Scale (VHS). Ford et al. (2014) found that the VHS correlated with depressive symptoms ( $r$ s of .27 and .28), such that an extreme desire to experience happiness was associated with greater depression. Moreover, experimental research suggests a temporal relationship between valuing happiness and negative emotions. Specifically, higher levels of valuing happiness, induced through experimental manipulation, resulted in relatively lower levels of happiness in response to a positive mood induction (Mauss et al., 2011, 2012). Thus, happiness emotion goals may confer risk for depression (Ford et al., 2014).

Emotion regulation has been posited to be important for understanding the association between happiness emotion goals and depression (Ford et al., 2014). Gross's (1998) process model defines emotion regulation as “the process by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions” (p. 275). A plethora of emotion regulation strategies have been identified in the extant literature. In the context of Gross's (1998) model, emotion regulation efforts that seek to change the interpretation of an emotion-eliciting event (*cognitive reappraisal*) and inhibit emotion-expressive behavior (*expressive suppression*), respectively, have received an overwhelming amount of attention as they relate to negative emotions (Aldao, Nolen-Hoeksema, & Schweizer, 2010). Although Gross and Thompson (2007) note that they make no assumptions about whether specific strategies are adaptive or maladaptive, typically cognitive reappraisal has been considered an adaptive strategy and expressive suppression a maladaptive strategy (John & Gross, 2004). In fact, the chronic and inflexible use of expressive suppression increases the likelihood that one will experience psychopathology, including depression (Aldao et al., 2010; Gross & Levenson, 1997).

Individuals differ in the degree to which they use expressive suppression (Gross & John, 2003), which has led to investigations examining whether individual differences in expressive suppression moderate the relationship between psychopathology and emotional states (Kashdan & Breen, 2008). Kashdan and Breen (2008) suggest that the chronic and inflexible use of expressive suppression leads individuals prone to psychopathology to experience a cycle of diminished positive emotions, heightened negative emotions, and the use of avoidance

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behaviors that reduce opportunities for positive emotions or events. Following from [Kashdan and Breen \(2008\)](#), the purpose of Study 1 was to examine whether expressive suppression moderates the relationship between happiness emotion goals and depression.

More precisely, in the case of emotion goals, evidence suggests that overvaluing, or having unrealistic expectations about, happiness decreases the likelihood that one will actually experience happiness and increases the likelihood of experiencing negative emotions ([Ford et al., 2014](#); [Mauss et al., 2011, 2012](#)). However, the strength of the relation between happiness emotion goals and emotional outcomes may depend, at least in part, on the strategies that one uses to up- or down-regulate affective states. That is, the inflexible use of emotion regulation strategies that are commonly associated with negative outcomes, in combination with high levels of happiness emotion goals, may have a joint effect in which one is more likely to experience prolonged negative affective states and psychopathology. As such, the association between happiness emotion goals and depression could be stronger when individuals chronically and inflexibly use expressive suppression. To test this hypothesis, we examined whether expressive suppression moderated the association between happiness emotion goals and depressive symptoms in Study 1. We expected that happiness emotion goals would only relate to depressive symptoms when coupled with the heightened use of expressive suppression.

## 2. Study 1

### 2.1. Method

#### 2.1.1. Participants

A total of 465 participants were recruited from across the United States through an online crowd sourcing website. The average age was 35.9 years ( $SD = 11.7$ , range 19–65). The sample was primarily female (64.9%), White (83.7%), not Hispanic or Latino (92.7%), and currently not married (57.2%). The majority of the sample reported completing an associate degree or higher (86.2%) and being employed at least part time (71.4%). The median household income was between \$40,000 and 49,999 (USD).

#### 2.1.2. Measures

**2.1.2.1. VHS.** As reviewed, the VHS ([Mauss et al., 2011](#)) is a seven-item self-report measure that assesses happiness emotion goals. Items are rated using a 7-point scale (ranging from 1 to 7). The VHS shares a moderate correlation ( $r = .39$ ) with a measure assessing the valuing of positive emotion ([Ford et al., 2014](#)). The VHS has evidenced adequate internal consistency (Cronbach's  $\alpha$ s of .76 and .79; [Ford et al., 2014](#); [Mauss et al., 2011](#)). Following [Ford et al. \(2014\)](#), the VHS items were summed and averaged to create a total scale score. Higher scores on the VHS indicate greater happiness emotion goals.

**2.1.2.2. The Depression Anxiety Stress Scales-21 item version (DASS-21).** The DASS-21 ([Lovibond & Lovibond, 1995](#)) is a 21-item measure that consists of three seven-item scales that assess symptoms of depression (e.g., "I was unable to become enthusiastic about anything"), anxiety, and stress over the past week using a 4-point scale (ranging from 0 to 3). The depression scale has demonstrated adequate internal consistency ( $\alpha = .94$ ) and correlates strongly ( $r = .79$ ) with another measure of depression ([Antony, Bieling, Cox, Enns, & Swinson, 1998](#)). Higher scores on the depression scale indicate greater depressive symptoms.

**2.1.2.3. Emotion Regulation Questionnaire (ERQ).** The ERQ ([Gross & John, 2003](#)) is a 10-item self-report measure that assesses the propensity to use cognitive reappraisal and expressive suppression. Of particular interest is the four-item ERQ scale that assesses expressive suppression (e.g., "I control my emotions by not expressing them"). Items are rated

on a 7-point scale (ranging from 1 to 7). The expressive suppression scale has shown adequate internal consistency ( $\alpha$ s ranging from .68 to .76) and shares a moderate correlation ( $r = .39$ ) with a measure of negative affect ([Gross & John, 2003](#)). Higher scores on the expressive suppression scale indicate greater use of this emotion regulation strategy.

#### 2.1.3. Procedure

Participant recruitment took place using Amazon Mechanical Turk (MTurk), an online crowd sourcing website where researchers can recruit general population adults to complete questionnaires. Studies support the quality of MTurk data ([Buhrmester, Kwang, & Gosling, 2011](#); [Paolacci & Chandler, 2014](#); [Shapiro, Chandler, & Mueller, 2013](#)) and MTurk samples tend to be more demographically diverse than American undergraduate samples ([Buhrmester et al., 2011](#)). Participation was restricted to MTurk workers located in the United States and with approval ratings above 95%, a method shown to increase data quality ([Peer, Vosgerau, & Acquisti, 2014](#)). Participants were paid \$1.5 (USD) in exchange for their participation, an amount consistent with precedence for MTurk participant payment ([Buhrmester et al., 2011](#)).

## 3. Results

### 3.1. Descriptive statistics and zero-order correlations

Descriptive statistics and zero-order correlations are presented in [Table 1](#). There are few established standards for interpreting skew and kurtosis statistics ([Kline, 2011](#)), with the skew and kurtosis statistics in this study falling well below cutoffs identified by [Kline \(2011\)](#) for indicating "extreme" skew ( $>3.0$ ) or kurtosis ( $>10.0$ ). Consistent with prior research, happiness emotion goals shared a moderate correlation with depressive symptoms.

### 3.2. Main and interactive effects

Multiple linear regression was used to examine study predictions. The maximum variance inflation factor (VIF) among the predictors was 1.10, well below conventional guidelines ( $>10$ ; [Cohen, Cohen, West, & Aiken, 2003](#)) for indicating problems with multicollinearity. Following [Aiken and West \(1991\)](#), the statistical predictors (VHS and ERQ-Suppression) were mean-centered and entered into Step 1 to examine main effects. DASS-21-Depression was the criterion variable. Collectively, the VHS ( $\beta = .29$ ,  $p < .01$ ) and ERQ-Suppression ( $\beta = .24$ ,  $p < .01$ ) accounted for a significant amount of unique variance in DASS-21-Depression scores ( $R^2 = .19$ ,  $p < .01$ ). An interaction term was computed between VHS and ERQ-Suppression scores (calculated as the product of the centered predictors; [Aiken & West, 1991](#)) and entered into Step 2. Contrary to our primary prediction, the interactive effect did not account for a significant amount of unique variance in DASS-21-Depression scores ( $\Delta R^2 = .00$ ,  $\beta = .08$ ,  $ns$ ).

## 4. Study 1 summary

In Study 1, we found further evidence of an association between happiness emotion goals and depressive symptoms. This association was independent of expressive suppression, an emotion regulation strategy related to depression ([Aldao et al., 2010](#)). Consistent with prior research (e.g., [Gross & John, 2003](#)), expressive suppression shared a positive association with depressive symptoms. Although expressive suppression evidenced an additive effect in relation to depressive symptoms, it did not evidence the predicted moderating effect in relation to happiness emotion goals and depressive symptoms. In a reconceptualization as to how happiness emotion goals contribute to depressive symptoms, we propose it is important to consider one's perceived ability to effectively regulate emotional distress.

**Table 1**  
Study 1 Descriptive statistics and zero-order correlations.

Range of scores											
Variable	Mean	SD	Skew	Kurtosis	Possible	Observed	1	2	3		
1. Valuing Happiness Scale	4.04	1.19	−0.05	−0.29	1	7	1	7	(.80)		
2. ERQ-Suppression	14.85	5.66	−0.06	−0.50	4	28	4	28	.30**	(.82)	
3. DASS-21-Depression	5.29	5.63	1.04	0.07	0	21	0	21	.36**	.33**	(.94)

Note.  $N = 465$ . \*\* $p < .01$  (two-tailed). Cronbach's alpha values listed in parentheses along the diagonal. ERQ = Emotion Regulation Questionnaire; DASS-21 = Depression Anxiety and Stress Scales-21 item version.

This reconceptualization may be best understood in the context Catanzaro and Mearns's (1990) conceptualization of negative mood regulation (NMR) expectancies. Catanzaro and Mearns (1990) stated that "if a person has a low expectancy for alleviating negative moods, attempts to alter such a mood will be feeble at best, and the negative mood state will continue or become worse" (p. 548). Although NMR expectancies are related to coping responses, Catanzaro and Greenwood (1994) found that NMR expectancies share significant relations with negative emotions after partialing out the effects of active and avoidant coping responses. Additionally, NMR expectancies are self-confirming in that they tend to generate expected responses (Kirsch, Mearns, & Catanzaro, 1990). Kirsch et al. (1990) found that NMR expectancies correlated with depressive symptoms ( $r = -.50$ ), such that lower NMR expectancies (i.e., the expectation that one could not effectively regulate emotions) were associated with greater depressive symptoms. Kirsch et al. (1990) further found that NMR expectancies correlated with depressive symptoms independent of coping behavior, which led them to conclude "that mood enhancement is not produced by more persistent use of active coping strategies but rather by persons' beliefs in the effectiveness of those strategies" (p. 310).

In support of a potential causal role of NMR expectancies in relation to depressive symptoms, researchers found that NMR expectancies prospectively predict depressive symptoms at 8-week (Kassel, Bornovalova, & Mehta, 2006) and 1-year (Davis, Andresen, Trosko, Massman, & Lovejoy, 2005) follow-ups even after controlling for baseline depressive symptoms. Pursuant to the present research, extant studies have found that NMR expectancies moderate the association between risk factors for negative emotional states and the experience of negative emotions (Fergus, Bardeen, & Orcutt, 2013; Kashdan, Zvolensky, & McLeish, 2008). That is, the association between risk factors for negative emotional states and negative emotions is stronger when individuals hold low NMR expectancies.

As described earlier, when there is a mismatch between current emotional states and emotion goals, individuals purportedly deploy emotion regulation strategies as a way to reduce that mismatch (Mauss & Tamir, 2014). Based upon the extant literature, individuals with unrealistic happiness emotion goals and low NMR expectancies would not be expected to ameliorate their negative mood state, regardless of their specific coping behavior, due to the self-confirming nature of NMR expectancies (Catanzaro, 1997; Catanzaro & Greenwood, 1994; Catanzaro & Mearns, 1990; Kirsch et al., 1990). The inability to achieve their emotion goal may in turn serve to further increase their expectation that there is little that they can do to effectively regulate their emotions (Kirsch et al., 1990) and, ultimately, exacerbate depressive symptoms (Davis et al., 2005; Kassel et al., 2006). If this possibility is tenable, NMR expectancies should moderate the association between happiness emotion goals and depressive symptoms. Following from research interested in the independence of emotion regulation expectancies from specific emotion regulation strategies (Catanzaro, 1997; Catanzaro & Greenwood, 1994; Kirsch et al., 1990), we examined whether an observed interactive effect was robust to the effects of expressive suppression. Along with expecting to find support for the moderating effect of NMR expectancies in Study 2, we sought to replicate Study 1 findings in an independent sample.

## 5. Study 2

### 5.1. Method

#### 5.1.1. Participants and procedure

A sample of 439 participants was recruited from across the United States through MTurk. The posting of the study on MTurk ensured that there were no duplicate respondents across Study 1 and Study 2. The procedure was identical to that reported in Study 1. The average age was 35.8 years ( $SD = 11.4$ , range 19–65). The sample was primarily female (69.7%), White (81.1%), not Hispanic or Latino (94.5%), and currently not married (53.5%). The majority of the sample reported completing an associate degree or higher (82.9%) and being employed at least part time (64.9%). The median household income was between \$40,000 and 49,999 (USD). In addition to the VHS (Mauss et al., 2011), DASS-21 (Lovibond & Lovibond, 1995), and ERQ (Gross & John, 2003), participants completed the following additional measure in Study 2.

#### 5.1.2. Measures

5.1.2.1. *Generalized expectancy for Negative Mood Regulation Scale (NMR)*. The NMR scale (Catanzaro & Mearns, 1990) is a 30-item self-report measure that assesses NMR expectancies (e.g., "I can usually find a way to cheer myself up"). Items are rated on a 5-point scale (ranging from 1 to 5). The NMR scale has shown adequate internal consistency ( $\alpha$ s ranging from .87 to .92; Catanzaro & Mearns, 1990). The NMR scale has been found to correlate strongly ( $r$ s ranging from  $-.42$  to  $-.60$ ) with measures of depressive symptoms (Davis et al., 2005; Kassel et al., 2006; Kirsch et al., 1990). Higher scores indicate more positive expectancies.

## 6. Results

### 6.1. Descriptive statistics and zero-order correlations

Descriptive statistics and zero-order correlations are presented in Table 2. Skew and kurtosis statistics did not indicate extreme violations of normality. Consistent with Study 1, happiness emotion goals shared a moderate correlation with depressive symptoms.

### 6.2. Main and interactive effects

Replicating Study 1 findings, although VHS ( $\beta = .27$ ,  $p < .01$ ) and ERQ-Suppression ( $\beta = .24$ ,  $p < .01$ ) accounted for significant unique variance in DASS-21-Depression scores ( $R^2 = .15$ ,  $p < .01$ ), there was no evidence of an interactive effect between VHS and ERQ-Suppression ( $\Delta R^2 = .00$ ,  $\beta = .06$ ,  $ns$ ). For the primary analyses, multiple linear regression was used. The maximum VIF among the predictors was 1.11, well below conventional guidelines ( $< 10$ ; Cohen et al., 2003) for indicating problems with multicollinearity. Collectively, the VHS ( $\beta = .13$ ,  $p < .01$ ) and NMR scale ( $\beta = -.59$ ,  $p < .01$ ) accounted for a significant amount of unique variance in DASS-21-Depression scores ( $R^2 = .41$ ,  $p < .01$ ) in Step 1. As predicted, the interactive effect accounted for a significant amount of unique variance in DASS-21-Depression scores ( $\Delta R^2 = .02$ ,  $\beta = -.14$ ,  $p < .01$ ) in Step 2. A follow-up regression found that the interaction was not a reflection of

**Table 2**  
Study 2 Descriptive statistics and zero-order correlations.

Variable	Mean	SD	Skew	Kurtosis	Possible	Observed	1	2	3	4		
1. Valuing Happiness Scale	4.08	1.15	−0.06	−0.42	1	7	1	7	(.77)			
2. NMR Scale	100.74	22.14	−0.27	0.04	30	150	36	150	−.31**	(.94)		
3. ERQ-Suppression	14.82	5.58	−0.11	−0.70	4	28	4	28	.22**	−.28**	(.78)	
4. DASS-21-Depression	5.09	5.33	1.11	0.43	0	21	0	21	.32**	−.63**	.30**	(.93)

Note.  $N = 439$ . \*\* $p < .01$  (two-tailed). Cronbach's alpha values listed in parentheses along the diagonal. NMR = Negative Mood Regulation Expectancies; ERQ = Emotion Regulation Questionnaire; DASS-21 = Depression Anxiety and Stress Scales-21 item version.

shared variance with expressive suppression ( $\Delta R^2 = .02$ ,  $\beta = -.14$ ,  $p < .01$ ).

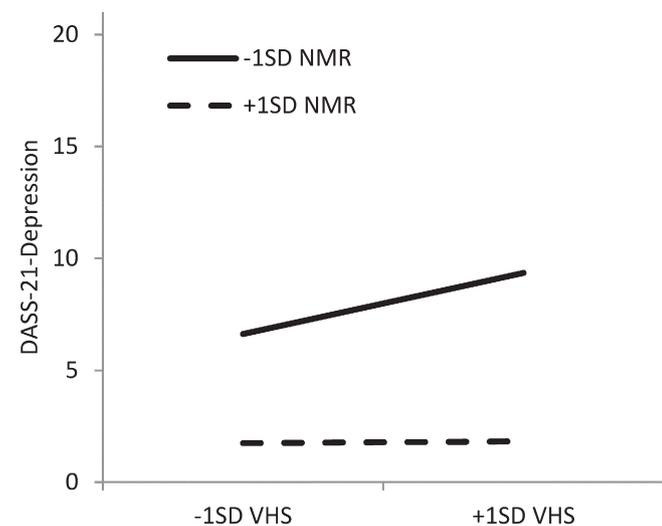
Graphs and simple regression equations (simple effects) were used to further investigate the significant interaction term between happiness emotion goals and NMR expectancies (following Aiken and West (1991)). Two simple regression equations were constructed (using  $\pm 1 SD$  from the mean score on the NMR scale) for each significant interactive effect. To plot these equations, two values of the VHS ( $\pm 1 SD$  from the mean) were substituted into the regression equations. Significance of the simple slopes of these regression equations was tested at both low ( $-1 SD$ ) and high ( $+1 SD$ ) NMR scale values. Simple effects are depicted in Fig. 1. Simple effects indicated that VHS scores shared an association with scores on the DASS-21-Depression scale at low ( $\beta = .26$ ,  $p < .01$ ), but not high ( $\beta = .01$ ,  $ns$ ), NMR scale values.

## 7. Study 2 summary

Replicating Study 1 findings, expressive suppression did not moderate the association between happiness emotion goals and depressive symptoms in Study 2. Consistent with study predictions, NMR expectancies moderated the association between happiness emotion goals and depressive symptoms in Study 2. The pattern of the observed moderation effect indicated that happiness emotion goals were associated with depressive symptoms only when individuals believed that they could not alter negative mood states.

## 8. Discussion

Study 2 findings contribute to prior research highlighting the importance of NMR expectancies to depressive symptoms, with NMR



**Fig. 1.** Moderating effect of negative mood regulation expectancies (NMR = Negative Mood Regulation Scale) on the association between happiness emotion goals (VHS = Valuing Happiness Scale) and Depressive Symptoms (DASS-21 = Depression Anxiety and Stress Scales-21 item version).

expectancies sharing the strongest association with depressive symptoms among the study variables. Kirsch et al. (1990) suggested at least three ways in which NMR expectancies contribute to depressive symptoms, one of which is that NMR expectancies may lead to the use of maladaptive coping. However, and consistent with Kirsch et al.'s (1990) findings, we found that the impact of NMR expectancies on depressive symptoms was unaccounted for by expressive suppression. Kirsch et al. (1990) further suggested that NMR expectancies may affect the quality of coping responses. For example, individuals with low NMR expectancies may not fully engage in coping responses that could lead to positive emotions (e.g., an individual may be distracted, and thus not entirely present focused, while talking with a friend) or inflexibly use coping responses that serve to exacerbate negative emotions. Finally, Kirsch et al. (1990) suggested that the expectancy that one is unable to experience positive emotions when distressed could be sufficient to exacerbate and maintain negative emotions.

In addition to the additive effect of NMR expectancies in relation to depressive symptoms, NMR expectancies moderated the association between happiness emotion goals and depressive symptoms. As reviewed, a discrepancy between a current emotional state and emotion goals may lead individuals to employ emotion regulation strategies as a way to reduce that discrepancy (Mauss & Tamir, 2014). According to Mauss and Tamir (2014), the adaptive quality of emotion regulation strategies depends on whether the strategies help individuals reach their emotion goals. Individuals with high scores on the VHS have an extreme desire to experience happiness, believing that it is essential for leading a meaningful life (Mauss et al., 2011). Results from the present study suggest that individuals with low NMR expectancies and unrealistic happiness emotion goals are prone to experiencing negative emotional states. The heightened occurrence of negative emotional states may lead individuals with unrealistic happiness emotion goals to consequently have reduced perceptions of goal attainment (e.g., expectancy that one is unable to experience positive emotions). The reduced perceptions of goal attainment may exacerbate depressive symptoms (e.g., hopelessness; Dickson, Moberly, & Kinderman, 2011) and lead to even lower NMR expectancies, as individuals may believe that they do not have the ability to achieve their desired emotional state (Pyszczynski & Greenberg, 1987). Although viewing NMR expectancies as a moderator of the association between risk factors for negative emotional states and the experience of negative emotions is consistent with prior research (Fergus et al., 2013; Kashdan et al., 2008), these data do not preclude the possibility that happiness emotion goals may impact the effect of NMR expectancies on depressive symptoms. Future longitudinal and experimental studies will be important in examining the tenability of alternative associations among the study variables.

Researchers have proposed that adjusting emotion goals may be an important target of intervention in reducing depressive symptoms (Mauss & Tamir, 2014). However, the present findings indicate that emotion goals operate in concert with NMR expectancies to contribute to depressive symptoms. As such, the present findings contribute to prior assertions that it is particularly important to target NMR expectancies in the service of reducing depressive symptoms (e.g., Davis et al., 2005). Research suggests that improved NMR expectancies are an

important contributor to therapeutic outcomes for reducing negative affective states (Cloitre, Koenen, Cohen, & Han, 2002) and that changes in NMR expectancies are associated with changes in depressive symptoms (Backenstrass et al., 2006).

Study limitations must be acknowledged. Whereas a full range of depressive symptom scores were observed in both studies, the mean symptom score was relatively low. Although research supports conceptualizing depressive symptoms continuously (e.g., Prisciandaro & Roberts, 2005), ensuring the findings generalize to individuals with diagnosed depression is an important area of investigation. The generality of the present findings is further limited by the use of an internet sample. Although MTurk samples tend to be more diverse than standard internet samples or American undergraduate samples, they should not be considered representative of the general population. For example, as noted by Paolacci and Chandler (2014), MTurk samples tend to (a) underrepresent racial/ethnic minorities, (b) be younger in age, and (c) have higher education levels than the general United States population. The generalizability of study findings would be further supported by examining other groups of community respondents.

Our study is further limited by its cross-sectional design, which precludes causal conclusions related to the role of happiness emotion goals or NMR expectancies in relation to depressive symptoms. Finally, it is important to acknowledge that the interactive effect was small in size. Whereas the size of the interactive effect was consistent with prior effect sizes of the moderating effect of NMR expectancies in relation to negative emotions (Fergus et al., 2013; Kashdan et al., 2008), the direct effect of NMR expectancies on depressive symptoms appears larger in magnitude than its moderating effect. Overall, our study findings provide further indication that NMR expectancies are important to depressive symptoms.

With these study limitations in mind, the present results provide conceptual advancements regarding the role that happiness emotion goals play in contributing to depressive symptoms. The association between happiness emotion goals and depressive symptoms seems best understood by concurrently considering NMR expectancies. Increasing attention to NMR expectancies may help to improve treatment outcomes for individuals suffering from depression.

## References

- Aiken, L.S., & West, S.G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical Psychology Review, 30*, 217–237.
- Antony, M.M., Bieling, P.J., Cox, B.J., Enns, M.W., & Swinson, R.P. (1998). Psychometric properties of the 42-item and 21-item versions of the Depression Anxiety Stress Scales in clinical groups and a community sample. *Psychological Assessment, 10*, 176–181.
- Backenstrass, M., Schwarz, T., Fiedler, P., Joest, K., Reck, C., Mundt, C., et al. (2006). Negative mood regulation expectancies, self-efficacy beliefs, and locus of control orientation: Moderators and mediators of change in the treatment of depression? *Psychotherapy Research, 16*, 250–258.
- Buhrmester, M., Kwang, T., & Gosling, S.D. (2011). Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science, 6*, 3–5.
- Catanzaro, S.J. (1997). Mood regulation expectancies, affect intensity, dispositional coping, and depressive symptoms: A conceptual analysis and empirical reanalysis. *Personality and Individual Differences, 23*, 1065–1069.
- Catanzaro, S.J., & Greenwood, G. (1994). Expectancies for negative mood regulation, coping, and dysphoria among college students. *Journal of Counseling Psychology, 41*, 34–44.
- Catanzaro, S.J., & Mearns, J. (1990). Measuring generalized expectancies for negative mood regulation: Initial scale development and implications. *Journal of Personality Assessment, 54*, 546–563.
- Cloitre, M., Koenen, K.C., Cohen, L.R., & Han, H. (2002). Skills training in affective and interpersonal regulation followed by exposure: A phase-based treatment for PTSD related to childhood abuse. *Journal of Consulting and Clinical Psychology, 70*, 1067–1074.
- Cohen, J., Cohen, P., West, S.G., & Aiken, L.A. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Davis, R.N., Andresen, E.N., Trosko, M., Massman, P.J., & Lovejoy, M.C. (2005). Negative mood regulation (NMR) expectancies: A test of incremental validity. *Personality and Individual Differences, 39*, 263–270.
- Dickson, J.M., Moberly, N.J., & Kinderman, P. (2011). Depressed people are not less motivated by personal goals but are more pessimistic about attaining them. *Journal of Abnormal Psychology, 120*, 975–980.
- Fergus, T.A., Bardeen, J.R., & Orcutt, H.K. (2013). Experiential avoidance and negative emotional experiences: The moderating role of expectancies about emotion regulation strategies. *Cognitive Therapy and Research, 37*, 352–362.
- Ford, B.Q., Shallcross, A.J., Mauss, I.B., Floerke, V.A., & Gruber, J. (2014). Desperately seeking happiness: Valuing happiness is associated with symptom and diagnosis of depression. *Journal of Social and Clinical Psychology, 33*, 890–905.
- Gross, J.J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology, 2*, 271–299.
- Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology, 85*, 348–362.
- Gross, J.J., & Levenson, R.W. (1997). Hiding feelings: The acute effects of inhibiting negative and positive emotion. *Journal of Abnormal Psychology, 106*, 95–103.
- Gross, J.J., & Thompson, R.A. (2007). Emotion regulation: Conceptual foundations. In J.J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3–24). New York, NY: Guilford Press.
- Gruber, J., Mauss, I.B., & Tamir, M. (2011). A dark side of happiness? How, when, and why happiness is not always good. *Perspectives on Psychological Science, 6*, 222–233.
- John, O.P., & Gross, J.J. (2004). Healthy and unhealthy emotion regulation: Personality processes, individual differences, and life span development. *Journal of Personality, 72*, 1301–1334.
- Kashdan, T.B., & Breen, W.E. (2008). Social anxiety and positive emotions: A prospective examination of a self-regulatory model with tendencies to suppress or express emotions as a moderating variable. *Behavior Therapy, 39*, 1–12.
- Kashdan, T.B., Zvolensky, M.J., & McLeish, A.C. (2008). Anxiety sensitivity and affect regulatory strategies: Individual and interactive risk factors for anxiety-related symptoms. *Journal of Anxiety Disorders, 22*, 429–440.
- Kassel, J.D., Bornoalova, M., & Mehta, N. (2006). Generalized expectancies for negative mood regulation predict change in anxiety and depression among college students. *Behaviour Research and Therapy, 45*, 939–950.
- Kirsch, I., Mearns, J., & Catanzaro, S.J. (1990). Mood-regulation expectancies as determinants of dysphoria in college students. *Journal of Counseling Psychology, 37*, 306–312.
- Kline, R.B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). New York, NY: Guilford.
- Lovibond, S.H., & Lovibond, P.E. (1995). *Manual for the depression anxiety stress scales*. Sydney: Psychology Foundation.
- Mauss, I.B., Savino, N.S., Anderson, C.L., Weisbuch, M., Tamir, M., & Ludenslager, M.L. (2012). The pursuit of happiness can be lonely. *Emotion, 12*, 908–912.
- Mauss, I.B., & Tamir, M. (2014). Emotion goals: How their content, structure, and operation shape emotion regulation. In J.J. Gross (Ed.), *The handbook of emotion regulation* (pp. 361–375) (2nd ed.). New York, NY: Guilford Press.
- Mauss, I.B., Tamir, M., Anderson, C.L., & Savino, N.S. (2011). Can seeking happiness make people unhappy? Paradoxical effects of valuing happiness. *Emotion, 11*, 807–815.
- Paolacci, G., & Chandler, J. (2014). Inside the Turk: Understanding Mechanical Turk as a participant pool. *Current Directions in Psychological Science, 23*, 184–188.
- Peer, E., Vosgerau, J., & Acquisti, A. (2014). Reputation as a sufficient condition for data quality on Amazon Mechanical Turk. *Behavior Research Methods, 46*, 1023–1031.
- Prisciandaro, J.J., & Roberts, J.E. (2005). A taxometric investigation of unipolar depression in the National Comorbidity Survey. *Journal of Abnormal Psychology, 114*, 718–728.
- Pyszczynski, T., & Greenberg, J. (1987). Self-regulatory perseveration and the depressive self-focusing style: A self-awareness theory of reactive depression. *Psychological Bulletin, 102*, 122–138.
- Shapiro, D.N., Chandler, J., & Mueller, P.A. (2013). Using Mechanical Turk to study clinical populations. *Clinical Psychological Science, 1*, 213–220.