

pathways may also exist, as both articles describe (e.g., cortisol, DHEA), but the cardiovascular system seems to be the most promising target for initial research uniting these two literatures.

Regarding the behavioral path, appraising a stressor as a challenge rather than a threat may preserve self-regulatory resources that would otherwise be sapped by efforts to manage the threat. Although we know of no research that directly links challenge appraisals to self-regulation, the tendency for stress (broadly defined) to deplete self-regulatory resources (see Baumeister & Heatherton, 1996) suggests that threat appraisals may be particularly detrimental to self-regulation. Self-regulatory resources are crucial for promoting beneficial health behaviors (eating healthy foods, exercising) and resisting the temptation toward harmful behaviors (eating junk food, abusing substances; Mann, de Ridder, & Fujita, 2013). We recognize that some aspects of the literature on self-regulation, namely the depletion effect (self-control failures resulting from earlier exertion of self-control; Baumeister, Vohs, & Tice, 2007), are currently the subject of considerable debate (see Carter & McCullough, 2013, 2014; Lurquin et al., 2016). However, the broad finding that stress can interfere with self-regulation is not a new idea (e.g., Glass, Singer, & Friedman, 1969).

Well-being could also promote healthy behavior change by increasing the likelihood that people appraise stressful changes (e.g., lifestyle changes, a new treatment regimen) as challenges rather than threats, via the demand and resource appraisals outlined earlier. The third pathway from well-being to health, via increases in coping resources, is inherent to the balance of resources and demands that lead to challenge appraisals.

Taken together, these processes begin to reveal the sorts of health outcomes that would be most likely to benefit from well-being: those that are most closely linked to improvements in stress physiology (most notably, cardiovascular outcomes) and self-regulatory strength. Our analysis also suggests that the link between well-being and health may be particularly strong in the presence of a stressor. Well-being promotes health in numerous ways, even in the absence of significant stress (Lyubomirsky et al., 2005), but the advent of a stressor initiates the additional processes described here.

In conclusion, we believe that the reviews by Jamieson et al. (2018) and Hernandez et al. (2018) make valuable contributions both in isolation and in concert. Viewed as a pair, they reveal a process by which well-being could shape responses to stress in

ways that have clear downstream consequences for physical health. We do not mean to suggest that well-being only affects health via stress appraisal processes, nor that well-being is the only or even primary contributor to appraisals of demand and resources. Nonetheless, linking these literatures provides a framework for understanding the apparently inconsistent effects of well-being on health.

References

- Baumeister, R. F., & Heatherton, T. F. (1996). Self-regulation failure: An overview. *Psychological Inquiry*, 7(1), 1–15.
- Baumeister, R. F., Vohs, K. D., & Tice, D. M. (2007). The strength model of self-control. *Current Directions in Psychological Science*, 16, 351–355.
- Blascovich, J. (2008). Challenge, threat, and health. In J. Y. Shah & W. L. Gardner (Eds.), *Handbook of motivation science* (pp. 481–493). New York, NY: Guilford Press.
- Blascovich, J., & Tomaka, J. (1996). The biopsychosocial model of arousal regulation. *Advances in Experimental Social Psychology*, 28, 1–5.
- Carter, E. C., & McCullough, M. E. (2013). Is ego depletion too incredible? Evidence for the overestimation of the depletion effect. *Behavioral and Brain Sciences*, 36, 683–684.
- Carter, E. C., & McCullough, M. E. (2014). Publication bias and the limited strength model of self-control: Has the evidence for ego depletion been overestimated? *Frontiers in Psychology*, 5, 823–833.
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *The American Psychologist*, 56, 218–226.
- Glass, D. C., Singer, J. E., & Friedman, L. N. (1969). Psychic cost of adaptation to an environmental stressor. *Journal of Personality and Social Psychology*, 12, 200–210.
- Hernandez, R., Bassett, S., Boughton, S., Schuette, S., Shiu, E., & Moskowitz, J. (2018). Psychological well-being and physical health: Associations, mechanisms and future directions. *EMR*, 10(1), 18–29.
- Jamieson, J., Hangen, E., Lee, H., & Yeager, D. (2018). Capitalizing on appraisal processes to improve affective responses to social stress. *EMR*, 10(1), 30–39.
- Lurquin, J. H., Michaelson, L. E., Barker, J. E., Gustavson, D. E., von Bastian, C. C., Carruth, N. P., & Miyake, A. (2016). No evidence of the ego-depletion effect across task characteristics and individual differences: A pre-registered study. *PLoS One*, 11, e0147770.
- Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, 131, 803–855.
- Mann, T., de Ridder, D., & Fujita, K. (2013). Self-regulation of health behavior: Social psychological approaches to goal setting and goal striving. *Health Psychology*, 32(5), 487–498.

Comment on Jamieson, Hangen, Lee, and Yaeager: What Should We Regulate to Promote Adaptive Functioning and How?

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Abstract

Jamieson, Hangen, Lee, and Yaeager (2018) present their empirical findings as evidence for the effects of reappraising arousal on affective responses. This comment highlights the important contribution of the research by Jamieson and colleagues, but offers alternative ways of conceptualizing it.

Keywords

beliefs, emotion regulation, motivation

Jamieson et al. (2018) present a fascinating program of research. They show that leading people to think about the physiological symptoms of stress as beneficial attenuates the harmful consequences of stress and improves performance. They review a series of elegant studies, demonstrating the adaptive implications of their manipulations in various stressful contexts. They describe their effects as the result of regulating affective responses to stress, which they refer to as “arousal reappraisal.” At least two conclusions can be drawn from the article. First, how we think about our phenomenology carries important implications for adaptive functioning. Second, there is still much to learn about the regulation of phenomenological states. In this comment, I discuss some questions that arise from the article by Jamieson and colleagues and why such questions are important to consider.

What Is the Target of Regulation?

Does the manipulation developed by Jamieson and colleagues (Jamieson, Mendes, Blackstock, & Schmader, 2010; Jamieson, Nock, & Mendes, 2012; Jamieson, Nock, & Mendes, 2013) target affective experiences? The manipulation involves modifying expectancies, which are beliefs about future events (Roese & Sherman, 2007). Specifically, it changes expectancies about the effects of stress on performance. What is the goal of modifying these expectancies? The authors argue that their manipulation regulates affective responses and negative affect. Yet, they also claim that their manipulation is *not* aimed at eliminating or dampening (i.e., regulating) experienced arousal or stress (i.e., affective responses). Indeed, they assessed and demonstrated the effects of their manipulation on performance and sympathetic reactivity. However, they typically did not assess effects on negative or positive affect or on subjective stress (e.g., Jamieson et al., 2010; Jamieson et al., 2013). When they assessed such effects, they failed to find any (Jamieson et al., 2012). It appears, therefore, that Jamieson et al.’s manipulation may not target affect, nor necessarily influence it.

Does the manipulation involve cognitive reappraisal? According to Gross (2015, p. 9), cognitive change involves “modifying one’s appraisal of a situation in order to alter its emotional impact.” As one form of cognitive change, cognitive reappraisal targets “either the meaning of a potentially emotion-eliciting situation . . . or the self-relevance of a potentially emotion-eliciting situation” (Gross, 2015, p. 9). Jamieson et al.’s manipulation does not conform to this definition as it

does not target the emotion-eliciting situation (e.g., an upcoming test), nor is it designed to change its emotional impact.

Is the manipulation a form of emotion (or affect) regulation? According to Gross, Sheppes, and Urry (2011), emotion regulation is defined by the activation of a goal to modify the emotion-generative process, in an attempt to influence emotion generation. Affect regulation could be similarly defined as the activation of a goal to modify affect generation. The goal of Jamieson and colleagues’ (Jamieson et al., 2010; Jamieson et al., 2012; Jamieson et al., 2013) manipulation is not to change the subjective experience of stress (which it does not), but rather to change how well people behave under stress. Their manipulation, therefore, does not conform to the definition of emotion (or affect) regulation.

How Is the Target Regulated?

If Jamieson and colleagues’ (Jamieson et al., 2010; Jamieson et al., 2012; Jamieson et al., 2013) manipulation does not target affective states, does not influence affective states, and potentially does not involve affect regulation, what does it involve? I offer two possible accounts. One possibility is that modifying beliefs about the benefits of stress changes the motivation to regulate it. When people expect stress to be useful, they become less likely to try to avoid it and more likely to accept it, leading them to divert their attention to other matters. This account is consistent with research on experiential avoidance and acceptance (e.g., Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). Such research shows that when emotional distress is inevitable, accepting it without judgment could promote well-being.

Another possibility is that expectancies can be self-fulfilling (Roese & Sherman, 2007). Like other types of placebo effects, if people expect stress to improve their test scores, stress may indeed improve their test scores. Such effects of expectancies may be mediated by changes in motivation (e.g., Carver, Blaney, & Scheier, 1979). When people expect an outcome, they feel more confident and persist longer to achieve that outcome. Consistent with this possibility, when people expected stress to be beneficial for test performance they felt more confident about doing well in the test (e.g., Jamieson et al., 2010). Expecting stress to improve performance, therefore, might increase self-efficacy, promote goal persistence, and subsequently improve performance. Both this account and the previous one suggest that the effects of Jamieson and colleagues’ (Jamieson et al., 2010; Jamieson et al., 2012; Jamieson et al., 2013) manipulation on physiology and behavior were perhaps not mediated by changes in affect, but instead were mediated by changes in motivation.

Why Are These Questions Important?

The phenomenon captured by Jamieson and colleagues may be unique to stress and its particular physiological and behavioral implications. It is also possible, however, that this phenomenon is but one striking example of how changing expectancies regarding our phenomenological states can alter

the consequences of these states. If so, the mechanism underlying the findings of Jamieson and colleagues should not be unique to stress. Indeed, it should be applicable to any affective state.

Supporting this latter possibility, there is evidence that changing expectancies about the effects of negative emotions changes the motivation to experience these emotions (see Tamir, 2016). For instance, changing expectancies about the potential benefits of anxiety or anger decreases the motivation to avoid anxiety or anger, respectively (Tamir, Bigman, Rhodes, Salerno, & Schreier, 2015). The motivation to experience negative emotions when they are expected to be beneficial, in turn, is associated with greater well-being (e.g., Kim, Ford, Mauss, & Tamir, 2015; Tamir & Ford, 2012). Similarly, at least some evidence is consistent with the idea that changing expectancies about the effects of emotions on behavior might change the actual effects of emotions on behavior (Tamir & Bigman, in press).

The research by Jamieson and colleagues is important, as it demonstrates the powerful and far-reaching effects of beliefs about phenomenological states. It is, however, open to different interpretations. Identifying the mechanisms that underlie this and other forms of regulation is necessary for understanding how regulation occurs, what factors are likely to influence it, and in what ways it is most likely to impact health, well-being, and behavior.

References

- Carver, C. S., Blaney, P. H., & Scheier, M. F. (1979). Reassertion and giving up: The interactive role of self-directed attention and outcome expectancy. *Journal of Personality and Social Psychology, 37*, 1859–1870. doi:10.1037/0022-3514.37.10.1859
- Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry, 26*, 1–26. doi:10.1080/1047840X.2014.940781
- Gross, J. J., Sheppes, G., & Urry, H. L. (2011). Emotion generation and emotion regulation: A distinction we should make (carefully). *Cognition and Emotion, 25*, 765–781. doi:10.1080/02699931.2011.555753
- Hayes, S. C., Wilson, K. W., Gifford, E. V., Follette, V. M., & Strosahl, K. (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology, 64*, 1152–1168.
- Jamieson, J. P., Hangen, E. J., Lee, H. Y., & Yeager, D. S. (2018). Capitalizing on appraisal processes to improve affective responses to social stress. *EMR, 10*(1), 30–39.
- Jamieson, J. P., Mendes, W. B., Blackstock, E., & Schmader, T. (2010). Turning the knots in your stomach into bows: Reappraising arousal improves performance on the GRE. *Journal of Experimental Social Psychology, 46*, 208–212. doi:10.1016/j.jesp.2009.08.015
- Jamieson, J. P., Nock, M. K., & Mendes, W. B. (2012). Mind over matter: Reappraising arousal improves cardiovascular and cognitive responses to stress. *Journal of Experimental Psychology: General, 141*, 417–422. doi:10.1037/a0025719
- Jamieson, J. P., Nock, M. K., & Mendes, W. B. (2013). Changing the conceptualization of stress in social anxiety disorder: Affective and physiological consequences. *Clinical Psychological Science, 1*, 363–374.
- Kim, M. Y., Ford, B. Q., Mauss, I. B., & Tamir, M. (2015). Knowing when to seek anger: Psychological health and context-sensitive emotional preferences. *Cognition and Emotion, 29*, 1126–1136.
- Roese, N., & Sherman, J. (2007). Expectancy. In A. W. Kruglanski & E. T. Higgins (Eds.), *Social psychology: Handbook of basic principles* (2nd ed., pp. 91–115). New York, NY: Guilford Press.
- Tamir, M. (2016). Why do people regulate their emotions? A taxonomy of motives in emotion regulation. *Personality and Social Psychology Review, 20*, 199–222.
- Tamir, M., & Bigman, Y. E. (in press). Expectations influence how emotions shape behavior. *Emotion*.
- Tamir, M., Bigman, Y., Rhodes, E., Salerno, J., & Schreier, J. (2015). An expectancy-value model of emotion regulation: Implications for motivation, emotional experience, and decision-making. *Emotion, 15*, 90–103.
- Tamir, M., & Ford, B. Q. (2012). Should people pursue feelings that feel good or feelings that do good? Emotional preferences and well-being. *Emotion, 12*, 1061–1070.

Comment: Social Integration and Health: Contributions of the Social Sharing of Emotion at the Individual, the Interpersonal, and the Collective Level

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Abstract

Among the four components proposed by Sbarra and Coan (2018) to guide the research aimed at understanding the role of emotion in the connection between social relationship and health, I view the fourth one, labeled

“transactional dimensions,” as offering particularly rich promises in this regard. To illustrate, I sketch the example of individual, interpersonal, and collective effects entailed by the process of social sharing of emotion. The example rests on the bidirectional flow of transactions that develops continuously between these three levels.