

© 2025 American Psychological Association ISSN: 1528-3542

2025, Vol. 25, No. 5, 1122-1136 https://doi.org/10.1037/emo0001492

Managing Emotions in Everyday Life: Why a Toolbox of Strategies Matters

Chayce R. Baldwin¹, Kathryn E. Schertz¹, Ariana Orvell², Cory Costello¹, Sakura Takahashi¹, Jason S. Moser³, Ozlem Ayduk⁴, and Ethan Kross^{1, 5}

Department of Psychology, University of Michigan Department of Psychology, Bryn Mawr College ³ Department of Psychology, Michigan State University ⁴ Department of Psychology, University of California, Berkeley ⁵ Management and Organizations Area, Ross School of Business, University of Michigan

Emerging research indicates that people use multiple strategies to manage their emotions in everyday life. Yet, we know little about what these strategy combinations look like, how they function, or how individual differences influence these phenomena. We addressed these issues in two, 2-week daily diary studies performed during the height of the COVID-19 pandemic (N = 422; data collected April and September 2020). Each evening, participants rated their level of COVID-19 anxiety and indicated which of 18 emotion regulation strategies they used to manage it. There was tremendous diversity in the strategy combinations people used: 74% of the combinations were unique across participants and included strategies seldom studied together (e.g., exercise, journaling, social interaction, and cognitive reframing). On average, using a given strategy predicted same-day use of another strategy with only 1% accuracy. Despite this variability, a set of features consistently predicted effective regulation: Using large and healthy repertoires of strategies in diverse ways predicted reductions in anxiety over time. Psychologically distressed individuals experienced more daily anxiety and drew on a wider but more unhealthy set of strategies. However, when they used adaptive strategy combinations, they benefited just as much as less distressed individuals. These results illuminate the anatomy of people's emotion regulatory lives, underscoring the need to develop frameworks that capture the diverse ways people manage their emotions. They also identify specific mechanisms that interventions can target to improve how people manage their emotions under ecologically valid conditions.

Keywords: emotion regulation, strategy variability, anxiety, psychological distress, daily life

Supplemental materials: https://doi.org/10.1037/emo0001492.supp

Researchers have devoted substantial attention to understanding how emotion regulation strategies function over the past several decades. This work has provided important insight into the operation of specific tools such as reappraisal (e.g., Gross, 1998), distraction (e.g., Wolgast & Lundh, 2017), expressive writing (e.g., Sexton & Pennebaker, 2009), perspective broadening (e.g., Kross, 2021), and mindfulness (e.g., Roemer et al., 2015), among others. However, a growing body of research demonstrates that people routinely use multiple strategies to regulate their emotions in daily life (e.g., Ford et al., 2019; Heiy & Cheavens, 2014; Ladis et al., 2022). In fact, some data suggest that drawing on multiple strategies is the rule, not the exception (Folkman & Lazarus, 1980; Grommisch et al., 2020). For example, one study found that people use, on average, seven strategies to manage a single stressor (Heiy & Cheavens, 2014).

However, which factors determine whether and how combining strategies will promote emotion regulation are not well understood.

This article was published Online First January 16, 2025.

Nicole R. Giuliani served as action editor.

Chayce R. Baldwin https://orcid.org/0000-0003-0685-1706

Chayce R. Baldwin, Kathryn E. Schertz, and Ariana Orvell contributed equally to this work. All study data and analysis files are available at https:// osf.io/b2duy/?view_only=ba423a08645b41899d0e60f9aeee0fe0 (Baldwin et al., 2024). This work was supported by funds to Ethan Kross from the University of Michigan Institute for Social Research.

Chayce R. Baldwin played a lead role in data curation, formal analysis, and visualization and an equal role in investigation, methodology, writingoriginal draft, and writing-review and editing. Kathryn E. Schertz played an equal role in formal analysis, methodology, writing-original draft, and writing-review and editing. Ariana Orvell played a lead role in investigation and an equal role in conceptualization, project administration, writingoriginal draft, and writing-review and editing. Cory Costello played an equal

role in conceptualization and formal analysis. Sakura Takahashi played an equal role in conceptualization and investigation. Jason S. Moser played a supporting role in writing-review and editing and an equal role in conceptualization. Ozlem Ayduk played a supporting role in writing-review and editing and an equal role in conceptualization. Ethan Kross played a lead role in funding acquisition and project administration and an equal role in conceptualization, methodology, writing-original draft, and writing-review and editing.

Correspondence concerning this article should be addressed to Chayce R. Baldwin or Kathryn E. Schertz or Ethan Kross, Department of Psychology, University of Michigan, 530 Church Street, Ann Arbor, MI 48109, United States, or Ariana Orvell, Department of Psychology, Bryn Mawr College, 101 North Merion Avenue, Bryn Mawr, PA 19010-2899, United States. Email: cbwin@umich.edu or schertzk@umich.edu or aorvell@brynmawr.edu or ekross@umich.edu

Here, we address this issue by examining the role three factors play in predicting emotion regulation over time: the number of strategies a person uses on a particular day, the healthiness of those strategies, and the consistency with which the strategies are selected from day to day. We examined this issue during the early stages of the COVID-19 pandemic, when uncertainty concerning the future loomed large on people's minds, contributing to escalating levels of anxiety (National Center for Health Statistics, 2020). Addressing calls to support at-risk populations (Amsalem et al., 2021; Brehl et al., 2021), we also examined how these factors vary based on people's psychological distress (i.e., propensity to ruminate and worry) and physical risk to COVID-19 (i.e., risk of exposure to and complications from COVID-19). In doing so, we aimed to provide an unprecedented view of the processes that underlie emotion regulation in daily life.

Emotion Regulation Dynamics: Quantity, Quality, and Consistency

Recent theory proposes that using more strategies can be effective (i.e., *strategy quantity*), but this depends on the healthiness of those strategies (i.e., *strategy quality*; Bonanno & Burton, 2013; Ford et al., 2019). For example, Grommisch et al. (2020) found that using a greater number of adaptive strategies (e.g., active coping, acceptance) was associated with more positive affect in daily life, while using a greater number of maladaptive strategies (e.g., suppression, ignoring) was associated with less positive feelings. Thus, both *quantity* and *quality* seem crucial to consider when examining how people combine strategies.

It is difficult, however, to draw definitive conclusions about the role that strategy quantity and quality play in predicting emotion regulation in everyday life for two reasons. First, the bulk of past research has examined a relatively small set of strategies (e.g., situation modification, reappraisal, suppression, mindfulness, rumination, social sharing; Brans et al., 2013; Brockman et al., 2017; Bucich & MacCann, 2019; English et al., 2017; Nezlek & Kuppens, 2008; Richardson, 2017; cf. Southward & Cheavens, 2020). Missing from these inquiries are approaches from diverse theoretical traditions, such as engaging in rituals, exercising, and spending time outside, which have repeatedly been linked with adaptive outcomes (Frumkin et al., 2017; Hobson et al., 2018; Wang et al., 2024). Thus, it is not clear how strategy quantity or quality impact emotion regulation without considering the wider universe of tools people may employ. To address this, we surveyed a diverse set of strategies across theoretical traditions which span cognitive, behavioral, and social approaches to coping and used expert ratings to capture general strategy quality. Although the utility of certain strategies may vary based on the nature of the stressor and the qualities of the person using them (Bonanno & Burton, 2013), expert ratings capture how generally helpful versus unhelpful certain strategies are (Aldao et al., 2010; Gross, 2015; Koole, 2009; Webb et al., 2012) and are often used to gain clarity into disparate constructs and gauge their criterion validity (e.g., Lopes et al., 2005; Lynam & Widiger, 2001; Miller et al., 2014).

Second, we know little about how consistently using strategies impacts emotion regulation. Some prior research indicates that toggling between individual strategies and using a wide range of strategies are adaptive (Bonanno & Burton, 2013). However, consistency may also interact with the quantity or quality of strategies. To use a health metaphor, although fruits and vegetables

are all promoted as healthy, nutrition recommendations suggest that eating a variety of them is healthier than eating the same fruit every day (Slavin & Lloyd, 2012). Similarly, engaging in an exercise routine with different activities is better than just doing one activity (Malone et al., 2021).

However, evidence about the benefits of variably using strategies has been mixed (e.g., Aldao & Nolen-Hoeksema, 2013). For example, one study found that more variably using different strategies predicted lower negative affect (Blanke et al., 2020), but another did not replicate this relationship (Elkjær et al., 2022). One reason for these mixed findings may be due to a focus on variability in individual strategies (i.e., switching from one strategy to another), rather than variability in combinations of strategies (i.e., switching from one *cluster* of strategies to another). Addressing this issue is important because people often use multiple strategies to manage their negative emotions. Only two studies that we are aware of have begun to explore these issues focusing on *combinations* of strategies, with both supporting the idea that variably drawing on different combinations of strategies instead of consistently using the same combination was associated with better well-being outcomes (Grommisch et al., 2020; Lischetzke et al., 2022).

Here, we build on this work in two ways. First, we measure a larger sample of strategies to better capture the way people vary the strategies they use (18 compared to eight in Grommisch et al., 2020, and nine in Lischetzke et al., 2022). Second, we developed a new operationalization of strategy variability that allows us to examine how the extent of varying one's strategy *combinations* in idiosyncratic ways from *day to day* may impact anxiety.

Capturing Emotion Regulation Dynamics During COVID-19

The COVID-19 pandemic provided a rare opportunity to examine these issues in response to a potent public health threat. There is a long and rich history of using collective traumas to provide novel contributions to our understanding of emotional functioning (Cavanagh et al., 2014; Cohn et al., 2004; Kredlow et al., 2024). In this vein, COVID-19 enabled us to examine emotion regulation in response to a universally experienced and intense long-term stressor, rather than a diverse range of stressors of varying types, causes, and intensity. We capitalized on this opportunity by recruiting two samples of participants to perform a 14-day daily diary study that asked them at the end of each day to report on their daily COVID-19 anxiety as well as a broad set of 18 strategies (for details, see the Method section) they used each day to manage that anxiety. We used these data to (a) identify the combinations of strategies people used to manage their daily COVID-19 anxiety, (b) examine how strategy quantity, quality, and variability of combinations predict changes in their anxiety over time, and (c) investigate whether individual differences in psychological distress and physical risk to COVID-19 had implications for strategy usage and efficacy.

Method

Overview

Study 1 included a convenience sample of adults living in the Northeastern United States during the pandemic's first peak (April 14, 2020, to April 30, 2020). Study 2 was conducted approximately

4 months after Study 1 (September 9, 2020, to September 22, 2020) with a nationally representative sample of adults (on age, sex, and ethnicity) from across the United States, as COVID-19 cases were widespread at that time. The University of Michigan Health and Sciences Institutional Review Board deemed the study exempt from institutional review board oversight because all data were collected anonymously and presented minimal risk to participants.

Each evening, people rated how anxious they were about COVID-19 that day. We then presented them with a broad set of strategies that spanned multiple literatures (see Table 1), asking them to indicate which ones they used to manage their anxiety that day.

Participants

Sample 1

We recruited a sample of U.S. adults living in the Northeastern United States in the spring of 2020 (April 14, 2020, to April 30, 2020) through Cloud Research, a widely used online subject recruitment platform. In two waves of data collection, started 1 day apart, 311 participants completed Part 1 of the study (described below). Participants were excluded for the following reasons: completing the survey too quickly (n = 15), duplicate IP addresses (n = 0), incomplete survey (n = 0), living outside the Northeastern United States (n = 37), excessive missingness in survey (n = 0), straightlining in the survey (n = 1), more than one of the previously listed reasons (n = 13), less than 60% daily surveys completed (n = 48). This resulted in a final sample of 197 participants for Sample 1 (with a total of N = 2,413 observations).

Sample 2

We recruited a nationally representative sample (with respect to age, gender, and ethnicity) in early Fall 2020 (from September 9, 2020, to September 22, 2020) through Prolific Academic, the largest online crowdsourcing platform for academic research. Three hundred forty-two participants completed Part 1 of the study. Participants were excluded for the following reasons: completing the survey too quickly (n=22), duplicate IP addresses (n=4), incomplete survey (n=2), excessive missingness in survey (n=0), straightlining in the survey (n=0), more than one of the previously listed reasons (n=9), less than 60% daily surveys completed (n=80). This resulted in a final sample of 225 participants for Sample 2 (with a total of N=2,730 observations).

Final Sample

Because we used the same measures across both samples, we preregistered pooling the samples if justified to enhance power. We observed no differences in our analyses across samples, and thus, we pooled the samples from Studies 1 and 2, yielding a final combined sample of 422 participants ($M_{\rm age} = 43.24$, $SD_{\rm age} = 14.30$; 49.3% female, 49.5% male, 1.2% identifying as nonbinary or preferring not to respond; 70.6% White, 10.4% Black, 9.5% Asian or Asian American, 4% Latinx/Hispanic, 0.5% Native American or Alaska Native, 4.9% multiracial; see Supplemental Table S2 for detailed demographics). Following prior work (e.g., Weidman & Kross, 2021), sample size was determined based on best practices

suggested for experience sampling/daily diary research, exceeding the minimum suggested sample size for both Level 1 and Level 2 (Gabriel et al., 2019).

Participants were compensated \$2 for participating in Part 1, up to \$14 for Part 2 (\$1 for each survey completed during the 14-day daily diary). Participants who completed at least 90% of the surveys in Part 2 were also eligible to win one of four \$50 bonuses.

Materials and Procedure

Part 1: Baseline Individual Difference Measures

During a baseline session, participants completed a battery of questionnaires to assess individual differences and demographics.

Psychological Distress. Following previous work, we measured several related constructs that involve perseveration, worry, anxiety, and depression with the preregistered objective of combining these to provide a comprehensive measure of psychological distress (Orvell et al., 2021, 2023). Participants completed the Penn State Worry Questionnaire $(M = 4.10, SD = 1.59, \alpha = .96; Meyer et al., 1990)$, the brooding subscale of the Ruminative Response Scale (M = 3.68, SD = 1.56, $\alpha = .86$; Nolen-Hoeksema & Morrow, 1991), the negative emotionality (i.e., neuroticism) subscale of the Big Five Inventory-2 $(M = 3.49, SD = 1.45, \alpha = .94; Soto & John, 2017)$, and the Depression, Anxiety, and Stress Scale (depression, M = 2.89, SD = $1.70, \alpha = .95$; anxiety, $M = 2.27, SD = 1.30, \alpha = .88$; stress, M = 3.10, SD = 1.62, $\alpha = .94$; Lovibond & Lovibond, 1995), in random order.² We also administered questionnaires to tap into people's ongoing distress regarding the pandemic. Participants completed the Intrusion subscale of the Impact of Event Scale, which was adapted to focus on intrusive COVID-19-related thoughts (M = 3.08, SD = 1.52, $\alpha =$.92; Weiss & Marmar, 1997) and completed four items on a 1 = notat all anxious to 7 = very anxious scale assessing their current levels of anxiety surrounding COVID-19 ("How anxious are you about the general disruption caused by the Coronavirus? [For example, impact on the economy, your job, strain on the healthcare system, etc.]"; "How anxious are you that you will get the Coronavirus?"; "How anxious are you that people you are close to will get the Coronavirus?") and beliefs surrounding their ability to cope with COVID-19-related anxiety ("How successful have you been at controlling your anxiety about the Coronavirus?," reversed; four-item composite: M = 4.12, SD = 1.39, $\alpha = .83$).

A principal components analysis conducted with data from Sample 1 suggested a single component (|loadings| from .74 to .92). We thus combined these measures into a single index of psychological distress (combined sample: M = 3.70, SD = 1.50). We preregistered using this composite prior to data collection with the second sample. The composite demonstrated high internal consistency using Cronbach's α ($\alpha = .98$) and McDonald's ω _h, which is less likely to inflate internal consistency of a large number of items (ω _h = .84; Dunn et al., 2014). Results for this measure broken down by subscale for each inferential analysis are included in the Supplemental Material.

Physical Risk. To create a comprehensive measure of physical risk, we used a checklist that included items that the Center for

¹ Participants in Sample 1 only also completed a Part 3 survey, for which they were compensated \$2.

² For consistency in data collection, data on each of these measures were collected on a 7-point scale. Mathematically rescaled sum scores are presented in the Supplemental Material for comparison to other samples.

Table 1Strategies Reported on in Daily Diary Survey

Strategy	Description	Healthiness rating	Representative publication
Exercised	I exercised	5.00	Bernstein and McNally (2018) Harris et al. (2006)
Spent time outside	I spent time outside	5.00	Bratman et al. (2021) Frumkin et al. (2017)
Thought about this not lasting forever	I thought about how this situation is not going to last forever	4.71	Ahmed et al. (2018) Bruehlman-Senecal and Ayduk (2015)
Interacted with someone	I interacted with people (via phone, video call, text message, in person)	4.57	Coan and Maresh (2014) Zaki and Williams (2013)
Physical comfort	I sought physical comfort from others (e.g., through a hug, holding hands)	4.57	Debrot et al. (2013) Jakubiak and Feeney (2017)
Wrote about it	I reflected on how I was feeling in writing	4.43	Baikie and Wilhelm (2005) Pennebaker and Chung (2007)
Thought about big picture	I thought about the big picture	4.29	Gross (1998) Schartau et al. (2009)
Mindfulness	I used mindfulness or meditation	4.29	Khoury et al. (2013) Roemer et al. (2015)
Tried to find silver lining	I tried to find a silver lining	4.29	Garnefski and Kraaij (2006) McRae (2016)
Engaged in a ritual	I engaged in a religious ritual (e.g., prayer) or family ritual (e.g., cooking or sharing a certain meal)	4.29	Brooks et al. (2016) Hobson et al. (2018)
Talked to get perspective/advice	I talked to others about the situation to get their perspective or advice about issues surrounding the coronavirus	4.29	Lee et al. (2020) Rimé (2009)
Found humor in it	I laughed it off or found humor in the situation	3.71	Braniecka et al. (2019) Samson and Gross (2012)
Thought about or did something else	I distracted myself by thinking about something else or doing another activity	3.50	Sheppes et al. (2011) Wolgast and Lundh (2017)
Venting	I vented to others by talking to them about my feelings surrounding the coronavirus	2.71	van Emmerik et al. (2002) Zech and Rimé (2005)
Ate or drank (excluding alcohol)	I ate/drank to make myself feel better (excluding alcohol)	2.29	Aldao et al. (2010) Macht (2008)
Drank alcohol	I drank alcohol to make myself feel better	1.57	Carver et al. (1989) Nolen-Hoeksema (2012)
Hid anxiety	I tried to hide my anxiety by not showing or talking about how I was feeling	1.50	Gross (1998) Webb et al. (2012)
Refused to think about it	I refused to let myself think about my anxiety	1.33	Holahan et al. (2005) Wenzlaff and Wegner (2000)

Note. The columns in Table 1 list the strategies we sampled, how they were described to participants, their expert-rated level of healthiness (where $1 = very \ unhealthy$, $5 = very \ healthy$), and representative publications on their relationship to coping and well-being. The Method section provides additional information on how the healthiness component was scored.

Disease Control recognized as being risk factors for contracting COVID-19, or becoming seriously ill from COVID-19, at the time of data collection. These items included (a) being over 60 years old, (b) having a history of serious underlying medical conditions (e.g., diabetes, heart disease, lung disease), (c) having asthma or a history of respiratory problems, (d) being immunocompromised, (e) working in a hospital as a nurse or doctor, and (f) being pregnant. Participants were instructed to select all items that applied. Physical risk was measured as a sum score of these six risk factors (M = 0.54, SD = 0.84). See the Supplemental Material for a breakdown of frequency for each risk factor within the sample.

Demographics and Other Items. Participants completed additional demographics regarding employment, political orientation, living status, and so forth; see the Supplemental Material for details.

Part 2: Daily Diary Phase

Part 2 of the study involved a 14-day daily diary period. Participants completed a short questionnaire in the evening each day

for 2 weeks. Participants began the daily diary phase 1 day after completing the baseline survey. Participants were emailed a link to complete a survey each evening at 7 p.m. eastern time.

Measures

Daily Anxiety

Participants reported their daily COVID-19 anxiety by answering the question, "How anxious have you been about the Coronavirus today? Consider all sources of anxiety caused by the Coronavirus pandemic, for example, worry about yourself or close others getting sick, concern about finances, employment, childcare stress, getting groceries or medicine etc." ($1 = not \ at \ all \ anxious, 7 = extremely \ anxious, M = 3.21, SD = 1.80$).

Emotion Regulation Strategies

Two members of the author team (AO and ST) began by conducting a broad survey of the literature to identify potential strategies to include

in the current investigation. These strategies were then discussed with other authors of the article and pruned to a list of 18 strategies (see Table 1) that would be manageable to administer in the context of a daily diary study, but which was still far-reaching and extended beyond strategies typically examined in experience sampling or daily diary studies on emotion regulation/coping (Brans et al., 2013; Brockman et al., 2017; Bucich & MacCann, 2019; Cheng, 2001; English et al., 2017; McMahon & Naragon-Gainey, 2018).

Although not exhaustive, the strategies we included span those typically studied within classic models of emotion regulation (e.g., the "process model"; Gross, 1998, 2015) and those that target problem versus emotion-focused coping (Lazarus & Folkman, 1987), as well as strategies studied within different areas of psychology including clinical (e.g., mindfulness, avoidance; e.g., Chambers et al., 2009) and health and medicine (e.g., exercise; DeSteno et al., 2013; Frumkin et al., 2017). We also examined strategies that involve other people and which are often grouped under the umbrella of "social support" (e.g., Brans et al., 2013; Bucich & MacCann, 2019; Lennarz et al., 2019) but which are associated with divergent outcomes (e.g., venting vs. engaging in interpersonal reappraisal; Bolger, 1990; Lee et al., 2020; Nils & Rimé, 2012; Rimé, 2009).

During each daily diary survey, participants indicated which strategies they used to reduce their COVID-19 anxiety on that day using a binary checklist (as in, e.g., Chen et al., 2024; DiGirolamo et al., 2023; McMahon & Naragon-Gainey, 2019; see Table 1) such that endorsement of a given strategy was coded as 1 = yes and 0 = no.

Strategy Healthiness Ratings

Six of the authors, who have expertise in emotion regulation, as well as an additional expert in emotion regulation, rated each of the strategies independently based on their knowledge of the existing literature. The 18 coping strategies were rated using a 1 (*very unhealthy*) to 5 (*very healthy*) scale. Agreement was substantial (intraclass correlation 2k = .96, 95% CI [0.93, 0.98]), so these ratings were averaged to create a healthiness score for each strategy.

To assess the overall healthiness of strategy use on a given day, we calculated the average healthiness of the strategies that a participant used on that day and then person-centered these scores such that scores above or below 0 indicate a higher or lower average healthiness than is usual for the individual.

Validity Check. Because the efficacy of strategies may vary across individuals and contexts (see Bonanno & Burton, 2013), we conducted robustness checks to test whether the relative healthiness scores computed here predicted similar patterns of our outcome, COVID-19 anxiety, across individuals and over time. The relationship between daily anxiety and using strategies rated as relatively healthier was largely the same across individuals, suggesting this measure captures general efficacy, across individuals and their contexts each day (see the Supplemental Material).

Variability of Strategy Use

There are multiple ways to operationalize strategy variability, and prior research has yet to adopt a gold standard. Thus, we examined two variability metrics to capture the extent to which a person's strategy combinations are changing from day to day. To do so, we used two different points of reference: One metric captured how much people's strategy combination on 1 day varied from the

previous day (day-to-day variability), and the other captured how much people's strategy combination on 1 day varied from usual (i.e., the typical strategies they deployed over the entire course of the study; day-to-usual variability). These metrics capture variability in strategy use from each time period and variability in strategy use from the average across all time periods. We elaborate on these metrics below.

Variability from the day before (day-to-day variability) captures the degree to which people shifted the strategy combinations they used on a given day compared to the previous day. We computed this metric by calculating the proportion of strategies that were not overlapping between a given combination and the combination used the previous day. For example, if a person used two strategies on 1 day and used the same two strategies plus an additional three strategies on the next day, then the proportion of strategies that were nonoverlapping would be $3_{\text{nonoverlapping}}/5_{\text{total}} = .60$, which would indicate a change of 60% from the day before.

Variability from usual (day-to-usual variability) captures the degree to which the strategy combinations people used on any given day during the study diverged from the strategy combinations they used on average over the course of the study. We computed this metric by calculating the proportion of strategies used on a given day that were not overlapping with each of the other combinations a person used during the study period. For example, if a given strategy combination with six strategies overlapped by three strategies on average with each other strategy combination used by that person, then the proportion of strategies that were nonoverlapping would be $3_{\text{avg nonoverlapping}}/6_{\text{total}} = .50$, indicating a 50% distinctness from their average strategy use. This captures how much a person draws on strategies that are atypical from what they use most consistently.

The range of possible values for each variability metric was bounded between 0% and 100%, with 0% indicating complete consistency between the strategy combinations compared and 100% indicating complete distinctness, with no overlapping strategies between the combinations. Importantly, this overlap represents any deviation from one combination to another—adding strategies, switching out old strategies for new strategies, or subtracting strategies. For both metrics of variability, we created personcentered scores such that scores above (or below) 0 indicate a higher (or lower) proportion of overlap for that day (either from usual or the previous day).

Other Daily Collected Measures

In addition to assessing participants' anxiety and emotion regulation tool use each day, we also asked participants how much COVID-19-related news and media they consumed during the day under the assumption that media exposure would be linked with anxiety. These measures and their corresponding analyses are reported in full in the Supplemental Material. All other collected variables are listed in the Supplemental Material; they have not been analyzed and are beyond the scope of this article.

Overview of Analyses

Our analyses proceeded in three phases. First, we conducted descriptive analyses to examine how people use different strategies to manage daily anxiety. Second, we used a linear mixed model to examine how the quality (healthiness), quantity (size), and variability of strategy combinations related to COVID-19 anxiety over time (i.e., lagged analyses). Preliminary analyses indicated that our samples differed on age and COVID-19 news consumption. Therefore, we tested whether these factors modulated the effects of strategy use on COVID-19 anxiety. However, including COVID-19 news consumption and age as moderator variables did not significantly improve model fit. So, we did not include either as moderators in our final analyses (see the Supplemental Material for full details of sample differences, results, and model comparisons). Last, we investigated if psychological distress and physical risk were associated with the strategies people use and if these individual differences moderated the main inferential models. All inferential analyses controlled for sample, and lagged analyses additionally controlled for same-day COVID-19 anxiety and the day of the study. Detailed analysis descriptions and full model results for all analyses are included in the Supplemental Material.

Transparency and Openness

After data collection and analysis with the initial sample, we preregistered the methodology and analytic plans for the second sample on the Open Science Framework at https://osf.io/b2duy/?view_only= ba423a08645b41899d0e60f9aeee0fe0. We preregistered pooling data from both samples and reporting analyses on a combined sample, if justified by model comparison results. Model comparisons supported combining the samples for all analyses reported in the main text (see the Supplemental Material for full model comparison results). We made several principled departures from the preregistration in terms of the analytic approach we employed. Specifically, we originally preregistered using empirically and theoretically derived factor solutions to group strategies. However, model fit analyses performed in our second sample did not support utilizing this approach, so we developed new means to grouping strategies and used a complementary analytic approach. We describe all departures from the preregistration in the Supplemental Material. We additionally report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study. Analysis code and data are shared on the Open Science Framework at https://osf.io/b2duy/?view_only=ba423a08645b41899d0e60f9a eee0fe0. Data were analyzed in R Version 4.3.2 (R Core Team, 2023). Details of the R packages used for each analysis are detailed in the Supplemental Material.

Results

Daily Strategy Use

Strategy Quantity: How Many Strategies Did People Use?

Participants varied considerably in the number of strategies they used to regulate their COVID-19 anxiety. Across people and days of the studies, almost the full range of strategies were implemented, ranging from 0 (14% of time) to 16 (<1% of time; Figure 1, Panel A) and every possibility in between. On average, participants used between three and four strategies each day (M = 3.62, SD = 2.82) and around nine different strategies (M = 9.28, SD = 4.01) over the course of the study.

Strategy Quality: What Types of Strategies Did People Use Most?

Participants were more likely to use healthy strategies (Figure 1, Panel B). The most popular strategy was "interacting with someone," which was used in more than half of the instances we sampled (54%). Three other strategies were used at least 30% of the time: thinking about this situation not lasting forever (38%), spending time outside (36%), and exercising (30%; see the Supplemental Material for details of frequency of the remaining strategies). The least frequently used strategies were writing about it (3%) and drinking alcohol (8%).

Strategy Variability: How Much Do People Vary in How They Combine Strategies?

Using our metrics of strategy variability, individuals rotated about half of their strategies from 1 day to the next (day-to-day variability; 53%, SD = 28%) and varied from what they usually use, using strategies less common for them, about half of the time (day-to-usual variability; 56%, SD = 20%).

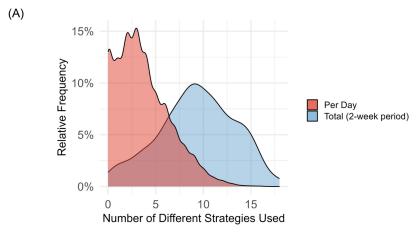
Were Certain Strategies Used Together?

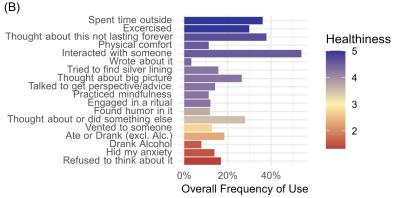
One question we were interested in was whether people use certain strategies on the same days. To answer this question, we conducted within-person correlations between each of the 18 strategies, adjusting p values for the false discovery rate to account for multiple comparisons. Across the 153 possible correlations between strategies, 85 correlations (56%) were significant at $p_{\text{adjusted}} < .05$; however, all were relatively "weak"; the mean correlation was r = |.07|, and rs ranged from |.03| to |.19| (adjusted $ps \le .001-.042$). This means that if we took the two most highly correlated strategies (i.e., talking to someone to vent and talking to someone to get advice), we could only predict whether a person used both strategies together on a given day with less than 4% accuracy ($R^2 = .036$). Moreover, our average ability to predict whether one strategy a person used on a given day predicted another was less than 1% (average $R^2 = .005$). Thus, while people on the whole preferred using certain strategies (e.g., interacting with others), how those strategies paired with others on a given day was largely idiosyncratic. This resulted in high variability with regard to the specific combinations of strategies used over the course of the study. On most days, people used different combinations: Across the 14-day period, people used unique combinations of strategies on 9 days, on average. In fact, 74% of the strategy combinations people used were unique; neither they nor anyone else used the same strategy combination at any other time across the 2-week period.

What Do Healthy and Unhealthy Strategy Combinations Look Like?

We identified the 15 healthiest and unhealthiest combinations of strategies that people used on a given day (out of 5,143 combinations total) to concretize what healthy versus unhealthy strategy use looked like. To do this, we correlated every person's selected strategies on each day with the healthiness scores of those

Figure 1Number of Distinct Strategies Used per Day and in Total Across 2-Week Period





Note. Panel A shows the distribution of strategies used by each person each day (per day) and the distribution of the total number of strategies people used across the 14-day period (total) using a density plot. Panel B shows the proportion of times each strategy was used overall; strategies on the *y*-axis are ordered by expert-rated healthiness. excl. Alc. = excluding alcohol. See the online article for the color version of this figure.

strategies and then selected the 15 lowest and highest correlations. The highest possible "healthy" score would be obtained by using every strategy above the midpoint of the expert-rated healthiness scale, while the unhealthiest score would be obtained by using every strategy below the midpoint. No observed combinations met these bounds, but several were close. As Figure 2 illustrates, the healthiest combinations contained on average 9–12 healthy strategies. The unhealthiest combinations comprised fewer strategies overall, which is partly reflective of the fact that we sampled a greater number of healthy (vs. unhealthy) strategies. Healthy combinations also sometimes contained unhealthy strategies (e.g., distraction, venting), and unhealthy combinations included the occasional healthy strategy (e.g., interacting with others). In fact, in nearly half of all cases (49%), individuals used a mix of healthy and unhealthy strategies together.

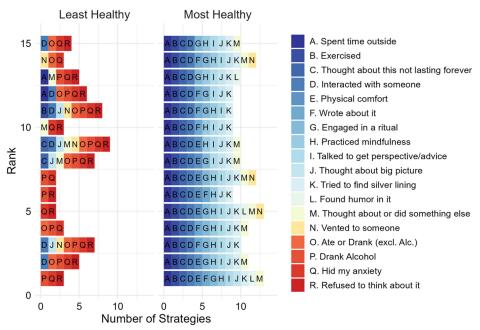
What Strategy Combination Features Predict Changes in Anxiety Over Time?

To understand how the features of the strategy combinations participants used contributed to emotion regulation, we estimated a linear mixed model with the interaction of average healthiness, number of strategies, and our two metrics of strategy variability predicting next-day COVID-19 anxiety. We included both metrics of strategy variability (i.e., day-to-day and day-to-usual variability) in the same models to assess whether they differentially predict anxiety (the two metrics were correlated, but not collinear; r = .48). This analysis revealed two key results.

First, we observed a main effect of healthiness. The healthier the combinations of strategies people used on a given day, the lower their COVID-19 anxiety the next day (b = -0.08, 95% CI [-0.15, -0.01], p = .022; see Figure 3A).

Second, we observed a significant interaction between the quantity of strategies used and variably using strategies that were atypical of what a person usually used (day-to-usual variability; two-way interaction: b = -0.33, 95% CI [-0.61, -0.04], p = .023). As Figure 3B illustrates, when individuals used a smaller number of strategies (-1 SD, i.e., 1.5 fewer than their mean level), using more variable strategy combinations did not impact next-day anxiety (simple slope for smaller combinations: b = 0.24, 95% CI [-0.31, 0.79], p = .393). However, when using larger combinations of

Figure 2
Most and Least Healthy Strategy Combinations



Note. Figure depicts the 15 unhealthiest (left side) and healthiest (right side) strategy combinations. Each row depicts an individual's strategy combination on a given day. Letters correspond to the strategies in the legend. Each row corresponds to a unique individual. excl. Alc. = excluding alcohol. See the online article for the color version of this figure.

strategies (+1 SD, i.e., 1.5 more than their mean level), more variable use predicted lower next-day anxiety (simple slope for larger combinations: b = -0.76, 95% CI [-1.37, -0.14], p = .016). Concretely, using larger, less typical combinations of strategies versus larger, more typical combinations of strategies resulted in 30% less anxiety the next day. No other interactions or main effects were significant (see the Supplemental Material for full model results and robustness checks).

Psychological Distress's Impact on Strategy Use and Effectiveness

Across the 2 weeks, psychological distress was associated with higher overall levels of COVID-19 anxiety (r = .65, 95% CI [0.59, 0.70], p < .001). Individuals higher in psychological distress used a greater number of strategies each day (r = .15, 95% CI [0.05, 0.24], p = .002) and used a greater number of distinct strategies over the 2 weeks (r = .31, 95% CI [0.23, 0.40], p < .001). This greater strategy use was driven by these individuals' greater use of unhealthy strategies (r = .43, 95% CI [0.35, 0.51], p < .001; see Figure 4); psychological distress was not associated with healthy strategy usage across the 2-week period (r = .02, 95% CI [-0.07, 0.12], p =.664). Indeed, on days when individuals higher (vs. lower) in psychological distress used more strategies than normal (i.e., day-tousual variability), they were more likely to be using additional unhealthy strategies (b = 0.03, 95% CI [0.02, 0.03], p < .001; see the Supplemental Material for full model results). Finally, psychological distress was positively associated with both metrics of strategy

variability (day-to-usual variability: r = .16, 95% CI [0.06, 0.25], p = .001; day-to-day variability: r = .14, 95% CI [0.05, 0.24], p = .003).

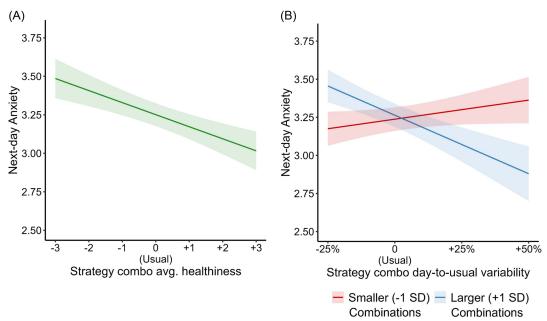
We next examined whether psychological distress played into the efficacy of individuals' strategy combinations. Psychological distress did not moderate healthiness (quality) or the relationship between quantity and variability to predict COVID-19 anxiety over time (two-way interaction with healthiness: b=0.01, 95% CI [-0.03, 0.05], p=.570; three-way interaction with number of strategies and variability: b=-0.08, 95% CI [-0.25, 0.08], p=.332; see the Supplemental Material for full model results). That is, the patterns of strategy usage reported above had the same effects on anxiety regardless of psychological distress.

In sum, individuals with higher psychological distress used more strategies day to day and more distinct combinations of strategies over time in more variable patterns across the 2-week period. However, they diversified primarily by rotating in unhealthier strategies. Importantly, when they used healthy strategies, people with higher psychological distress benefited from them as their less distressed counterparts.

Physical Risk's Impact on Strategy Use and Effectiveness

Physical risk was uncorrelated with individuals' levels of psychological distress (r = .01, 95% CI [-0.08, 0.11], p = .780). As with psychological distress, physical risk to COVID-19 was associated with higher overall levels of COVID-19 anxiety across the 2 weeks (r = .10, 95% CI [0.01, 0.20], p = .031). However, physical risk was not significantly correlated with strategy use quantity,

Figure 3
Strategy Combination Healthiness, Size, and Variability Predicting Next-Day COVID-19 Anxiety



Note. (A) Regression line for strategy combination healthiness (x-axis) predicting next-day anxiety. (B) Regression lines for strategy combination day-to-usual variability (x-axis) predicting next-day anxiety, for ± 1 SD of a person's daily strategy combination size (red vs. blue lines). X-axis values reflect the empirical range of day-to-usual variability in the sample. Number of strategies, day-to-usual variability, and strategy healthiness are within-person centered, such that higher and lower values represent deviations from a person's average level on a given variable. Shaded error regions around the regression lines represent ± 1 standard error of the estimate. avg. = average. See the online article for the color version of this figure.

healthiness, or variability (ps = .489-.904; see the Supplemental Material for all correlation results).

Additionally, physical risk did not moderate healthiness (quality) or the relationship between quantity and variability to predict COVID-19 anxiety over time (two-way interaction with healthiness: b = 0.02, 95% CI [-0.04, 0.09], p = .489; three-way interaction with number of strategies and variability: b = 0.17, 95% CI [-0.16, 0.51], p = .312; see the Supplemental Material for full model results). Thus, as with psychological distress, the patterns of strategy usage reported above had the same effects on anxiety regardless of an individual's physical risk.

Discussion

Recent work suggests that the key to effective emotion regulation may lie not in the individual regulatory strategies that people use but in the repertoire of strategies they deploy. But what strategies comprise effective combinations, and what are the active underlying ingredients that promote emotion regulation? Here, we addressed these open questions across two 14-day diary studies performed during the height of the COVID-19 pandemic. Three key findings emerged.

People Regulated Their Anxiety in Remarkably Diverse Ways

First, people regulated their anxiety in diverse ways over the course of these studies, rarely ever using the same strategy

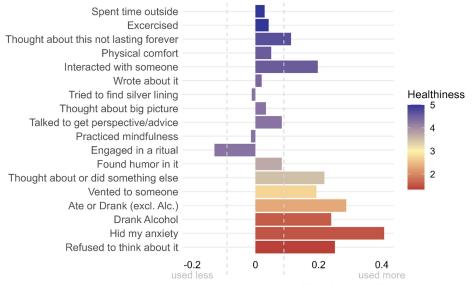
combinations each day. On average, people used between three and four strategies each day and nine different strategies across the 2-week daily diary period. Some strategies were more popular than others: Exercise, spending time outside, recognizing that the pandemic will not last forever (i.e., perspective broadening), and interacting with others—face-to-face or via technology—were the most commonly used tools. Conversely, several extensively studied strategies such as mindfulness and expressive writing were among the least frequently used.

While some strategies were used more than others, there was substantial heterogeneity in the ways that people combined strategies. Seventy-four percent of strategy combinations were used only once; neither the original user nor anyone else repeated the same strategy combination over the 2-week study period. This variability was not, however, due to participants being completely haphazard in how they selected strategies. Fine-grained analyses of participants' strategy combinations indicated that about half of the strategies used from day to day were rotated in and out of a participant's repertoire (56%, day-to-usual variability), while a core group of strategies was maintained over time. Understanding what conditions led participants to swap strategies in this way is a key challenge for future research. Future research should also consider the extent to which strategies are used to provide additional insights into how strategies combine with each other to influence regulation in daily life.

What is perhaps most striking about these results, however, is the way strategies from diverse theoretical traditions were repeatedly used together. Consider, for example, that some of the most successful

MANAGING EMOTIONS 1131

Figure 4Correlation of Use of Individual Strategies With Psychological Distress



Correlation of Strategy Use w/ Psychological Distress

Note. Correlation of the use of individual strategies with psychological distress, ordered by the healthiness of strategies. Higher correlations indicate that individuals with higher psychological distress use more of a given strategy compared to individuals lower in psychological distress, while values close to 0 indicate no difference in use, and values below 0 indicate lower use. Bars that extend beyond the dashed lines are significant at p < .05. Color of the bar indicates healthiness score. excl. Alc. = excluding alcohol. See the online article for the color version of this figure.

regulation attempts we observed included using exercise, rituals, and getting advice and physical comfort from others, together. Many of these strategies are seldom studied in investigations of emotion regulation in daily life or studied together. For example, 65% of the strategy combinations used by participants in our study contained individual strategies that were not measured in any of the most recent studies on emotion regulation in daily life in the flagship emotion journals *Emotion* and *Affective Science* $(N=17)^3$ (e.g., venting, eating/drinking, going outside).

Given the lack of empirical work documenting how these different strategies combine, it is not surprising that the way individuals combine strategies is not reflected in any theoretical models of emotion regulation we are aware of. These descriptive findings highlight the urgent need for future work to move beyond studying narrow bands of tools that are motivated by specific theoretical traditions to building frameworks that shed light on how and why these strategies operate together to impact emotional health.

Finally, it is noteworthy that we saw heterogeneity in strategy use despite the fact we focused on a common stressor—the COVID-19 pandemic. Focusing on a single stressor provided us with the ability to compare the effectiveness and composition of strategies people use in the same context each day, reducing noise in variability and effectiveness of strategies that are driven by differences in the situation rather than the strategies themselves. Yet, we still observed enormous variability in the strategies people used over time. A key challenge for future research is to identify how these findings generalize to different kinds of emotional trigger situations and emotional responses.

Quantity, Quality, and Variability of Strategy Combinations Matter for Anxiety

A key goal of this work was to examine how different facets of the combinations of strategies people use to manage their feelings impact their efficacy. To accomplish this, we used a novel approach, which considered aggregate features of idiosyncratic strategy groups, allowing us to assess the effectiveness of naturally occurring strategy combinations on affect over time.

Consistent with prior work, strategy combinations that were on the whole healthier predicted improvements in how anxious people felt over time (Southward & Cheavens, 2020). We also found that the quantity of strategies people used and the variability with which they deployed them interacted to predict changes in anxiety over time. When participants used fewer strategies than usual, using them more variably had no impact on how anxious they felt over time. However, when they used more strategies than usual, using those tools in more variable combinations predicted declines in anxiety. Indeed, using larger strategy combinations more variably predicted up to 30% less anxiety the next day.

One interpretation of these findings is that using a large number of strategies in a variety of combinations offers individuals novel ways to manage the situation at hand. Returning to the metaphor of how engaging in varying exercise workouts is beneficial, this

³ Studies from *Emotion* (N = 10) were published in 2023 and 2024, and studies from *Affective Science* (N = 7) were published between 2020 and 2024; see Supplemental Material.

diversification of strategy use might be helpful because different strategies activate different regulation mechanisms. Interestingly, however, just the act of switching strategies from day to day (day-to-day variability) *did not* impact anxiety, despite prior literature which theorizes that simply switching strategies is in itself adaptive (Bonanno & Burton, 2013; Pruessner et al., 2020; Southward et al., 2018). Rather, using more strategies by drawing on those outside of one's core repertoire is what helped individuals regulate their emotions. One possibility is that there is regulatory value to novelty—a type of "fresh start" effect. Another possibility is that individuals are sensitive to the demands of a given context and draw on strategies they use less frequently when useful. Future research linking emotion regulation variability to flexibility, which accounts for switching motivations or contextual feedback (English & Eldesouky, 2020), will help differentiate between these possibilities.

In sum, it was not the specific strategies people used, but the *properties* of the combinations of strategies people implemented from day to day that regulated their anxiety. Indeed, in a supplemental analysis, we found that only one strategy (going outside) out of 18 strategies we sample predicted next-day anxiety (see the Supplemental Material). These findings are consistent with research suggesting that curating a "toolbox" of coping strategies is key for regulatory success (Bonanno & Burton, 2013; Fujita et al., 2020; Kross, 2021).

Importantly, the present study was designed to capture the cumulative impact of strategy use on emotions from day to day, which is particularly useful for understanding individuals' response to long-term stressors, like COVID-19 anxiety. To also understand how strategy use impacts the fluctuation of emotions throughout a day, future research can capture the momentary dynamics of strategy combinations, including whether strategies are used simultaneously, sequentially, or in response to different acute problems and whether using specific strategies together has interactive effects. Further, while we measured healthiness in our study by capturing general strategy efficacy as rated by experts, it is important to note that strategy efficacy can vary meaningfully by person and context. Although robustness checks demonstrate the validity of this approach (see the Supplemental Material), these average scores remove potential nuance in our understanding of factors that influence strategy healthiness in a particular moment of use, such as the extent of strategy use (e.g., mild social drinking vs. overdrinking), the type of stressor (e.g., using reappraisal for controllable vs. uncontrollable events; Troy et al., 2013), or cultural context (e.g., using suppression in individualistic vs. collectivistic cultures; Tamir et al., 2024). Future research can attempt to tease apart how healthiness may vary across individuals and situations.

Psychological Distress Shapes People's Regulatory Efforts

These findings also shed light on how individual differences in psychological distress shape how people regulate their anxiety. Individuals higher in psychological distress drew on more strategies each day and across the study period. They also showed more variability in the combinations of strategies they used. However, they diversified their strategy combinations by employing more unhealthy strategies. Critically, on days when individuals higher in psychological distress used healthier and more adaptive combinations of strategies, they benefited *just as much* as individuals lower on this measure. Thus, these results pinpoint one mechanism that

can be targeted for interventions to improve the emotion regulation outcomes of individuals higher in psychological distress—building a healthier repertoire. Since these individuals already demonstrate good variability and draw on a large repertoire of strategies, ensuring they have a healthy pool of strategies to draw from should help them more effectively regulate their emotions.

Constraints to Generality

This research was conducted in the context of the COVID-19 pandemic and the accompanying unique societal conditions in the United States at the time. While our conclusions were made in context of this specific stressor, these circumstances allowed us to examine how people respond to substantive, long-term stressors in their everyday lives and compare how emotion regulation in response to a common stressor varies across individuals and over time. Additionally, despite government-imposed restrictions that people faced specifically for going outside, interacting with others, and exercising (e.g., at locations such as gyms), these were three of the four most popular strategies in our study, each used 30% or more of the time. Most of the remaining strategies are not strategies which would reasonably have been restricted during COVID-19—either because they are cognitive (e.g., suppression) or because they are accessible in people's daily lives (e.g., rituals, eating/drinking). Future research should explore whether the relationships observed here generalize to additional contexts, including how people manage other intense, shared stressors (e.g., a regional conflict) and how people manage idiosyncratic stressors in daily life.

Regarding the sample, both studies include U.S.-based samples, with Study 2 reflecting one that was nationally representative. These results thus may generalize to the United States as a whole, but replications of the study in cultural contexts outside the United States may find different patterns of results. While we intentionally chose strategies from a diverse array of theoretical backgrounds to better capture strategy use in daily life, the authors' biases and backgrounds may have influenced the specific strategies we chose or shape why we think they are important, even though the expert raters came from a variety of cultural backgrounds. Of note, all expert raters live within the United States; thus, any biases related to a "Western, Educated, Industrialized, Democratic" (Henrich et al., 2010) perspective align with the sample of participants in our studies, who are also from a Western, Educated, Industrialized, and Democratic population. Future research should continue to strive to understand which strategies people use in daily life and how this might differ in various contexts and cultures.

Conclusion

Roughly 30% of the adult U.S. population reported symptoms of anxiety in the clinical range at the time these studies were performed (National Center for Health Statistics, 2020). While rates have subsided since then, roughly 17% of U.S. adults continue to report clinically significant anxiety symptoms at the time of our writing this article (National Center for Health Statistics, 2024), underscoring the need to understand what factors promote effective emotion regulation. Our findings provide a window into understanding the complex patterns of emotion regulation individuals employ in daily life and reveal patterns in how they may be most effective. Most strikingly, our findings demonstrate that the strategies people use to

manage their anxiety in everyday life are remarkably diverse. They span the gamut from intrapersonal tools people can deploy on their own, to interpersonal tools that rely on others, to environmental tools that involve interacting with one's external surroundings. A key challenge for future research is to develop new models that are capable of parsimoniously capturing the complexity with which individuals use a multitude of strategies in their daily lives.

References

- Ahmed, S. P., Somerville, L. H., & Sebastian, C. L. (2018). Using temporal distancing to regulate emotion in adolescence: Modulation by reactive aggression. *Cognition and Emotion*, 32(4), 812–826. https://doi.org/10 .1080/02699931.2017.1358698
- Aldao, A., & Nolen-Hoeksema, S. (2013). One versus many: Capturing the use of multiple emotion regulation strategies in response to an emotioneliciting stimulus. *Cognition and Emotion*, 27(4), 753–760. https:// doi.org/10.1080/02699931.2012.739998
- Aldao, A., Nolen-Hoeksema, S., & Schweizer, S. (2010). Emotion-regulation strategies across psychopathology: A meta-analytic review. Clinical Psychology Review, 30(2), 217–237. https://doi.org/10.1016/j.cpr.2009.11.004
- Amsalem, D., Dixon, L. B., & Neria, Y. (2021). The coronavirus disease 2019 (COVID-19) outbreak and mental health: Current risks and recommended actions. *JAMA Psychiatry*, 78(1), 9–10. https://doi.org/10 .1001/jamapsychiatry.2020.1730
- Baikie, K. A., & Wilhelm, K. (2005). Emotional and physical health benefits of expressive writing. Advances in Psychiatric Treatment, 11(5), 338–346. https://doi.org/10.1192/apt.11.5.338
- Baldwin, C. R., Schertz, K. E., Orvell, A., Costello, C. K., Moser, J., Ayduk, O., & Kross, E. (2024, November 28). "Managing emotions in everyday life: Why a toolbox of strategies matters" project files. Open Science Framework. https://osf.io/b2duy/?view_only=389cf8bfc4d34ea 9b6d1385813b3ba34
- Bernstein, E. E., & McNally, R. J. (2018). Exercise as a buffer against difficulties with emotion regulation: A pathway to emotional wellbeing. *Behaviour Research and Therapy*, 109, 29–36. https://doi.org/10.1016/j .brat.2018.07.010
- Blanke, E. S., Brose, A., Kalokerinos, E. K., Erbas, Y., Riediger, M., & Kuppens, P. (2020). Mix it to fix it: Emotion regulation variability in daily life. *Emotion*, 20(3), 473–485. https://doi.org/10.1037/emo0000566
- Bolger, N. (1990). Coping as a personality process: A prospective study. *Journal of Personality and Social Psychology*, 59(3), 525–537. https://doi.org/10.1037/0022-3514.59.3.525
- Bonanno, G. A., & Burton, C. L. (2013). Regulatory flexibility: An individual differences perspective on coping and emotion regulation. *Perspectives on Psychological Science*, 8(6), 591–612. https://doi.org/10 .1177/1745691613504116
- Braniecka, A., Hané, M., Wołkowicz, I., Chrzczonowicz-Stępień, A., Mikołajonek, A., & Lipiec, M. (2019). Is it worth turning a trigger into a joke? Humor as an emotion regulation strategy in remitted depression. *Brain and Behavior*, 9(2), Article e01213. https://doi.org/10.1002/brb3.1213
- Brans, K., Koval, P., Verduyn, P., Lim, Y. L., & Kuppens, P. (2013). The regulation of negative and positive affect in daily life. *Emotion*, 13(5), 926–939. https://doi.org/10.1037/a0032400
- Bratman, G. N., Olvera-Alvarez, H. A., & Gross, J. J. (2021). The affective benefits of nature exposure. *Social and Personality Psychology Compass*, 15(8), Article e12630. https://doi.org/10.1111/spc3.12630
- Brehl, A.-K., Schene, A., Kohn, N., & Fernández, G. (2021). Maladaptive emotion regulation strategies in a vulnerable population predict increased anxiety during the COVID-19 pandemic: A pseudo-prospective study.

- Journal of Affective Disorders Reports, 4, Article 100113. https://doi.org/ 10.1016/j.iadr.2021.100113
- Brockman, R., Ciarrochi, J., Parker, P., & Kashdan, T. (2017). Emotion regulation strategies in daily life: Mindfulness, cognitive reappraisal and emotion suppression. *Cognitive Behaviour Therapy*, 46(2), 91–113. https://doi.org/10.1080/16506073.2016.1218926
- Brooks, A. W., Schroeder, J., Risen, J. L., Gino, F., Galinsky, A. D., Norton, M. I., & Schweitzer, M. E. (2016). Don't stop believing: Rituals improve performance by decreasing anxiety. *Organizational Behavior and Human Decision Processes*, 137, 71–85. https://doi.org/10.1016/j.obhdp.2016.07.004
- Bruehlman-Senecal, E., & Ayduk, O. (2015). This too shall pass: Temporal distance and the regulation of emotional distress. *Journal of Personality* and Social Psychology, 108(2), 356–375. https://doi.org/10.1037/a0 038324
- Bucich, M., & MacCann, C. (2019). Emotional intelligence and day-to-day emotion regulation processes: Examining motives for social sharing. *Personality and Individual Differences*, 137, 22–26. https://doi.org/10 .1016/j.paid.2018.08.002
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, 56(2), 267–283. https://doi.org/10.1037/0022-3514.56 .2.267
- Cavanagh, S. R., Fitzgerald, E. J., & Urry, H. L. (2014). Emotion reactivity and regulation are associated with psychological functioning following the 2011 earthquake, tsunami, and nuclear crisis in Japan. *Emotion*, 14(2), 235–240. https://doi.org/10.1037/a0035422
- Chambers, R., Gullone, E., & Allen, N. B. (2009). Mindful emotion regulation: An integrative review. *Clinical Psychology Review*, 29(6), 560–572. https://doi.org/10.1016/j.cpr.2009.06.005
- Chen, M. S., Bi, K., Han, X., Sun, P., & Bonanno, G. A. (2024). Emotion regulation flexibility and momentary affect in two cultures. *Nature Mental Health*, 2(4), 450–459. https://doi.org/10.1038/s44220-024-00215-3
- Cheng, C. (2001). Assessing coping flexibility in real-life and laboratory settings: A multimethod approach. *Journal of Personality and Social Psychology*, 80(5), 814–833. https://doi.org/10.1037/0022-3514.80 .5.814
- Coan, J. A., & Maresh, E. A. (2014). Social baseline theory and the social regulation of emotion. In J. J. Gross (Ed.), *Handbook of emotion* regulation (Vol. 2, pp. 221–236). Guilford Press.
- Cohn, M. A., Mehl, M. R., & Pennebaker, J. W. (2004). Linguistic markers of psychological change surrounding September 11, 2001. *Psychological Science*, 15(10), 687–693. https://doi.org/10.1111/j.0956-7976.2004.00741.x
- Debrot, A., Schoebi, D., Perrez, M., & Horn, A. B. (2013). Touch as an interpersonal emotion regulation process in couples' daily lives: The mediating role of psychological intimacy. *Personality and Social Psychology Bulletin*, 39(10), 1373–1385. https://doi.org/10.1177/0146167213497592
- DeSteno, D., Gross, J. J., & Kubzansky, L. (2013). Affective science and health: The importance of emotion and emotion regulation. *Health Psychology*, 32(5), 474–486. https://doi.org/10.1037/a0030259
- DiGirolamo, M. A., Neupert, S. D., & Isaacowitz, D. M. (2023). Emotion regulation convoys: Individual and age differences in the hierarchical configuration of emotion regulation behaviors in everyday life. *Affective Science*, 4(4), 630–643. https://doi.org/10.1007/s42761-023-00228-8
- Dunn, T. J., Baguley, T., & Brunsden, V. (2014). From alpha to omega: A practical solution to the pervasive problem of internal consistency estimation. *British Journal of Psychology*, 105(3), 399–412. https://doi.org/10.1111/bjop.12046
- Elkjær, E., Mikkelsen, M. B., & O'Toole, M. S. (2022). Emotion regulation patterns: Capturing variability and flexibility in emotion regulation in an experience sampling study. *Scandinavian Journal of Psychology*, 63(4), 297–307. https://doi.org/10.1111/sjop.12808

- English, T., & Eldesouky, L. (2020). Emotion regulation flexibility. European Journal of Psychological Assessment, 36(3), 456–459. https://doi.org/10.1027/1015-5759/a000581
- English, T., Lee, I. A., John, O. P., & Gross, J. J. (2017). Emotion regulation strategy selection in daily life: The role of social context and goals. *Motivation and Emotion*, 41(2), 230–242. https://doi.org/10.1007/s11031-016-9597-z
- Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, 21(3), 219– 239. https://doi.org/10.2307/2136617
- Ford, B. Q., Gross, J. J., & Gruber, J. (2019). Broadening our field of view: The role of emotion polyregulation. *Emotion Review*, 11(3), 197–208. https://doi.org/10.1177/1754073919850314
- Frumkin, H., Bratman, G. N., Breslow, S. J., Cochran, B., Kahn, P. H., Jr., Lawler, J. J., Levin, P. S., Tandon, P. S., Varanasi, U., Wolf, K. L., & Wood, S. A. (2017). Nature contact and human health: A research agenda. *Environmental Health Perspectives*, 125(7), Article 075001. https://doi.org/10.1289/EHP1663
- Fujita, K., Orvell, A., & Kross, E. (2020). Smarter, not harder: A toolbox approach to enhancing self-control. *Policy Insights From the Behavioral* and Brain Sciences, 7(2), 149–156. https://doi.org/10.1177/237273 2220941242
- Gabriel, A. S., Podsakoff, N. P., Beal, D. J., Scott, B. A., Sonnentag, S., Trougakos, J. P., & Butts, M. M. (2019). Experience sampling methods: A discussion of critical trends and considerations for scholarly advancement. *Organizational Research Methods*, 22(4), 969–1006. https://doi.org/10 .1177/1094428118802626
- Garnefski, N., & Kraaij, V. (2006). Cognitive emotion regulation questionnaire—Development of a short 18-item version (CERQ-short). Personality and Individual Differences, 41(6), 1045–1053. https://doi.org/ 10.1016/j.paid.2006.04.010
- Grommisch, G., Koval, P., Hinton, J. D. X., Gleeson, J., Hollenstein, T., Kuppens, P., & Lischetzke, T. (2020). Modeling individual differences in emotion regulation repertoire in daily life with multilevel latent profile analysis. *Emotion*, 20(8), 1462–1474. https://doi.org/10.1037/emo00 00669
- Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. Review of General Psychology, 2(3), 271–299. https://doi.org/10 .1037/1089-2680.2.3.271
- Gross, J. J. (2015). Emotion regulation: Current status and future prospects. Psychological Inquiry, 26(1), 1–26. https://doi.org/10.1080/1047840X .2014.940781
- Harris, A. H. S., Cronkite, R., & Moos, R. (2006). Physical activity, exercise coping, and depression in a 10-year cohort study of depressed patients. *Journal of Affective Disorders*, 93(1–3), 79–85. https://doi.org/10.1016/j.iad.2006.02.013
- Heiy, J. E., & Cheavens, J. S. (2014). Back to basics: A naturalistic assessment of the experience and regulation of emotion. *Emotion*, 14(5), 878–891. https://doi.org/10.1037/a0037231
- Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, 33(2–3), 61–83. https://doi.org/10.1017/S0140525X0999152X
- Hobson, N. M., Schroeder, J., Risen, J. L., Xygalatas, D., & Inzlicht, M. (2018). The psychology of rituals: An integrative review and process-based framework. *Personality and Social Psychology Review*, 22(3), 260–284. https://doi.org/10.1177/1088868317734944
- Holahan, C. J., Moos, R. H., Holahan, C. K., Brennan, P. L., & Schutte, K. K. (2005). Stress generation, avoidance coping, and depressive symptoms: A 10-year model. *Journal of Consulting and Clinical Psychology*, 73(4), 658–666. https://doi.org/10.1037/0022-006X.73.4.658
- Jakubiak, B. K., & Feeney, B. C. (2017). Affectionate touch to promote relational, psychological, and physical well-being in adulthood: A

- theoretical model and review of the research. *Personality and Social Psychology Review*, 21(3), 228–252. https://doi.org/10.1177/108886 8316650307
- Khoury, B., Lecomte, T., Fortin, G., Masse, M., Therien, P., Bouchard, V., Chapleau, M.-A., Paquin, K., & Hofmann, S. G. (2013). Mindfulnessbased therapy: A comprehensive meta-analysis. *Clinical Psychology Review*, 33(6), 763–771. https://doi.org/10.1016/j.cpr.2013.05.005
- Koole, S. L. (2009). The psychology of emotion regulation: An integrative review. *Cognition and Emotion*, 23(1), 4–41. https://doi.org/10.1080/ 02699930802619031
- Kredlow, M. A., Oyarzún, J. P., Fan, H., Meksin, R., Hirst, W., & Phelps, E. A. (2024). Emotion language use in narratives of the 9/11 attacks predicts long-term memory. *Emotion*, 24(3), 808–819. https://doi.org/10 .1037/emo0001287
- Kross, E. (2021). Chatter. Crown.
- Ladis, I., Daros, A. R., Boukhechba, M., Daniel, K. E., Chow, P. I., Beltzer, M. L., Barnes, L. E., & Teachman, B. A. (2022). When and where do people regulate their emotions? Patterns of emotion regulation in unselected and socially anxious young adults. *Journal of Social and Clinical Psychology*, 41(4), 326–364. https://doi.org/10.1521/jscp.2022.41.4.326
- Lazarus, R. S., & Folkman, S. (1987). Transactional theory and research on emotions and coping. *European Journal of Personality*, 1(3), 141–169. https://doi.org/10.1002/per.2410010304
- Lee, D. S., Orvell, A., Briskin, J., Shrapnell, T., Gelman, S. A., Ayduk, O., Ybarra, O., & Kross, E. (2020). When chatting about negative experiences helps—And when it hurts: Distinguishing adaptive versus maladaptive social support in computer-mediated communication. *Emotion*, 20(3), 368–375. https://doi.org/10.1037/emo0000555
- Lennarz, H. K., Hollenstein, T., Lichtwarck-Aschoff, A., Kuntsche, E., & Granic, I. (2019). Emotion regulation in action: Use, selection, and success of emotion regulation in adolescents' daily lives. *International Journal of Behavioral Development*, 43(1), 1–11. https://doi.org/10.1177/016 5025418755540
- Lischetzke, T., Schemer, L., In-Albon, T., Karbach, J., Könen, T., & Glombiewski, J. A. (2022). Coping under a COVID-19 lockdown: Patterns of daily coping and individual differences in coping repertoires. Anxiety, Stress, & Coping, 35(1), 25–43. https://doi.org/10.1080/106 15806.2021.1957848
- Lopes, P. N., Salovey, P., Coté, S., & Beers, M. (2005). Emotion regulation abilities and the quality of social interaction. *Emotion*, 5(1), 113–118. https://doi.org/10.1037/1528-3542.5.1.113
- Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335–343. https://doi.org/10.1016/0005-7967(94)00075-U
- Lynam, D. R., & Widiger, T. A. (2001). Using the five-factor model to represent the *DSM-IV* personality disorders: An expert consensus approach. *Journal of Abnormal Psychology*, 110(3), 401–412. https:// doi.org/10.1037/0021-843X.110.3.401
- Macht, M. (2008). How emotions affect eating: A five-way model. *Appetite*, 50(1), 1–11. https://doi.org/10.1016/j.appet.2007.07.002
- Malone, S. K., Patterson, F., Grunin, L., Melkus, G. D., Riegel, B., Punjabi, N., Yu, G., Urbanek, J., Crainiceanu, C., & Pack, A. (2021). Habitual physical activity patterns in a nationally representative sample of U.S. adults. *Translational Behavioral Medicine*, 11(2), 332–341. https://doi.org/10.1093/tbm/ibaa002
- McMahon, T. P., & Naragon-Gainey, K. (2018). The moderating effect of maladaptive emotion regulation strategies on reappraisal: A daily diary study. *Cognitive Therapy and Research*, 42(5), 552–564. https://doi.org/ 10.1007/s10608-018-9913-x

- McMahon, T. P., & Naragon-Gainey, K. (2019). The multilevel structure of daily emotion-regulation-strategy use: An examination of within-and between-person associations in naturalistic settings. *Clinical Psychological Science*, 7(2), 321–339. https://doi.org/10.1177/2167702618807408
- McRae, K. (2016). Cognitive emotion regulation: A review of theory and scientific findings. *Current Opinion in Behavioral Sciences*, 10, 119–124. https://doi.org/10.1016/j.cobeha.2016.06.004
- Meyer, T. J., Miller, M. L., Metzger, R. L., & Borkovec, T. D. (1990).
 Development and validation of the Penn State Worry Questionnaire.
 Behaviour Research and Therapy, 28(6), 487–495. https://doi.org/10.1016/0005-7967(90)90135-6
- Miller, J. D., McCain, J., Lynam, D. R., Few, L. R., Gentile, B., MacKillop, J., & Campbell, W. K. (2014). A comparison of the criterion validity of popular measures of narcissism and narcissistic personality disorder via the use of expert ratings. *Psychological Assessment*, 26(3), 958–969. https://doi.org/10.1037/a0036613
- National Center for Health Statistics. (2020). U.S. Census Bureau, Household Pulse Survey—Anxiety & depression, 2020–2024 [Data set]. https://www.cdc.gov/nchs/covid19/pulse/mental-health.htm
- National Center for Health Statistics. (2024). U.S. Census Bureau, Household Pulse Survey—Anxiety & depression, 2020–2024 [Data set]. https://www.cdc.gov/nchs/covid19/pulse/mental-health.htm
- Nezlek, J. B., & Kuppens, P. (2008). Regulating positive and negative emotions in daily life. *Journal of Personality*, 76(3), 561–580. https:// doi.org/10.1111/j.1467-6494.2008.00496.x
- Nils, F., & Rimé, B. (2012). Beyond the myth of venting: Social sharing modes determine the benefits of emotional disclosure. *European Journal* of Social Psychology, 42(6), 672–681. https://doi.org/10.1002/ejsp.1880
- Nolen-Hoeksema, S. (2012). Emotion regulation and psychopathology: The role of gender. *Annual Review of Clinical Psychology*, 8(1), 161–187. https://doi.org/10.1146/annurev-clinpsy-032511-143109
- Nolen-Hoeksema, S., & Morrow, J. (1991). A prospective study of depression and posttraumatic stress symptoms after a natural disaster: The 1989 Loma Prieta Earthquake. *Journal of Personality and Social Psychology*, 61(1), 115–121. https://doi.org/10.1037/0022-3514.61.1.115
- Orvell, A., Bruehlman-Senecal, E., Vickers, B., Kross, E., & Ayduk, Ö. (2023). From the laboratory to daily life: Preliminary evidence that self-distancing training buffers vulnerable individuals against daily rumination and depression over time. Psychology of Consciousness: Theory, Research, and Practice, 10(2), 164–180. https://doi.org/10.1037/cns0000323
- Orvell, A., Vickers, B. D., Drake, B., Verduyn, P., Ayduk, O., Moser, J., Jonides, J., & Kross, E. (2021). Does distanced self-talk facilitate emotion regulation across a range of emotionally intense experiences? *Clinical Psychological Science*, 9(1), 68–78. https://doi.org/10.1177/216770 2620951539
- Pennebaker, J. W., & Chung, C. K. (2007). Expressive writing, emotional upheavals, and health. In H. S. Friedman & R. C. Silver (Eds.), Foundations of health psychology (pp. 263–284). Oxford University Press.
- Pruessner, L., Barnow, S., Holt, D. V., Joormann, J., & Schulze, K. (2020). A cognitive control framework for understanding emotion regulation flexibility. *Emotion*, 20(1), 21–29. https://doi.org/10.1037/emo0000658
- R Core Team. (2023). R: A language and environment for statistical computing [Computer software]. https://www.R-project.org/
- Richardson, C. M. E. (2017). Emotion regulation in the context of daily stress: Impact on daily affect. *Personality and Individual Differences*, 112, 150–156. https://doi.org/10.1016/j.paid.2017.02.058
- Rimé, B. (2009). Emotion elicits the social sharing of emotion: Theory and empirical review. *Emotion Review*, 1(1), 60–85. https://doi.org/10.1177/ 1754073908097189
- Roemer, L., Williston, S. K., & Rollins, L. G. (2015). Mindfulness and emotion regulation. *Current Opinion in Psychology*, 3, 52–57. https:// doi.org/10.1016/j.copsyc.2015.02.006

- Samson, A. C., & Gross, J. J. (2012). Humour as emotion regulation: The differential consequences of negative versus positive humour. *Cognition and Emotion*, 26(2), 375–384. https://doi.org/10.1080/02699931.2011 .585069
- Schartau, P. E. S., Dalgleish, T., & Dunn, B. D. (2009). Seeing the bigger picture: Training in perspective broadening reduces self-reported affect and psychophysiological response to distressing films and autobiographical memories. *Journal of Abnormal Psychology*, 118(1), 15–27. https:// doi.org/10.1037/a0012906
- Sexton, J. D., & Pennebaker, J. W. (2009). The healing powers of expressive writing. In S. B. Kaufman & J. C. Kaufman (Eds.), *The psychology of creative writing* (pp. 264–274). Cambridge University Press. https://doi.org/10.1017/CBO9780511627101.018
- Sheppes, G., Scheibe, S., Suri, G., & Gross, J. J. (2011). Emotion-regulation choice. *Psychological Science*, 22(11), 1391–1396. https://doi.org/10 .1177/0956797611418350
- Slavin, J. L., & Lloyd, B. (2012). Health benefits of fruits and vegetables. Advances in Nutrition, 3(4), 506–516. https://doi.org/10.3945/an.112 .002154
- Soto, C. J., & John, O. P. (2017). Short and extra-short forms of the Big Five Inventory–2: The BFI-2-S and BFI-2-XS. *Journal of Research in Personality*, 68, 69–81. https://doi.org/10.1016/j.jrp.2017.02.004
- Southward, M. W., Altenburger, E. M., Moss, S. A., Cregg, D. R., & Cheavens, J. S. (2018). Flexible, yet firm: A model of healthy emotion regulation. *Journal of Social and Clinical Psychology*, 37(4), 231–251. https://doi.org/10.1521/jscp.2018.37.4.231
- Southward, M. W., & Cheavens, J. S. (2020). More (of the right strategies) is better: Disaggregating the naturalistic between- and within-person structure and effects of emotion regulation strategies. *Cognition and Emotion*, 34(8), 1729–1736. https://doi.org/10.1080/02699931.2020.17 97637
- Tamir, M., Ito, A., Miyamoto, Y., Chentsova-Dutton, Y., Choi, J. H., Cieciuch, J., Riediger, M., Rauers, A., Padun, M., Kim, M. Y., Solak, N., Qiu, J., Wang, X., Alvarez-Risco, A., Hanoch, Y., Uchida, Y., Torres, C., Nascimento, T. G., Afshar Jahanshahi, A., ... García Ibarra, V. J. (2024). Emotion regulation strategies and psychological health across cultures. American Psychologist, 79(5), 748–764. https://doi.org/10.1037/amp 0001237
- Troy, A. S., Shallcross, A. J., & Mauss, I. B. (2013). A person-by-situation approach to emotion regulation: Cognitive reappraisal can either help or hurt, depending on the context. *Psychological Science*, 24(12), 2505–2514. https://doi.org/10.1177/0956797613496434
- van Emmerik, A. A., Kamphuis, J. H., Hulsbosch, A. M., & Emmelkamp, P. M. (2002). Single session debriefing after psychological trauma: A meta-analysis. *Lancet*, 360(9335), 766–771. https://doi.org/10.1016/ S0140-6736(02)09897-5
- Wang, X., Liu, T., Jin, X., & Zhou, C. (2024). Aerobic exercise promotes emotion regulation: A narrative review. *Experimental Brain Research*, 242(4), 783–796. https://doi.org/10.1007/s00221-024-06791-1
- Webb, T. L., Miles, E., & Sheeran, P. (2012). Dealing with feeling: A metaanalysis of the effectiveness of strategies derived from the process model of emotion regulation. *Psychological Bulletin*, 138(4), 775–808. https:// doi.org/10.1037/a0027600
- Weidman, A. C., & Kross, E. (2021). Examining emotional tool use in daily life. *Journal of Personality and Social Psychology*, 120(5), 1344–1366. https://doi.org/10.1037/pspp0000292
- Weiss, D. S., & Marmar, C. R. (1997). The Impact of Event Scale—Revised.
 In J. P. Wilson & T. M. Keane (Eds.), Assessing psychological trauma and PTSD (pp. 399–411). Guilford Press.
- Wenzlaff, R. M., & Wegner, D. M. (2000). Thought suppression. *Annual Review of Psychology*, 51(1), 59–91. https://doi.org/10.1146/annurev.psych.51.1.59

Wolgast, M., & Lundh, L.-G. (2017). Is distraction an adaptive or maladaptive strategy for emotion regulation? A person-oriented approach. *Journal of Psychopathology and Behavioral Assessment*, 39(1), 117–127. https://doi.org/10.1007/s10862-016-9570-x

Zaki, J., & Williams, W. C. (2013). Interpersonal emotion regulation. Emotion, 13(5), 803–810. https://doi.org/10.1037/a0033839

Zech, E., & Rimé, B. (2005). Is talking about an emotional experience helpful? Effects on emotional recovery and perceived benefits. *Clinical* Psychology & Psychotherapy, 12(4), 270–287. https://doi.org/10.1002/cpp.460

Received April 4, 2024
Revision received October 22, 2024
Accepted November 20, 2024

E-Mail Notification of Your Latest Issue Online!

Would you like to know when the next issue of your favorite APA journal will be available online? This service is now available to you. Sign up at https://my.apa.org/portal/alerts/ and you will be notified by e-mail when issues of interest to you become available!