

## **PREDICTING POSITIVE AND NEGATIVE AFFECT BASED ON EMOTION AND THOUGHT REGULATION STRATEGIES**

**Cornelia Măirean \***

*Romanian Academy Iasi Branch, Romania*

### *Abstract*

*This study examined the relationship between two emotions and thought regulation strategies - expressive suppression and cognitive reappraisal - and its affective state following exposure to a trauma-related event. We predicted that these relationships would be moderated by peritraumatic state anxiety. An experimental design was used where participants were exposed to an aversive film. Individual differences in emotions and thought regulation strategies were measured before exposure. After the film, the participants completed scales for measuring peritraumatic anxiety, as well as positive and negative affect. The analyses indicated that emotions and thought suppression predicted negative affect. Moreover, peritraumatic anxiety predicted both positive and negative affect, but it did not moderate the relation between emotion and thought regulation strategies and its affect. The practical implications of these results for personal wellbeing are discussed.*

Keywords: suppression; reappraisal; anxiety; positive affect; negative affect

### **Introduction**

Intense and negative emotional reactions, including unwanted thoughts are common in the aftermath of stressful or traumatic life events (Vanderhasselt, Koster, Onraedt, Bruyneel, Goubert, & De Raedt, 2014). When confronted with such situations, peoples use consciously or unconsciously different regulation strategies to modulate their emotions and thoughts in order to respond

---

Correspondence concerning this paper should be addressed to:

\* Ph.D., Romanian Academy Iasi Branch. Address: Codrescu street, No. 2, Iași, Romania. Tel.: +40 741 528 231; Fax: +40 232 210 660 E-mail: [cornelia.mairean@psih.uaic.ro](mailto:cornelia.mairean@psih.uaic.ro)

appropriately to environmental demands (Campbell-Sills & Barlow, 2007). Although these strategies vary according to particular situational demands (e.g., Aldao & Nolen-Hoeksema, 2012a), there is empirical evidence that there are relatively stable individual differences in the way people use emotion and thought regulation strategies (Liu, Prati, Perrewe, & Brymer, 2010; McRae, Jacobs, Ray, John, & Gross, 2012). Moreover, previous studies documented that these individual differences have substantial implications when it comes to mental health and wellbeing (Badour & Feldner, 2013; McRae et al., 2012; Moore, Zoellner, & Mollenholt, 2008; Shepherd & Wild, 2014). On the other hand, ineffective emotion and thought regulation strategies play an important role in the development and maintenance of different mental disorders (Aldao & Nolen-Hoeksema, 2012b; Beblo, Fernando, Klocke, Griepenstroh, Aschenbrenner, & Driessen, 2012). In this study, we focused on the relation between two emotion and thought regulation strategies and people's current emotional experience. Specifically, our aim in this research was to study the consequences of cognitive reappraisal and expressive suppression of emotions and thoughts on one's affective state after experimental exposure to a traumatic life event.

#### *Positive and negative affect*

Affect is a general term which represents a positive or negative subjective experience occurring at a given moment in time, and it is often conceptualized as varying along two dimensions, depending on positive and negative emotional activation (Tellegen, Walson, & Clark, 1999; Wyer, Clore, & Isbell, 1999). Negative affect (NA) includes symptoms of anxiety and depression, while cheerfulness and joy represent examples of a positive affect (PA) (Pressman & Cohen, 2005). Although PA and NA were initially regarded as relatively independent constructs, other authors sustain that these two affective states can co-occur at the same time within an individual (Larsen, McGraw, & Cacioppo, 2001). Because these dimensions are independent, an individual can be high on both, low on both or high on one and low on the other (Watson, Clark, & Tellegen, 1988). According to this perspective, if a person tends to experience negative moods, he/she can still experience positive moods (or vice versa). A theoretical framework that offers some insight about the relationship between these two affective states was offered by the broaden-and-build theory (Fredrickson & Cohn, 2008). According to this theory, positive

emotions share the ability to expand one's attention, cognition and behavioural repertoires (Fredrickson & Joiner, 2002; Gasper & Clore, 2002; Johnson & Fredrickson, 2005). Moreover, positive emotions play an important role in the regulation of negative emotions (Tugade & Fredrickson, 2004) and buffer the aversive effects of stress (Folkman, 2008). In other words, they function as efficient antidotes for the lingering effects of negative emotions (Fredrickson, Mancuso, Branigan, & Tugade, 2000). Not only do positive emotions make people feel good in the present, but positive emotions also increase the likelihood that people will feel good in the future (Fredrickson, 2001). Moreover, even short-lived positive emotions may have long-term positive effects by enhancing physical, psychological, cognitive and social resources (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009; Johnson, Hobfoll, Hall, Canetti-Nisim, Galea, & Palmieri, 2007). Therefore, it is important to understand which factors predict positive affects when confronted with stressful experiences.

*The role of emotion and thought regulation strategies*

Based on their immediate effects on affect, specific regulation strategies are considered either adaptive or maladaptive (see reviews in Aldao, Nolen-Hoeksema, & Schweitzer, 2010; Kring & Sloan, 2010; Nolen-Hoeksema & Watkins, 2011). Expressive suppression consists of efforts to inhibit or reduce ongoing unwanted emotions and thoughts. An adaptive emotion regulation strategy is cognitive reappraisal; this involves redefining potentially emotion-eliciting events in order to regulate the negative emotions (Gross, 1998). Previous studies showed that persons who habitually use expressive suppression of negative emotions and thoughts experience even more negative emotions and less positive ones, whereas cognitive reappraisal lead to beneficial outcomes, including reductions in the experience of negative affect and increase of positive affect (e.g., Ciuluvica, Amerio, & Fulcheri, 2014). Multiple studies have confirmed this pattern of results, reporting that people who use cognitive reappraisal frequently, in everyday life, report greater well-being (Nezlek & Kuppens, 2008), whereas expressive suppression can have destructive effects on well-being (e.g. Beblo et al., 2012). These results are explained by the fact that persons who often suppress their emotions and thoughts experience incongruence between their inner self and their external behaviour (Sheldon, Ryan, Rawsthorne, & Hardi, 1997). This incongruence has

been found to increase negative emotional states (Heuven, Bakker, Schaufeli, & Huisman, 2006). Moreover, the use of suppression may lead to increased accessibility of suppressed thought and distressing emotion (Wegner & Erber, 1992). On the other hand, people who use reappraisal are more able to deal with difficult life events and, consequently, they experience more positive affect, less negative affect, and a greater life satisfaction (Gross & John, 2003). However, there are also contradictory results that report no significant association between these regulation strategies and both positive and negative affect (Cisler, Olatunji, Feldner, & Forsyth, 2010; Liu et al., 2010; Meyer, Smeets, Giesbrecht, & Merckelbach, 2012).

Because there may be situations where the positive role of reappraisal and the negative role of suppression are not supported, an important goal for future research is to identify the conditions under which emotion and thought regulation strategies might lead to more dysfunctional outcomes. In context of exposure to trauma, there is evidence that the relation between individual differences in emotions and thought regulation and affect may be moderated by peritraumatic anxiety. Several studies have shown that suppression of emotions and thoughts influences the development of anxiety (Aldao et al., 2010; Beck, Gudmundsdottir, Palyo, Miller, & Grant, 2006). Generally, expressive suppression is associated with greater anxiety (e.g., Kashdan, Barrios, Forsyth, & Steger, 2006), whereas cognitive reappraisal is negatively associated with self-reported anxiety (Bardeen & Fergus, 2014). This link is explained by the fact that habitual suppression of emotions and thoughts prevent habituation to emotional stimuli and as such result in hypersensitivity to anxiety-related thoughts and symptoms (Wenzlaff & Wegner, 2000).

## **Objectives**

The present study has two objectives: (1) to investigate the relation between emotion and thought regulation strategies (cognitive reappraisal and expressive suppression) and affective state, following exposure to a trauma-related event; (2) to test the moderated role of peritraumatic anxiety in the relation between individual differences in emotion and thought regulation strategies and both positive and negative affect. Based on theoretical and empirical evidence presented above, we hypothesized that: (1) suppression of both emotion and thought will be positively related with negative affect and

negatively related with positive affect. (2) cognitive reappraisal will be negatively related with negative affect and positively related with positive affect; (3) peritraumatic anxiety will moderate the relation between individual differences in emotions and thoughts regulation strategies and both positive and negative affect.

## Method

### *Participants*

Participants were invited to take part in this study in exchange for course credit. One hundred and fifty participants were recruited for this study. All of the participants answered a set of questionnaires after signing a confidentiality agreement. The exclusion criteria were related to a history of road-traffic accidents and to previous mental health treatment. There were no other exclusion criteria, including restrictions based on demographic variables. As part of informed consent, all participants reported in writing if they had previously received any treatment for a mental health problem (in the form of medication or psychotherapy). Two participants reported that they had received treatment for a mental health problem and were excluded from the analysis, yielding a final sample of 148 students enrolled in study programs at a faculty of psychology (22 boys, 126 girls). The participants were aged between 19 and 36 ( $M=21.19$ ;  $SD=3.28$ ).

### *Materials and measures*

*Emotion Regulation Questionnaire* (ERQ; Gross & John, 2003) is a 10-item self-reporting scale designed to measure an individual's tendency to use cognitive reappraisal (six items) and expressive suppression (four items) to regulate emotions. Each item consists of a seven-point Likert scale (1-strongly disagree; 7-strongly agree). In this present study, the Cronbach Alphas for both the cognitive reappraisal (.79) and expressive suppression subscales (.72) were acceptable.

*The White Bear Suppression Inventory* (WBSI; Wegner & Zanakos, 1994) is a 15 item self-reporting inventory measuring an individual's propensity to suppress negative thoughts. The respondents were to indicate the degree of accord with the items by using a 5 point Likert-scale ranging from

“strongly disagree” to “strongly agree,” with neutral (don’t know) in the middle. The Cronbach alpha for this current sample was .85.

*The state anxiety scale* (STAI-S, Spielberger, Gorsuch, & Lushene, 1970) consists of 20 items arranged on a six-point scale of intensity (from ‘not at all’ to ‘very much so’) and measures the subjective feelings of apprehension, nervousness and anxiety at the moment. The Cronbach alpha for this current sample was .83.

*Positive Affect Negative Affect Schedule* (PANAS; Watson et al., 1988) was used to measure positive and negative affective states. The instrument consist of 10 items for positive affect (PA) and 10 items for negative affect (NA). The participants rated all the items on a 5-point scale (1-*slightly or not at all*, and 5-*very much*) with that momentary time frame. The average scores were computed separately for each dimension; higher scores indicated a higher level of positive (PA) and negative (NA) affectivity, respectively. The internal Cronbach alphas were .82 for PA and .88 for NA, respectively.

The items of the four scales were translated into Romanian, using the back-translation method. After translating the items into Romanian, a certified professional translated them back into English. There were no major dissimilarities as compared to the original scales.

#### *Trauma Film*

A 4-minute trauma video depicting traumatic scenes of a road traffic accident was used to model a traumatic experience. It consisted of scenes of horrific content, including injured victims screaming, emergency service personnel working to free trapped victims, dead bodies being moved and children crying. Our criteria in order to select this film was to conduct a pre-test with 33 participants. In the pre-test, after viewing five selected clips, the participants reported their affective state using a Positive Affect Negative Affect Schedule (Watson et al., 1988), on an 11-point scale, ranging from 0 (sad affective states) to 10 (happy affective states). We selected the film that received the lowest mean score. The film selected was compiled by Watkins-Hughes (2009) and was used as part of a campaign to stop texting while driving (though not in the country where the study was developed). The participants were asked to mention if they had seen the film before. No participant had seen the film until then. With respect to the ethical issues of showing a film with traumatic content, we note that previous studies using other traumatic films

(e.g., Holmes, Brewin, & Hennessy, 2004) found that no participants reported ongoing distress subsequent to the end of the experiment.

*Demographic variables* were collected via a questionnaire that covered age and gender.

### *Procedure*

This study used an intragroup design, where participants were tested before and after exposure to a trauma-related event. Permission to administer the survey was obtained from the institutional review board and informed consent was obtained from all participants. Before starting the study, the participants were informed that the film contains graphic scenes of the aftermath of a road traffic accident. Exclusion criteria for the participants were related to a history of road-traffic accidents and receiving medication as well as psychotherapy treatment for a mental health problem. The participants volunteered to take part in the research of their own accord. Prior to the students' participation, consent statements were signed. The participants were informed that their participation was voluntary, that the information would be kept confidential and that they could terminate the experiment at any point. The research was presented as an explorational study of peoples' reactions to different life situations. The participants completed all measures anonymously in one session. They filled in the ERQ and WBSI scales, and then the film was shown. Post-film questionnaires (STAI-S and PANAS) were then completed. Finally, the participants were debriefed, and the experimenter thanked them for their involvement.

## **Results**

### *Correlation between emotion and through regulation strategies, peritraumatic anxiety, positive and negative affect*

In this study, thought suppression was negatively related to positive affect ( $r = -.17$ ;  $p < .019$ ) and positively related to negative affect ( $r = .38$ ;  $p < .019$ ). Peritraumatic anxiety correlated negatively with positive affect ( $r = -.20$ ;  $p < .019$ ) and positively with negative affect ( $r = .73$ ;  $p < .019$ ). That is, a higher level of thought suppression and peritraumatic anxiety is associated with a lower level of positive affect, and a higher level of negative affect. Emotion regulation strategies did not significantly correlate to positive or negative affects. None of

the correlation coefficients for the relations among the variables exceeded 0.80, suggesting no problems with multicollinearity (Tabachnick & Fidell, 2007).

Table 1. Means, standard deviations, and bivariate correlations for all study variables

Variables	1	2	3	4	5	6
1. ER_R	1					
2. ER_S	.04	1				
3. Thought_S	.16	.08	1			
4. STAI	.17*	-.16	.30**	1		
5. PA	.04	-.04	-.17*	-.20*	1	
6. NA	.08	.02	.38**	.73**	-.17*	1
M	27.01	12.53	49.72	17.49	25.83	22.44
SD	4.50	3.91	11.13	3.84	7.36	7.97

Note: ER\_R-emotion regulation reappraisal, ER\_S-emotion regulation suppression, Thought\_S-thought suppression, STAI-peritraumatic anxiety, PA-positive affect, NA-negative affect; N = 148; \* p <.05; \*\* p<.01.

#### *Testing for moderation*

We conducted hierarchical regression models for outcomes with a positive and negative affect, with emotional reappraisal, emotion suppression, thought suppression and peritraumatic anxiety as the main effects in step one, and interaction between emotion and thought regulation strategies and peritraumatic anxiety in step two. The main interaction effects were centered to minimize multicollinearity. The results are depicted in Table 2.

Peritraumatic anxiety was a significant predictor of both positive and negative affect. Therefore, when the participants experience a high level of peritraumatic anxiety, they also experience a low level of positive affect, and a high level of negative affect. The relation between peritraumatic anxiety and negative affect is much stronger than the relation between peritraumatic anxiety and positive affect. These results confirmed the fact that the anxiety felt peritraumatic represent a vulnerability factor the subsequent negative states. The emotions suppression and thought suppression were significant predictors of a negative affect. Specifically, when people use more frequently suppression in order to deal with unwanted emotion and thought, the risk for the occurrence of negative emotional consequences is higher. The interactions between peritraumatic anxiety and emotion and though regulation strategies (expressive suppression, cognitive reappraisal) were not significant in predicting positive



and negative affect. Therefore, in this study, both peritraumatic anxiety and suppression are independent predictors of positive and negative affect. The effect of one variable is not moderated by the effect of the other variable.

Table 2. Hierarchical regression models of peritraumatic anxiety, emotion and through regulation strategies on positive and negative affect

	Positive affect		Negative affect	
	$\beta$	t	$\beta$	t
<i>Step 1</i>				
ER_R	.07	.84	-.07	-1.30
ER_S	-.03	-.40	.14*	2.40*
Thought_S	-.18	-2.15	.19**	3.22**
STAI	-.20*	-2.26*	.72***	12.20***
$\Delta R^2$	.042*		.564***	
$\Delta F$	2.60*		48.47***	
<i>Step 2</i>				
ER_R x STAI	-.09	-1.10	.07	1.32
ER_S x STAI	-.04	-0.03	.01	.04
Thought_S x STAI	.07	-.78	.08	1.44
$\Delta R^2$	.032		.569***	
$\Delta F$	.530		1.59	

Note: ER\_R-emotion regulation reappraisal, ER\_S-emotion regulation suppression, Thought\_S-thoughts suppression, STAI-peritraumatic anxiety, PA-positive affect, NA-negative affect; N=148; \*p < .05; \*\*p < .01; \*\*\*p < .001.

### Discussion

The first goal of this present study was to examine the relationship between individual differences in expressive suppression, cognitive reappraisal and an affective state after exposure to traumatic stimuli. Our results showed that emotion and thought suppression represent a positive predictor of a negative affect. These findings are in line with previous studies indicating that both the suppression of unwanted emotions and the suppression of negative thoughts can lead to a negative affect (Beblo et al., 2012; Campbell-Sills, Barlow, Brown, & Hofmann, 2006; Nezik & Kuppens, 2008). Even if people tend to inhibit the unwanted emotions and thoughts, in order to protect themselves from the harmful effects of these emotions and thoughts on their general wellbeing, it seems that this strategy is maladaptive, especially when

applied inflexibly (Kashdan & Steger, 2006). In this study, we measured suppression as a trait, therefore as a general tendency to react to different life situations.

Contrary to our expectations, there was no significant association between cognitive reappraisal and both positive and negative affects. Although suppression increases the experience of negative emotions, reappraisal not only fails to decrease negative emotional experiences but also did not increase the positive affect. The assumption that cognitive reappraisal is generally associated with favourable affective experiences was not supported by our findings. However, a similar result was obtained in a recent previous study (Meyer et al., 2012). Reappraisal probably plays an important role when it comes to preventing the development of stress related symptoms, but it did not account for variation in an affective state soon after exposure to a traumatic life event. Therefore, this present results did not deny its potentially adaptive role, but rather, extended beyond our data, suggest that it may contribute to long term positive outcomes after traumatic exposure, like posttraumatic growth (e.g., Johnson et al., 2007).

The second goal of this present study was to examine the moderator's role of peritraumatic anxiety in the relation among expressive suppression, cognitive reappraisal and affective state. Although anxiety proved to be an important predictor of both positive and negative affect, it did not moderate the relation between expressive suppression, cognitive reappraisal and affective state. Therefore, the role of peritraumatic anxiety, as a possible moderator of emotion and thought regulation effects on affect, was not supported. Based on our results, suppression increased the negative affect after traumatic exposure, regardless of the intensity of peritraumatic emotions.

#### *Limitation and future directions*

This study has some limitations. First, the sample only consisted of university students, most of them female, and therefore the generalization of the results is limited. Future studies should include trauma-populations, in order to provide a more ecological perspective of the relations between emotion and thought regulation, trauma exposure and affective states. Secondly, the study may lack ecological validity in terms of the generalization of the results based on the stressful film paradigm. However, this paradigm permitted an objective measure of the relation between regulation and affective states, in real-time, in

response to trauma-related cues. Thirdly, other limitations of our study concern the methods used for the assessment of the main study variables (self-report). For instance, our conclusions are generally limited by the use of introspective reports of affect.

### **Conclusions**

Despite the above presented limitation, the present study highlights the role of peritraumatic anxiety in predicting a low level of positive affect and a high level of negative affect. Moreover, the results showed that emotion and thought suppression lead to a high level of negative affect. However, the assumption that cognitive reappraisal has favourable consequences for an affective state while expressive suppression has negative consequences was only partially supported by our results. Whereas suppression was largely related to a negative affect, reappraisal was not related to a positive affect, neither to a negative affect. The role of peritraumatic anxiety as possible moderator of emotion and thought regulation strategies on affect was not supported.

These findings have a number of theoretical and clinical implications. Most importantly, they strengthen the claims that maladaptive regulation strategies have an implication in an individual reaction soon after exposure to trauma. It is possible to implicate reappraisal in long term posttraumatic reactions. The relation among suppression, reappraisal and both short and long term posttraumatic reactions should be considered in future studies. Because the positive affect and negative affect are distinct constructs that can coexist with the same person, in the same time (Larsen et al., 2001), it is important to note that suppression only increased the negative affect but had no effect on the positive affect. If the positive affect has the potential to buffer the aversive effects of negative emotions (Tugade & Fredrickson, 2004), researchers and clinicians should try to find ways to maintain a positive affect, rather than to reduce a negative affect after moderate exposure to a critical life event. If emotional responses that occur shortly after traumatic exposure mediate longer-term effects on health outcomes and well-being, it is important to intervene in order to promote an optimal affective state in the context of stressful situations. Because reappraisal and suppression seem to be independent constructs, as our results as well as previous results have shown (Moore et al., 2008), increasing suppressing may not decrease the potentially more adaptive use of reappraisal.

However, given that our present findings do not suggest beneficial outcomes for reappraisal, we cannot recommend intervention for preventing traumatic stress development based on the use of these regulation strategies. We only suggest that such interventions should try to encourage people to decrease the use of suppression or to decrease their reliance that suppression is a self-protective measure in stressful situations.

### **Acknowledgement**

This paper is supported by the Sectoral Operational Programme Human Resources Development (SOP HRD), financed from the European Social Fund and by the Romanian Government under the contract number POSDRU/159/1.5/S/133675

### **References**

- Aldao, A., & Nolen-Hoeksema, S. (2012a). The influence of context on the implementation of adaptive emotion regulation strategies. *Behaviour research and therapy*, 50(7), 493-501.
- Aldao, A., & Nolen-Hoeksema, S. (2012b). When are adaptive strategies most predictive of psychopathology? *Journal of abnormal psychology*, 121(1), 276.
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. *Clinical psychology review*, 30(2), 217-237.
- Badour, C. L., & Feldner, M. T. (2013). Trauma-related reactivity and regulation of emotion: Associations with posttraumatic stress symptoms. *Journal of behavior therapy and experimental psychiatry*, 44(1), 69-76.
- Bardeen, J. R., & Fergus, T. A. (2014). An examination of the incremental contribution of emotion regulation difficulties to health anxiety beyond

- specific emotion regulation strategies. *Journal of anxiety disorders*, 28(4), 394-401.
- Beblo, T., Fernando, S., Klocke, S., Gripenstroh, J., Aschenbrenner, S., & Driessen, M. (2012). Increased suppression of negative and positive emotions in major depression. *Journal of affective disorders*, 141(2), 474-479.
- Beck, J. G., Gudmundsdottir, B., Palyo, S. A., Miller, L. M., & Grant, D. M. (2006). Rebound effects following deliberate thought suppression: Does PTSD make a difference? *Behavior therapy*, 37(2), 170-180.
- Campbell-Sills, L., & Barlow, D. H. (2007). Incorporating emotion regulation into conceptualizations and treatments of anxiety and mood disorders. In James J. Gross (Ed), *Handbook of emotion regulation* (pp. 542-559). New York, US: Guilford Press.
- Campbell-Sills, L., Barlow, D. H., Brown, T. A., & Hofmann, S. G. (2006). Effects of suppression and acceptance on emotional responses of individuals with anxiety and mood disorders. *Behaviour research and therapy*, 44(9), 1251-1263.
- Cisler, J. M., Olatunji, B. O., Feldner, M. T., & Forsyth, J. P. (2010). Emotion regulation and the anxiety disorders: An integrative review. *Journal of psychopathology and behavioral assessment*, 32(1), 68-82.
- Ciuluvica, C., Amerio, P., & Fulcheri, M. (2014). Emotion Regulation Strategies and Quality of Life in Dermatologic Patients. *Procedia-Social and Behavioral Sciences*, 127, 661-665.
- Cohn, M. A., Fredrickson, B. L., Brown, S. L., Mikels, J. A., & Conway, A. M. (2009). Happiness unpacked: positive emotions increase life satisfaction by building resilience. *Emotion*, 9(3), 361.
- Folkman, S. (2008). The case for positive emotions in the stress process. *Anxiety, Stress, and Coping*, 21(1), 3-14.
- Fredrickson, B. L., & Cohn, M. A. (2008). Positive emotions. In: L. F. Barrett (Ed.), *Handbook of Emotions*. New York: Guilford.
- Fredrickson, B. L., & Joiner, T. (2002). Positive emotions trigger upward spirals toward emotional well-being. *Psychological science*, 13(2), 172-175.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *American psychologist*, 56(3), 218.

- Fredrickson, B. L., Mancuso, R. A., Branigan, C., & Tugade, M. M. (2000). The undoing effect of positive emotions. *Motivation and emotion*, 24(4), 237-258.
- Gasper, K., & Clore, G. L. (2002). Attending to the big picture: Mood and global versus local processing of visual information. *Psychological science*, 13(1), 34-40.
- 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(2), 348.
- Gross, J. J. (1998). Antecedent-and response-focused emotion regulation: divergent consequences for experience, expression, and physiology. *Journal of personality and social psychology*, 74(1), 224.
- Heuven, E., Bakker, A. B., Schaufeli, W. B., & Huisman, N. (2006). The role of self-efficacy in performing emotion work. *Journal of Vocational Behavior*, 69, 222-235.
- Holmes, E. A., Brewin, C. R., & Hennessy, R. G. (2004). Trauma films, information processing, and intrusive memory development. *Journal of Experimental Psychology: General*, 133(1), 3.
- Johnson, R. J., Hobfoll, S. E., Hall, B. J., Canetti-Nisim, D., Galea, S., & Palmieri, P. A. (2007). Posttraumatic growth: Action and reaction. *Applied Psychology*, 56, 428-436.
- Johnson, K. J., & Fredrickson, B. L. (2005). "We All Look the Same to Me" Positive Emotions Eliminate the Own-Race Bias in Face Recognition. *Psychological Science*, 16(11), 875-881.
- Kashdan, T. B., & Steger, M. F. (2006). Expanding the topography of social anxiety an experience-sampling assessment of positive emotions, positive events, and emotion suppression. *Psychological Science*, 17(2), 120-128.
- Kashdan, T. B., Barrios, V., Forsyth, J. P., & Steger, M. F. (2006). Experiential avoidance as a generalized psychological vulnerability: Comparisons with coping and emotion regulation strategies. *Behaviour research and therapy*, 44(9), 1301-1320.
- Kring, A. M., & Sloan, D. S. (2010). *Emotion Regulation and Psychopathology*. New York: Guilford Press.
- Larsen, J. T., McGraw, A. P., & Cacioppo, J. T. (2001). Can people feel happy and sad at the same time? *Journal of personality and social psychology*, 81(4), 684.

- Liu, Y., Prati, L. M., Perrewé, P. L., & Brymer, R. A. (2010). Individual differences in emotion regulation, emotional experiences at work, and work-related outcomes: A two-study investigation. *Journal of Applied Social Psychology, 40*(6), 1515-1538.
- McRae, K., Jacobs, S. E., Ray, R. D., John, O. P., & Gross, J. J. (2012). Individual differences in reappraisal ability: Links to reappraisal frequency, well-being, and cognitive control. *Journal of Research in Personality, 46*(1), 2-7.
- Meyer, T., Smeets, T., Giesbrecht, T., & Merckelbach, H. (2012). The efficiency of reappraisal and expressive suppression in regulating everyday affective experiences. *Psychiatry research, 200*(2), 964-969.
- Moore, S. A., Zoellner, L. A., & Mollenholt, N. (2008). Are expressive suppression and cognitive reappraisal associated with stress-related symptoms? *Behavior Research and Therapy, 46*, 993-1000.
- Nezlek, J. B., & Kuppens, P. (2008). Regulating positive and negative emotions in daily life. *Journal of personality, 76*(3), 561-580.
- Nolen-Hoeksema, S., & Watkins, E. R. (2011). A heuristic for developing transdiagnostic models of psychopathology explaining multifinality and divergent trajectories. *Perspectives on Psychological Science, 6*(6), 589-609.
- Pressman, S. D., & Cohen, S. (2005). Does positive affect influence health?. *Psychological bulletin, 131*(6), 925.
- Sheldon, K. M., Ryan, R. M., Rawsthorne, L. J., & Ilardi, B. (1997). Trait self and true self: Cross-role variation in the Big-Five Personality traits and its relations with psychological authenticity and subjective well-being. *Journal of Personality and Social Psychology, 73*(6), 1380-1393.
- Shepherd, L., & Wild, J. (2014). Emotion regulation, physiological arousal and PTSD symptoms in trauma-exposed individuals. *Journal of behavior therapy and experimental psychiatry, 45*(3), 360-367.
- Spielberger, C. D., Gorsuch, R. L., & Lushene, R. E. (1970). State-trait anxiety inventory. Palo Alto, Cal.: Consulting Psychologists Press.
- Tabachnick, B. G., & Fidell, L. S. (2007). *Experimental designs using ANOVA*. Thomson/Brooks/Cole.
- Tellegen, A., Watson, D., & Clark, L. A. (1999). On the dimensional and hierarchical structure of affect. *Psychological Science, 10*, 297-303.

- Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of personality and social psychology*, 86(2), 320.
- Vanderhasselt, M. A., Koster, E. H., Onraedt, T., Bruyneel, L., Goubert, L., & De Raedt, R. (2014). Adaptive cognitive emotion regulation moderates the relationship between dysfunctional attitudes and depressive symptoms during a stressful life period: A prospective study. *Journal of behavior therapy and experimental psychiatry*, 45(2), 291-296.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.
- Wegner, D. M., & Erber, R. (1992). The hyperaccessibility of suppressed thoughts. *Journal of personality and social psychology*, 63(6), 903.
- Wegner, D. M., & Zanakos, S. (1994). Chronic thought suppression. *Journal of personality*, 62(4), 615-640.
- Wenzlaff, R. M., & Wegner, D. M. (2000). Thought suppression. *Annual review of psychology*, 51(1), 59-91.
- Wyer, R. S., Clore, G. L., & Isbell, L. M. (1999). Affect and information processing. *Advances in experimental social psychology*, 31, 1-77.

Received February 13, 2015

Revision April 26, 2015

Accepted April 30, 2015