

Emotion Regulation and Resilience:
When Is Reappraisal (Not) Conducive to Resilience?

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Emotion regulation, which involves altering the level or nature of one's emotions, is necessary for humans to function in society and to maintain well-being (Gross, 2015). Perhaps nowhere is emotion regulation more important than when we encounter life's inevitable adversity, be it in the form of daily hassles, chronic adverse circumstances, stressful life events, or trauma (Folkman & Moskowitz, 2000; Troy & Mauss, 2011). Emotion regulation might help people feel better in the moment, and, over time, allow people to regain, maintain, or even increase psychological health after adversity, an outcome referred to as resilience (Bonanno, Romero, & Klein, 2015).

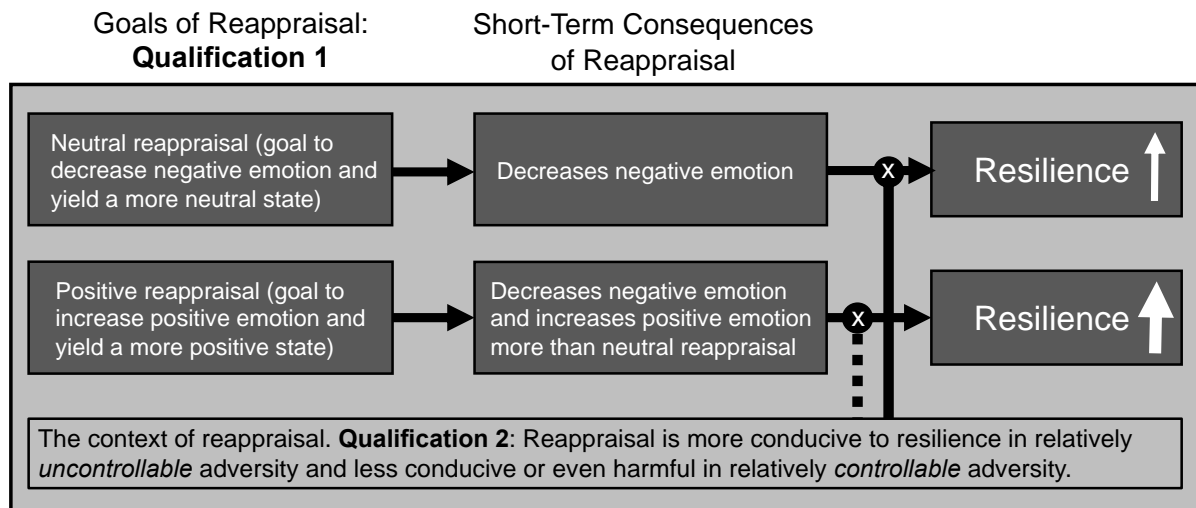
Reappraisal – changing the way one thinks about emotional situations – might present a particularly effective avenue to regulating emotions because it transforms emotions at their root (Gross, 2015; Lazarus & Folkman, 1984). Take, for example, someone who is going through a divorce. This is often an adverse event, and yet, it can be construed in different ways. One might view it as an overpowering loss that will mark one's family for life. Alternatively, one might see it as something that is painful but that might lead to positive outcomes in the long run, such as improved relationships. As a result of these different construals, one might feel different emotions. The first construal may bring intense sadness and anger. The second construal might also bring sadness and anger but perhaps at lower levels. Crucially, it might also bring some positive emotions such as hope or gratitude. This example illustrates how reappraisal might powerfully transform short-term emotional responses. When repeated over time, these short-term emotional consequences of reappraisal might accumulate to shape people's psychological health. Thereby, reappraisal might be a key to resilience.

Indeed, people who tend to use reappraisal more exhibit better psychological health, including in the context of adversity (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Gross &

John, 2003; Troy & Mauss, 2011). For example, correlational studies have found that reappraisal, measured with surveys, daily diaries, or laboratory assessments, predicts maintained or even increased psychological health following a wide variety of adverse events and circumstances and in a wide range of populations (Low, Overall, Chang, Henderson, & Sibley, 2021; Moskowitz, Folkman, Collette, & Vittinghoff, 1996; Smith et al., 2021; Troy, Shallcross, Wilhelm, & Mauss, 2010). This research might lead to the conclusion that we should all use reappraisal whenever we can.

However, the conclusion that *all* reappraisal is *always* conducive to resilience may be premature. After all, very few things in life are all good or all bad, and reappraisal is unlikely to be an exception (Cheng, 2001; Ford & Troy, 2019). The affect-regulation framework for resilience (Troy et al., in press) points to when and why there might be qualifications to reappraisal's links with resilience. Specifically, this framework argues that to understand when reappraisal is conducive to resilience we must consider 1) the emotional goals (i.e., the desired end states) of reappraisal and their associated profile of short-term consequences, and 2) the context within which reappraisal is used. Here, we examine qualifications that stem from these two aspects, illustrating each with one salient example (see Figure 1). First, we examine qualifications that stem from the goals of reappraisal. We ask: Is *all* reappraisal conducive to resilience, or are there some reappraisal goals that render it inert or even harmful? Second, we examine qualifications stemming from the context in which reappraisal is used. We ask: Is reappraisal *always* conducive to resilience, or are there some types of adversity when it might be inert or even harmful? We close with directions for future research.

[Insert Figure 1 around here. Figure 1 Caption. Qualifications to the reappraisal-resilience link stemming from the emotional goals of reappraisal (Qualification 1) and the context within which reappraisal is used (Qualification 2). The x symbols illustrate moderation by context. The dashed line indicates that positive reappraisal may be less moderated by context than neutral reappraisal. The thicker up-arrow illustrates that positive reappraisal might be particularly conducive to resilience.]



Is All Reappraisal Conducive to Resilience?

Any conclusion about reappraisal *in general* is likely incomplete in that it leaves out important distinctions within the heterogeneous category of reappraisal. One fundamental distinction lies in the emotional goals of reappraisal. As indicated in Figure 1, reappraisal can be used to decrease negative emotion to yield a more neutral state (e.g., “this isn’t that bad”) or increase positive emotion to yield a more positive state (e.g., “this could have benefits”), with divergent implications for its short-term consequences for negative and positive emotion

(McRae, Ciesielski, & Gross, 2012; McRae & Mauss, 2016; Shiota & Levenson, 2012). In turn, these divergent short-term consequences are potentially important for resilience in that positive emotions might have unique benefits when encountering adversity (Folkman & Moskowitz, 2000; Monroy, Garcia, Mendoza-Denton, & Keltner, 2021; Tugade & Fredrickson, 2004).

Several experience-sampling and daily-diary studies support this distinction. For example, Brans and colleagues (2013) found that momentary reappraisal was associated with changes from one measurement point to the next in positive but not negative emotion. More recent research examined reappraisal specifically with regard to emotional responses to daily stressors (Troy, Saquib, Thal, & Ciuk, 2019). This research found that daily reappraisal predicted greater positive as well as lower negative emotions in response to daily stressors, but with larger effect sizes for positive emotions. Together, these studies suggest that people may use reappraisal to increase positive emotions more so than decreasing negative emotions, including in the context of adversity.

Experimental research that directly compared reappraisal aimed at decreasing negative emotion (“neutral reappraisal”) and reappraisal aimed at increasing positive emotion (“positive reappraisal”) also generally supports these conclusions (McRae et al., 2012; Shiota & Levenson, 2012). For example, Duker and colleagues (2021) found that self-distancing, a form of neutral reappraisal, did not help people feel less negative or more positive emotion after recalling a stressful experience with sexism. In contrast, benefit finding, a form of positive reappraisal, helped participants feel less negative and more positive emotion. Similarly, Rompilla and colleagues (in press) found that in older adults who viewed sad film clips depicting loss, positive versus neutral reappraisal led to comparable decreases in negative emotions but greater increases in positive emotions. These results point to a potential advantage of positive reappraisal when it

comes to short-term emotional experiences, with positive reappraisal generally leading to lesser or comparable negative emotion and greater positive emotion.

Going beyond short-term emotional experiences, and distinguishing positive from neutral reappraisal, Nezlek and Kuppens (2008) found that daily positive reappraisal was positively associated with daily well-being while daily neutral reappraisal was not. Importantly, the relationship between positive reappraisal and well-being was mediated by positive emotions.

In a recent study, we examined whether the short-term consequences of reappraisal on positive versus negative emotion might extend to, and potentially play a role in longer-term psychological health. To do so, we measured habitual reappraisal in community participants and, six months later, psychological health. To capture reappraisal's short-term emotional consequences, we administered daily diaries that measured positive and negative emotional responses to daily stressors. Reappraisal was associated with greater psychological health, and this link was mediated by positive (but not negative) emotions experienced in response to daily stressors (Ford et al., in preparation). Taken together, this research suggests reappraisal that increases positive emotions (versus decreasing negative emotions) might be particularly conducive to resilience, as indicated by the thicker up-arrow in Figure 1.

Why might positive reappraisal be more robustly associated with resilience than neutral reappraisal? While we currently do not have empirical data that directly address this question, one possibility is that positive emotions have distinct benefits, especially in the context of adversity, including “undoing” negative emotion, building social connection, and motivating people to take action (Folkman & Moskowitz, 2000; Tugade & Fredrickson, 2004). In contrast, decreasing one's negative emotion – while feeling better in the moment – might come with some

downsides, including feelings of inauthenticity and sapping people's motivation for action (Ford & Troy, 2019).

Is Reappraisal *Always* Conducive to Resilience?

The research we have described so far examines reappraisal as an individual-level factor. Yet, how beneficial a particular individual-level factor is may crucially depend on its context, as illustrated by the moderation symbols (“x”) in Figure 1. The controllability of adversity is a particularly fundamental context feature because it determines whether it is more useful to regulate one's emotions versus one's situation (Cheng, 2001; Troy, Shallcross, & Mauss, 2013). When adversity is relatively uncontrollable (e.g., bereavement), reappraisal may be beneficial because it helps us feel better, and there is little we can change about the situation anyway. In contrast, when adversity is relatively controllable (e.g., a disagreement with a friend), reappraisal may be useless or even harmful because, while it may help us feel better, it takes away resources and motivation from efforts to change one's situation for the better.

Consistent with this notion, we have shown that the positive effects of reappraisal success depend on the controllability of adversity. Greater reappraisal success was associated with lower levels of depression when participants' recent life stressors were relatively uncontrollable. When adversity was relatively controllable, however, reappraisal success was associated with *higher* levels of depression, including when adjusting for stressor severity (Troy et al., 2013). We extended this model to people who tend to systematically face relatively uncontrollable adversity: people in lower-socioeconomic contexts (SES). Across three studies, they benefitted significantly more from reappraisal than those higher in SES (Troy, Ford, Mcrae, Zanolia, & Mauss, 2017).

Given that reappraisal appears to be more beneficial in relatively uncontrollable contexts, people who use reappraisal more in uncontrollable (versus controllable) contexts (i.e., who have good reappraisal-context fit) should have better psychological health. A study by Haines and colleagues (2016) tested this hypothesis by measuring reappraisal-context fit as the within-person association between reappraisal use and the perceived controllability of situations in daily life. They found that participants with better reappraisal-context fit had greater psychological health, consistent with the idea that reappraisal is more conducive to resilience in relatively uncontrollable (versus controllable) adversity.

Why might reappraisal lead to less benefits or even to harm in the context of relatively controllable adversity? One possibility is that reappraisal helps people feel better in the moment, but feeling better saps motivation to change their situation for the better, efforts that could be successful for more controllable stressors. To begin testing this idea, we examined Clinton voters during and after the 2016 U.S. election, measuring and manipulating their reappraisal use with regard to Trump-related content. Across studies, we found that reappraisal predicted less political action, and that this effect was mediated by lower negative emotion (Ford, Feinberg, Lam, Mauss, & John, 2019). These findings suggest that reappraisal may be costly in the longer run by decreasing people's attempts to behaviorally engage with and change adverse contexts. When those contexts are controllable, it might be better to attempt to effect change.

A recent study, conducted during the COVID-19 pandemic, brings together these ideas with the distinction of positive and neutral reappraisal (Smith et al., 2021). The study found that greater self-reported reappraisal success predicted reduced fear about COVID-19 and better psychological health. Yet, to the extent reappraisal success predicted reduced fear, it also predicted less health behaviors such as mask wearing. This is consistent with the idea that

decreased negative emotions may disrupt attempts to change one's situation (in this case, protecting oneself and others). Second, greater reappraisal success also predicted socially-engaged positive emotions such as gratitude and inspiration. Positive emotions, in turn, predicted better psychological health but at the same time *more* health behaviors. This is consistent with the idea that increased positive emotions might benefit short-term emotional consequences and longer-term psychological health, without disrupting a person's attempts to make needed and possible changes to their situation. In fact, positive emotions might motivate people to engage, seek support, and make changes.

This idea is consistent with earlier research on meaning making, a form of positive reappraisal (e.g., appreciating what one learned from adversity). This research found, for example, that meaning making was associated with less depressed mood in HIV-positive men and their caregivers regardless of perceived controllability, while neutral reappraisal was less strongly associated with depressed mood, especially when adversity was perceived as more controllable (Park, Folkman, & Bostrom, 2001). On the whole, then, perhaps both qualifications can be considered together: positive (compared to neutral) reappraisal might be more conducive to resilience because its profile of short-term emotional consequences is advantageous (Qualification 1) which, in turn, may make it more useful across multiple types of adversity (e.g., regardless of controllability, Qualification 2), as indicated by the dashed line in Figure 1.

Future Directions

In closing, we discuss key directions for future research on emotion regulation and resilience.

Deepening and broadening our understanding of affect-regulation processes. Here, we focused on one particularly fundamental distinction within reappraisal, and it will be

important to examine other distinctions in future research, such as among reappraisal tactics (e.g., changing how a situation is interpreted versus changing the goals to which one compares the situation; McRae et al., 2012; Uusberg, Taxer, Yih, Uusberg, & Gross, 2019). Similarly, we need make further distinctions within other emotion-regulation strategies such as suppression (Young et al., 2022). In addition to making distinctions *within* emotion-regulation strategies, we need to broaden our understanding by examining relationships among multiple emotion-regulation strategies (Ford, Gross, & Gruber, 2019; Shallcross, Troy, & Mauss, 2015).

More deeply considering the context. We focused here on controllability of adversity as a particularly salient context feature. Other features of adversity need to also be considered, including intensity, timing, duration, globality, threat, deprivation, and event type (Epel et al., 2018). Beyond features of adversity, the broader context matters as well. The broader context is shaped by a person's culture, society, community, family, and social group (e.g., based on race, gender, age, or socioeconomic status), and the affordances, practices, values, and beliefs they engender (Troy et al., in press). The broader context is relevant to resilience in that it powerfully influences the adversity people experience, emotion regulation, the short-term consequences of emotion regulation, and their implications for resilience. Some research has examined the role of broader context in emotion regulation and resilience (Ford & Troy, 2019; Juang et al., 2016), but given its profound influence, much more can be learned.

Resilience outcomes. Our review focused on psychological health as the indicator of resilience. In future research, it will be important to better understand the degree to which emotion regulation has general versus specific effects on different facets of psychological health, distinguishing, for instance, anxiety from depression or hedonic from eudaimonic well-being. As well, resilience doesn't just involve psychological but also social and physical functioning, and a

major direction for research is to investigate social and physical-health aspects of resilience. Initial research indicates there might be trade-offs, such that emotion-regulation processes that are helpful in one domain might not be in other domains (Smith et al., 2021).

Concluding Comment

Perhaps nowhere is emotion regulation more important than when we encounter adversity, for better – when it helps people be resilient – or for worse – when it fails. Here we considered reappraisal, which is particularly consequential in shaping resilience. Recent research indicates there are important nuances in reappraisal and its context that qualify reappraisal’s role in resilience. More broadly, any particular emotion-regulation strategy likely isn’t all good or all bad, and cannot be understood without considering the contexts in which it is embedded. These insights deepen our understanding of emotion regulation and resilience, ultimately changing how we help people, systems, and societies become more resilient.

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