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BRIEF REPORT

Short-Term Implications of Long-Term Thinking: Temporal Distancing and Emotional Responses to Daily Stressors

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Temporal distancing (TD) is a promising yet understudied emotion regulation strategy that involves reflecting on how one will feel much later in the future. Although limited, the available evidence suggests that TD is a beneficial way to appraise negative events. Experimental studies have demonstrated causality: Situational use of TD (e.g., when thinking about a negative event) confers short-term emotional benefits in the laboratory. In addition, correlational studies show that habitual use predicts better long-term well-being. However, several open questions remain. First, we do not fully understand associations between habitual TD and emotions in daily life. Second, we do not fully understand daily TD, either on average across days or fluctuating within person. We conducted an 8-day diary study to test associations between TD and emotional responses to daily stressful events for three distinct measures at two levels of analysis: habitual TD assessed with a survey, average daily TD across days, and within-person fluctuations in TD across days (N = 155 participants, 837 observations). TD was associated with lower negative emotion at the within-person level and with greater positive emotion at both levels. Overall, these findings suggest that TD—on average and fluctuating within person—is associated with a beneficial pattern of daily emotional experiences, which may support overall well-being.

Keywords: emotion regulation, temporal distancing, stress, positive emotions, negative emotions

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Stressful events are common in daily life, from minor hassles such as sitting in traffic to major events such as ending a relationship. These events potentially can, and often will, lead to increased negative emotions and reduced positive emotions both in the moment and potentially persisting after the event. The majority of prior research on people's attempts to regulate these emotional responses to stressful events has focused on general reappraisal or suppression (Webb et al., 2012). While more recent research has begun to examine a broader range of strategies in response to daily stressors (e.g., Heiy & Cheavens, 2014), no study to our knowledge has examined temporal distancing in response to daily stressors.

When faced with a stressful event, individuals may focus on their present feelings of distress. Alternatively, they might reflect on how they will feel about the event much later in the future (e.g., "This event will not be nearly as important to me a year from now"). The latter approach of taking a broader, future time perspective is referred to as temporal distancing (TD; Bruehlman-Senecal et al., 2016; Trope & Liberman, 2003). TD is thought to improve emotional responses by shifting one's perspective and promoting helpful insights about negative experiences (Ayduk & Kross, 2018). TD is conceptualized as part of a broader family of distancing strategies, such as self-distancing and minimizing reappraisal. These strategies share their focus on reconstruing the relevance and/or impact of an emotional event on one's life. TD is unique in its focus on time as a method of distancing oneself from the event. The present research examined associations between TD and emotional responses to daily stressors.

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The use of emotion regulation strategies like TD can be considered at two levels of analysis: habitual and average daily fluctuations at the between-person level and daily fluctuations at the within-person level. Prior research on TD has largely focused on the habitual level—people's tendencies to use TD as reported via a self-report questionnaire. Greater habitual TD has been associated with beneficial outcomes, including lesser daily negative emotions, greater daily positive emotions, and greater daily and overall well-being (Bruehlman-Senecal et al., 2016). Additionally, experimental work has shown that instructed TD has beneficial short-term effects (Ahmed et al., 2018; Bruehlman-Senecal & Ayduk, 2015; Bruehlman-Senecal et al., 2016; Yanagisawa et al., 2011) and that TD training has beneficial effects across a 2-week period (Ranney et al., 2017). Taken together, TD has been shown to be a beneficial strategy for regulating emotions, both at the habitual level and in experimental research, and for both short-term (e.g., emotions) and long-term outcomes (e.g., well-being).

Despite evidence for beneficial effects of TD, key open questions remain. First, we do not know how TD functions within individuals' daily lives. No prior research has examined TD reported in daily life, either on average or fluctuating within person across days. This is an important distinction because examining daily (rather than habitual) TD allows for the investigation of the *process* of emotion regulation, rather than just individual differences in habitual use. This approach also allows for the modeling of both between-person and within-person associations. Between-person associations describe whether people who use daily TD more frequently experience emotional benefits compared to people who use daily TD less. In contrast, within-person associations describe whether people experience emotional benefits on days when they use TD more compared to days when they use TD less. These within-person associations do not necessarily mirror between-person associations and thus yield new information (Fisher et al., 2018; Molenaar & Campbell, 2009). In addition, they remove the influence of person-level confounds (e.g., people with generally positive traits may be more likely to use TD and also more likely to have positive emotional profiles). Second, with the exception of Bruehlman-Senecal et al. (2016), little research has examined the effects of TD on emotions in daily life. Assessing emotions in daily life provides greater ecological validity compared to assessing emotions in the laboratory.

Because people are most motivated to regulate their emotions in stressful situations, the present study assessed TD and emotions during the most stressful event of each of 8 days. In addition, we measured habitual TD at the start of the study. In Aim 1, we investigated whether people who report higher habitual use of TD experience less negative and more positive emotions in daily life. In Aim 2, we investigated whether people who engage in more TD on average across days experience less negative and more positive emotions in daily life. In Aim 3, we investigated whether within-person fluctuations in daily TD were associated with less negative and more positive emotions in daily life.

In line with previous research (e.g., Bruehlman-Senecal & Ayduk, 2015), we predicted that TD in all three types of analyses would be associated with less negative and more positive emotions. We also conducted exploratory analyses for discrete emotion (i.e., anger, sadness, anxiety) and broad emotional categories (i.e., social negative emotions, low-arousal and high-arousal positive emotions, social positive emotions).

Method

Participants

A total of 160 adult women participants (80 friendship pairs) were recruited from the Bay Area community (M_{age} = 47, *SD* = 17) as part of a larger study on emotional wellness in women (institutional review board name: "Berkeley Friendship, Emotion, and Wellness Study"); 61.6% of participants identified as European American, 22.6% as Asian American, 6.3% as African American, and 3.8% as Hispanic or Latino American. Half of the sample was recruited to have reported experiencing a life stressor of at least moderate impact within the past 6 months. Although the other half of the sample was not required to have experienced a stressor, given how common life stress is, all but three participants in the full sample had experienced a stressful life event in the past 6 months (e.g., relationship infidelity, job loss, car accident). Five participants did not complete diaries and thus were not included in the present study.

Given the correlations in previous studies on habitual TD and emotions (*r*s = .25–.30; e.g., Bruehlman-Senecal et al., 2016), we expected medium to large between-person effects (Funder & Ozer, 2019). The present sample (*n* = 155) provided 80% power to detect these kinds of between-person effects (*r* = .22 or larger). For within-person effects, power was much greater: The sample size of 837 daily observations and the observed intraclass correlation coefficient of .33 resulted in an effective sample size of 341.11 for within-person analyses (Killip et al., 2004), which provided 80% power to detect small within-person effects (*r* = .15 or larger).

Procedure

First, participants completed online questionnaires including the eight-item TD Questionnaire (TDQ; Bruehlman-Senecal et al., 2016). To estimate the internal consistencies, we used the omegaSEM() function in the multilevelTools package in R (Geldhof et al., 2014) and the omega() function in the psych package in R (Revelle, 2022). Omega total was .87.

Next (*M* = 13 days later, *SD* = 18 days, range = 2–100 days), participants began 8 days of daily diaries, completed at the end of each day. Participants answered questions about the most stressful event of their day as well as their emotions and use of TD during this event. Average daily compliance was 66%.

These questions included two items about daily TD adapted from the TDQ ("I thought about how small the event is in the bigger picture of my life" and "I told myself that my feelings about the event are temporary") measured on a 7-point rating scale (i.e., 1 = *strongly disagree* to 7 = *strongly agree*). To assess daily TD, we created a composite of the two items for each of the 8 days (within-person ω = .48; between-person ω = .90). To compare habitual to daily TD using the same items, we also created a habitual TD composite using only these two items (*r* = .44).

To assess daily emotions, participants rated the extent to which they felt seven negative emotions (anxious, lonely, sad, annoyed,

angry, distressed, negative) and eight positive emotions (amused, energetic, calm, happy, interested, excited, content, positive)[1] during the most stressful event of the day, using 7-point rating scales (1 = *did not experience emotion* to 7 = *strongly experienced emotion*). For each of the 8 days, we computed a mean negative emotion composite (within-person ω = .77; between-person ω = .93) and a mean positive emotion composite (within-person ω = .84; between-person ω = .83).

Transparency and Openness

Data were collected as part of a larger study. We report all variables examined for the present research question and all data exclusions. Data and analysis code are available at https://osf.io/qg23d/. Data were analyzed using R Version 4.0. This study's design and its analysis were not preregistered.

Results

Consistent with correlations between trait measures and average state measures of reappraisal (r = .18–.23; Ford et al., 2017) and personality (average r = .26; Rauthmann et al., 2019), habitual and average daily TD were modestly positively correlated, r = .22, $p < .01$. Next, we assessed associations between the three measures of TD and daily emotions. We display standardized (r) and unstandardized (b) coefficients, standard errors, 95% confidence intervals, t values, and p values in Table 1. To compute standardized coefficients, we transformed the t statistics for each coefficient into r values (Page-Gould et al., 2019).

Habitual TD (Aim 1)

We used random-intercept multilevel models to predict daily negative and positive emotions from grand-mean centered habitual TD. When using the eight-item habitual TD composite, effects were in the expected direction but were not statistically significant (negative emotions: $r = -.13$, p = .096; positive emotions: r = .15, p = .069). When using the two-item habitual TD composite (for a direct comparison with daily TD), the association between habitual TD and lower negative emotions was still not statistically significant ($r = -.16$, p = .053), but the association between habitual TD and greater positive emotions was statistically significant (r = .16, p = .042).[2]

Average Daily and Within-Person Fluctuations in TD (Aims 2 and 3)

We used random-intercept, random-slope multilevel models to predict daily negative and positive emotions from average daily TD (between-person effects) and within-person fluctuations in TD (within-person effects). First, we grand-mean centered daily TD by subtracting the sample mean from each daily value. Next, to examine average daily TD, we calculated average TD across all of the diary days for each participant. Then, to examine within-person fluctuations in TD, we computed person-centered daily TD by subtracting each person's individual mean from their daily values. Between- and within-person effects were included in the same model. At the between-person level, average daily TD was not significantly associated with negative emotions (r = .07, p = .423) but was significantly associated with greater positive emotions (r = .17, p = .032). At the within-person level, daily TD was significantly associated with both lower negative emotions ($r = -.20$, $p < .001$) and greater positive emotions (r = .15, $p < .001$).[3]

Discrete Emotion and Broad Emotional Categories (Supplemental Analyses)

We also examined associations between TD and nine discrete emotion and broad emotional categories. Associations were statistically significant for some categories (anxiety, sadness, social negative, high-arousal positive, low-arousal positive) and not others (anger, social positive). The within-person link of daily TD with sadness was stronger than with any of the other discrete emotion or broad emotional categories, except for anxiety, as evidenced by nonoverlapping 95% confidence intervals. See the online supplemental materials for full results.

Discussion

The present research examined associations between TD and emotions in response to daily stressful events for three distinct measures at two levels of analysis. TD was associated with lower negative emotion only at the within-person level and with greater positive emotion for the average daily and within-person measures. These findings suggest two conclusions. First, people who tend to use TD more frequently experience more positive emotions in daily life compared to people who use it less. Second, and more specifically, people experience emotional benefits on days on which they use more TD than on days on which they use less TD. Our findings expand on prior work by assessing emotions experienced over multiple days and in response to stressful events and by extending prior work on habitual TD to two new measures: average daily and within-person fluctuations.

The present findings are generally consistent with prior findings of the beneficial effects of habitual TD on emotional functioning

[1] These 15 emotion items comprised the core set of common emotions assessed in other parts of the larger study (e.g., at different waves, in different contexts), drawing on the Positive and Negative Affect Schedule – Expanded Form, Affect Valuation Index, and discrete emotion frameworks (Watson & Clark, 1999; Tsai et al. 2006). In response to the most stressful event of the day, participants also rated the extent to which they felt four additional positive emotions (loving, gratitude, strong, proud) and four additional negative emotions (rejected, worried, down, contempt). We conducted sensitivity analyses using this broader set of emotion items. The direction, statistical significance, and approximate effect sizes remained the same, with one exception. Using the broader set (but not the core set) of positive emotion items, the eight-item habitual TD composite was associated with significantly greater positive emotions, p = .04.

[2] We also ran sensitivity analyses adjusting for the time lag between the entrance questionnaire and the daily diaries in the models predicting daily emotions from habitual TD as well for the correlational model of habitual and average daily TD. The direction and statistical significance of effects remained the same, with one exception. The two-item habitual TD composite was no longer significantly associated with greater positive emotions (p = .067).

[3] We conducted sensitivity analyses using each individual TD item in daily life. Only one result differed. The between-person effect of TD on positive emotions was statistically significant for the first item, b = 0.10, p = .025 ("I told myself that my feelings about the event are temporary") but was only marginally significant for the second item, b = 0.08, p = .081 ("I thought about how small the event is in the bigger picture of my life").

Table 1
Temporal Distancing Predicting Daily Emotions for Three Distinct Measures at Two Levels of Analysis

Model	*r*	*b*	*SE*	95% CI	*t* value	*df*	*p*
TD predicting daily negative emotions							
Model 1 ($N = 155$)							
Habitual TD (8 items)	−0.13	−0.13	0.08	[−0.29, 0.02]	−1.67	153	.096
Model 2 ($N = 155$)							
Habitual TD (2 items)	−0.16	−0.13	0.07	[−0.26, 0.002]	−1.95	153	.053
Model 3 ($N = 153$)							
Daily TD (between person)	0.07	0.06	0.07	[−0.08, 0.19]	0.80	151	.423
Daily TD (within person)	−0.20	−0.15	0.03	[−0.20, −0.10]	−5.43	683	<.001
TD predicting daily positive emotions							
Model 1 ($N = 155$)							
Habitual TD (8 items)	0.15	0.11	0.06	[−0.01, 0.23]	1.83	153	.069
Model 2 ($N = 155$)							
Habitual TD (2 items)	0.16	0.10	0.05	[.004, 0.20]	2.05	153	.042
Model 3 ($N = 153$)							
Daily TD (between person)	0.17	0.11	0.05	[0.01, 0.21]	2.17	151	.032
Daily TD (within person)	0.15	0.10	0.03	[0.05, 0.15]	3.84	683	<.001

Note. Model 1 shows the associations between the Temporal Distancing (TD) Questionnaire and negative and positive emotions in daily life. Model 2 shows the associations between a two-item measure of habitual TD that mirrors the daily diary measure and negative and positive emotions in daily life. Model 3 shows the between- and within-person associations between daily TD and negative and positive emotions in daily life. We display standardized (*r*) and unstandardized (*b*) coefficients, standard errors, 95% confidence intervals (CIs), *t* values, degrees of freedom, and *p* values. To compute standardized coefficients, we transformed the *t* statistics for each coefficient into *r* values (Page-Gould et al., 2019).

(Bruehlman-Senecal & Ayduk, 2015; Bruehlman-Senecal et al., 2016). However, the associations between habitual TD and daily emotions in the present investigation were somewhat muted. Specifically, the eight-item habitual TDQ was not significantly associated with daily emotions (and when adjusting for lag, neither was the two-item measure). Though the effects were in the predicted directions, effect sizes were considerably smaller than in prior work (Bruehlman-Senecal et al., 2016). However, the effects were stronger when using a two-item version of the TDQ that was consistent with the daily TD questionnaire. These apparent inconsistencies should be interpreted with caution as effects in multilevel designs may not be comparable to single-level designs.

Building on previous research on habitual TD, the present results extend previous findings by demonstrating the benefits of daily TD. This is a particularly important contribution to our understanding of how TD relates to emotional experiences because it speaks to the process of how TD is related to emotions. While the associations between habitual TD and emotions speak to broad individual differences, the within-person associations between daily TD and emotions speak to our understanding of what happens to people's emotions when they use TD. This focus on when rather than who brings us closer to understanding the process of emotion regulation and emotional experience across time. These questions are distinct from questions about habitual TD given the modest correlation between habitual and average daily TD and given that between-person effects do not necessarily generalize to within-person effects.

The present findings have real-world and clinical implications for how people might better regulate their emotions in the face of stressful events—for example, through targeted therapeutic training and increased use of TD strategies. Additionally, the present research has implications for measurement given the relatively modest association between habitual and daily TD. Previous research has found that self-reports of emotion over short-term (i.e., a few hours) versus longer-term (e.g., a few months) time frames tap into distinct aspects of self-knowledge: episodic emotion knowledge and semantic emotion knowledge, respectively (Robinson & Clore, 2002). The modest correlation observed for daily (i.e., short-term) and habitual (i.e., long-term) TD adds to these findings by suggesting that people may assess different phenomena when self-reporting emotion regulation under different conditions.

In an exploratory analysis comparing the strength of associations to one another, daily TD was more strongly associated with lower sadness at the within-person level compared to the other discrete emotion categories (except for anxiety) and compared to overall negative emotions. While temporal distancing is associated with more positive and less negative emotional experiences across a range of emotions, it may be particularly beneficial when faced with certain events that induce sadness, such as losses and personal disappointments. In contrast, when faced with events that primarily induce an emotion such as anger, a different regulation strategy may be better suited. This opens the door for more targeted approaches in the use of emotion regulation strategies in daily life, based on a discrete emotion framework, rather than more global approaches.

The present research had several strengths, including three distinct measures, the use of ecologically valid daily diaries, and the use of a diverse community sample of middle-aged and older adults. However, the following limitations should be considered. First, because the larger study from which these data were drawn was interested in emotional processes in women, our sample consisted of adult women. Although previous research has not detected any gender differences (Bruehlman-Senecal & Ayduk, 2015; Bruehlman-Senecal et al., 2016), future research is needed to test how well these findings generalize to all genders. Further, although the sample was diverse with regard to age, race, and ethnicity, it was comprised of adults living in the Bay Area of the United States. Future research should examine whether these effects hold in other countries and groups. Last, further research

should study how these findings may change based on features of the daily stressful events, including controllability and intensity (Haines et al., 2016; Suri et al., 2018; Troy et al., 2013). In sum, the present study suggests that the daily use of TD in response to stressful events is associated with a beneficial emotional profile at both the between-person and within-person levels.

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

Ayduk, O., & Kross, E. (2018). Self-distancing: Basic mechanisms and clinical implications. In D. D. Ridder, M. Adriaanse, & K. Fujita (Eds.), *International handbook of self-control in health and well-being* (pp. 364–376). Routledge.

Benkley, D., & Willroth, E. S. (2022, March 22). *Short-term implications of long-term thinking: Temporal distancing and emotional responses to daily stressors*. osf.io/qg23d/

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/a0038324

Bruehlman-Senecal, E., Ayduk, Ö., & John, O. P. (2016). Taking the long view: Implications of individual differences in temporal distancing for affect, stress reactivity, and well-being. *Journal of Personality and Social Psychology*, *111*(4), 610–635. https://doi.org/10.1037/pspp0000103

Fisher, A. J., Medaglia, J. D., & Jeronimus, B. F. (2018). Lack of group-to-individual generalizability is a threat to human subjects research. *Proceedings of the National Academy of Sciences of the United States of America*, *115*(27), E6106–E6115. https://doi.org/10.1073/pnas.1711978115

Ford, B. Q., Karnilowicz, H. R., & Mauss, I. B. (2017). Understanding reappraisal as a multicomponent process: The psychological health benefits of attempting to use reappraisal depend on reappraisal success. *Emotion*, *17*(6), 905–911. https://doi.org/10.1037/emo0000310

Funder, D. C., & Ozer, D. J. (2019). Evaluating effect size in psychological research: Sense and nonsense. *Advances in Methods and Practices in Psychological Science*, *2*(2), 156–168. https://doi.org/10.1177/2515245919847202

Geldhof, G. J., Preacher, K. J., & Zyphur, M. J. (2014). Reliability estimation in a multilevel confirmatory factor analysis framework. *Psychological Methods*, *19*(1), 72–91. https://doi.org/10.1037/a0032138

Haines, S. J., Gleeson, J., Kuppens, P., Hollenstein, T., Ciarrochi, J., Labuschagne, I., Grace, C., & Koval, P. (2016). The wisdom to know the difference: Strategy-situation fit in emotion regulation in daily life is associated with well-being. *Psychological Science*, *27*(12), 1651–1659. https://doi.org/10.1177/0956797616669086

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

Killip, S., Mahfoud, Z., & Pearce, K. (2004). What is an intracluster correlation coefficient? Crucial concepts for primary care researchers. *Annals of Family Medicine*, *2*(3), 204–208. https://doi.org/10.1370/afm.141

Molenaar, P. C., & Campbell, C. G. (2009). The new person-specific paradigm in psychology. *Current Directions in Psychological Science*, *18*(2), 112–117. https://doi.org/10.1111/j.1467-8721.2009.01619.x

Page-Gould, E., Sharples, A. E., & Song, S. (2019, October). Effect sizes for models of longitudinal data. In P. Shrout (Chair), *Modeling mediation processes in longitudinal data* [Symposium]. Annual Meeting of the Society of Experimental Social Psychology, Toronto, Ontario, Canada.

Ranney, R. M., Bruehlman-Senecal, E., & Ayduk, O. (2017). Comparing the effects of three online cognitive reappraisal trainings on well-being. *Journal of Happiness Studies*, *18*(5), 1319–1338. https://doi.org/10.1007/s10902-016-9779-0

Rauthmann, J. F., Horstmann, K. T., & Sherman, R. A. (2019). Do self-reported traits and aggregated states capture the same thing? A nomological perspective on trait-state homomorphy. *Social Psychological and Personality Science*, *10*(5), 596–611. https://doi.org/10.1177/1948550618774772

Revelle, W. (2022). psych: Procedures for psychological, psychometric, and personality research (R package version 2.2.3) [Computer software]. Northwestern University. https://CRAN.R-project.org/package=psych

Robinson, M. D., & Clore, G. L. (2002). Episodic and semantic knowledge in emotional self-report: Evidence for two judgment processes. *Journal of Personality and Social Psychology*, *83*(1), 198–215. https://doi.org/10.1037/0022-3514.83.1.198

Suri, G., Sheppes, G., Young, G., Abraham, D., McRae, K., & Gross, J. J. (2018). Emotion regulation choice: The role of environmental affordances. *Cognition and Emotion*, *32*(5), 963–971. https://doi.org/10.1080/02699931.2017.1371003

Trope, Y., & Liberman, N. (2003). Temporal construal. *Psychological Review*, *110*(3), 403–421. https://doi.org/10.1037/0033-295X.110.3.403

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

Tsai, J. L., Knutson, B., & Fung, H. H. (2006). Cultural variation in affect valuation. *Journal of Personality and Social Psychology*, *90*(2), 288–307. https://doi.org/10.1037/0022-3514.90.2.288

Watson, D., & Clark, L. A. (1999). *The PANAS-X: Manual for the Positive and Negative Affect Schedule – Expanded Form*. University of Iowa.

Webb, T. L., Miles, E., & Sheeran, P. (2012). Dealing with feeling: a meta-analysis 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

Yanagisawa, K., Masui, K., Furutani, K., Nomura, M., Yoshida, H., & Ura, M. (2011). Temporal distance insulates against immediate social pain: An NIRS study of social exclusion. *Social Neuroscience*, *6*(4), 377–387. https://doi.org/10.1080/17470919.2011.559127

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