Empirical Article

Clinical Psychological Science
1–11

DOI: 10.1177/2167702620951539
www.psychologicalscience.org/CPS

Does Distanced Self-Talk Facilitate Emotion Regulation Across a Range of Emotionally Intense Experiences?

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Abstract

Research indicates that a subtle shift in language—silently referring to oneself using one's own name and non–first-person-singular pronouns (i.e., distanced self-talk)—promotes emotion regulation. Yet it remains unclear whether the efficacy of distanced self-talk depends on the intensity of the negative experience reflected on and whether the benefits extend to emotionally vulnerable individuals. Two high-powered experiments addressed these issues. Distanced as opposed to immersed self-talk reduced emotional reactivity when people reflected on negative experiences that varied in their emotional intensity. These findings held when participants focused on future and past autobiographical events and when they scored high on individual difference measures of emotional vulnerability. The results also generalized across various types of negative events. These findings illuminate the functionality of language for allowing people to regulate their emotions when reflecting on negative experiences across the spectrum of emotional intensity and highlight the need for future research to examine the clinical implications of this technique.

Keywords

emotional control, self-talk, psychological distance, self-regulation, self-control

Received 4/1/19; Revision accepted 5/13/20

Many approaches to emotion regulation focus on the benefits of deliberate reframing strategies that instruct people to change the way they think to change the way they feel (Beck & Bredemeier, 2016; Gross, 2015; Hofmann, Sawyer, Fang, & Asnaani, 2012; Kross & Ayduk, 2017; Tolin, 2016). An emerging body of work, however, suggests that subtle shifts in language may instigate similar outcomes (Nook, Schleider, & Somerville, 2017; Orvell, Ayduk, Moser, Gelman, & Kross, 2019; Streamer, Seery, Kondrak, Lamarche, & Saltsman, 2017; White & Carlson, 2016; also see Rude, Gortner, & Pennebaker, 2004; Shahane & Denny, 2019; Tackman et al., 2019). Here we focus on one such strategy, distanced self-talk, which involves silently reflecting on the self using one's own name and second- or third-person singular pronouns (e.g., "Brian, why are you feeling this way?"; Dolcos & Albarracin, 2014; Kross & Ayduk, 2017; Kross et al., 2014; Nook et al., 2017; Orvell et al., 2019; Streamer et al., 2017; White et al., 2017).

Distanced self-talk leverages the structure of language to promote emotion regulation by cueing people to reflect on the self using parts of speech (i.e., names and non–first-person pronouns) that are typically used to refer to other people, thus allowing them to seamlessly adopt the perspective of a distanced observer. The increased psychological distance provided by these linguistic shifts helps people reframe negative experiences

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and diminish their emotional impact across a range of contexts, for example, when preparing to deliver a public speech, meeting a prospective dating partner, or reflecting on an anxiety-eliciting event (Kross et al., 2014, 2017; Streamer et al., 2017; also see Nook et al., 2017).

These findings suggest that distanced self-talk is a useful strategy for emotion regulation. However, they are limited by two important questions that we addressed in the current research: Are the benefits of distanced self-talk influenced by the intensity of the experience people reflect on? And can individuals who are emotionally vulnerable (i.e., those with a tendency to worry, ruminate, and experience depressive symptoms) benefit from distanced self-talk when reflecting on events that vary in their emotional intensity?

From a clinical science perspective, addressing these questions is important for two reasons. First, research indicates that reflecting on negative emotional experiences often instigates ruminative processes, which are associated with a host of negative short- and long-term outcomes, including depression and depressive symptoms, among both clinical and nonclinical populations (Brosschot, Gerin, & Thayer, 2006; Garfenski, Kraaij, & Spinhoven, 2001; Gotlib & Joormann, 2010; Michl, McLaughlin, Shepard, & Nolen-Hoeksema, 2013; M. S. Robinson & Alloy, 2003; Ruscio et al., 2015). Consequently, finding ways to effectively manage negative emotions surrounding such experiences has important potential clinical implications.

Second, regulating emotions surrounding strong negative emotional events is particularly challenging in part because the stress generated by such events taxes the same cognitive control resources that are involved in deliberately reframing negative experiences (Arnsten, 2009; Buhle et al., 2014). For individuals with depression or a tendency to worry or engage in rumination, this difficulty is particularly pronounced (Aldao, Nolen-Hoeksema, & Schweizer, 2010; Campbell-Sills et al., 2011; Erk et al., 2010; Johnstone, van Reekum, Urry, Kalin, & Davidson, 2007; Moser, Hartwig, Moran, Jendrusina, & Kross, 2014; Nasso, Vanderhasselt, Demeyer, & De Raedt, 2019; Sheppes, Suri, & Gross, 2015).

We suggest that distanced self-talk may be well suited for helping people in these contexts because it facilitates emotion regulation without consuming excessive cognitive control resources. In one pair of studies, for example, cueing people to reflect on emotionally arousing stimuli using distanced as opposed to immersed self-talk predicted reductions in event related potential and functional MRI markers of self-referential emotional reactivity without predicting enhanced activity in neural markers of cognitive control (Moser et al., 2017). Dovetailing with these findings are behavioral studies demonstrating that distanced self-talk benefits children who score low on individual difference measures of cognitive control (Grenell et al., 2019).

Taken together, these findings suggest that distanced self-talk may promote emotion regulation for experiences that vary in their emotional intensity and for individuals characterized by emotional vulnerability. To our knowledge, however, no research has systematically addressed these questions.

We addressed these issues by cueing participants to use distanced- and immersed self-talk to reflect on a series of negative future-oriented and past personal experiences that varied in their emotional intensity. Given prior research, we assessed emotional intensity by asking participants to rate how negatively thinking about each memory made them feel when they thought about it at baseline (e.g., Daselaar et al., 2008; Kross, Davidson, Weber, & Oschsner, 2009). We asked participants to reflect on their own personal experiences to examine whether distanced self-talk is beneficial for promoting emotion regulation surrounding the kinds of experiences that people grapple with in their daily lives. In Study 1, participants reflected on future negative events that varied in their levels of emotional intensity. In Study 2, participants reflected on more intense negative events that occurred in the past. In Study 2, we also examined whether individuals characterized by emotional vulnerability (i.e., a tendency to ruminate, worry, and experience depressive symptoms) benefited from using distanced self-talk.

Study 1: Reflecting on Negative Future Experiences

Method

Participants. Participants were 50 native English speakers (mean age = 18.66 years, *SD* = 0.82; 28 women) recruited from the subject pool at a large university. The sample was 82% White, 12% Asian, 2% Black, 2% Native American, and 2% multiracial. All participants provided informed consent and were compensated with course credit. We excluded data from one participant for whom we did not have behavioral rating data.

To determine our sample size, we conducted a power analysis using results from a published article that used a similar within-subjects paradigm. We observed a large effect size for the main effect of self-talk (Cohen's d = 1.01; Moser et al., 2017), and power analyses indicated that 15 participants were needed to replicate this effect with 95% power at an α level of .05. Given that we did not have effect sizes for the moderating role of event intensity, we performed power analyses assuming a small to medium effect size (to be conservative), d = 0.20 (Maxwell & Delaney, 2004). Results suggested

running approximately 53 subjects in a within-subjects, repeated-measures design.

Task 1: memory harvesting. Participants were prompted to write briefly about eight personal events that they worried about most often in their daily lives.[1] After describing each event, participants created a short cue phrase (e.g., "Mom's health"). They were then prompted to think about their deepest thoughts and feelings surrounding each experience for 30 s. After each reflection period, participants rated, on a scale from 1 (*not at all*) to 9 (*extremely*), how negatively they felt about the event as they reflected on it in that moment (M = 5.62, SD = 2.19). Participants also rated, on a scale from 1 (*never*) to 9 (*all the time*), how frequently they thought about each experience (M = 6.05, SD = 2.09). After each rating, participants completed a short filler task (e.g., list five state capitals) to prevent emotional spillover. Participants then disclosed their demographic data.

Task 2: self-talk task. Before the self-talk task, an experimenter walked participants through a short training session that included a sample trial and two practice trials (for the script used during training, see The Supplemental Material available online). Next, participants completed the self-talk task by repeatedly reflecting on the experiences generated during Task 1 while using immersed and distanced self-talk. Note that participants were cued to use immersed or distanced self-talk to try to *understand* their negative feelings.

The self-talk task consisted of eight blocks, each focusing on a separate negative personal experience. Within each block, participants reflected on the experience using immersed self-talk and distanced self-talk four times each for a total of 64 trials across eight blocks. Blocks and type of self-talk within each block were randomized.

Participants first saw a cue showing the type of self-talk they should use followed by a short fixation cross (for distanced self-talk trials, participants' actual name appeared). They then reflected on their experience for 15 s using the assigned type of self-talk and subsequently rated, on a scale from 1 (*not at all*) to 5 (*very*), how negatively they felt (M = 3.06, SD = 1.17; for a visual representation of the self-talk task's trial structure and timing, see the Supplemental Material). If participants did not generate a response within the allotted 3-s window, their trial data were coded as containing a missing response.

Funneled debriefing. Last, participants completed a funneled debriefing to probe their knowledge about the study's design and hypotheses. Five participants articulated some knowledge of the hypotheses connecting self-talk and negative affect in the expected direction. However, analyses performed without these participants' data did not alter any of the conclusions we report.

Type of experience coding. After data collection, two judges identified eight types of experiences that participants reported worrying about: (a) interpersonal, (b) achievement, (c) financial, (d) health, (e) events related to the future, (f) appearance and self-worth, and (g) morality and religion. Next, the same two judges categorized each experience into one of the above categories (κ = .89). Discrepancies were resolved by a third, independent coder.[2] One category (morality and religion) did not surpass the required number of 15 participants noted in the power analysis for a large main effect of self-talk: Seven participants generated eight events. Thus, we excluded memories from this category in the robustness analyses, reported below.

Results

Overview of primary analyses. We ran multilevel models using the *lme4* package (Version 1.1-21) for the R software environment (Version 4.0.0; R Core Team, 2020) because our variables included trial-level (i.e., type of self-talk) and block-level (discrete experiences generated during Task 1) data. Type of self-talk (distanced self-talk = .5, immersed self-talk = −.5) was entered as a Level 1 fixed effect, and event intensity was entered as a Level 2 fixed effect. Participant was entered as a random effect, and the slope of condition was allowed to vary across participants (initial tests indicated that allowing slopes to vary significantly improved the model fit in both studies; Study 1: χ^2 = 141.47, p < .001; Study 2: χ^2 = 163.68, p < .001; Bates, Mächler, Bolker, & Walker, 2015).[3] To examine whether the intensity of the experience (rated during the baseline session) that participants reflected on moderated the effect of condition on emotional reactivity, we examined the cross-level interaction between event intensity (Level 2) and type of self-talk (Level 1). To quantify the magnitude of the effects, we report the percentage change in emotional reactivity between using distanced and immersed self-talk.

Preliminary analyses. Preliminary analyses indicated that missing responses were not systematically related to condition (immersed self-talk: n = 101, or 6.31% of responses; distanced self-talk: n = 118, or 7.38% of responses; z = −1.35, p = .178). Both time on task (block number over the course of the task) and time in block (trial number in block) were associated with lower negative-emotional-reactivity ratings (ts ≥ |1.99| ps < .05). However, condition did not interact with either of these variables (ps ≥ .38).

Emotion regulation. As predicted, distanced self-talk (compared with immersed self-talk) led to declines in

Table 1. Models Testing Whether the Benefits of Distanced Self-Talk Persist for Future (Study 1) and Past (Study 2) Experiences That Vary in Their Emotional Intensity

Fixed effects	*b*	*SE*	*t* test	*p*	95% CI
Study 1					
Type of self-talk	−0.48	0.08	$t(48) = -6.30$	< .001	[−0.63, −0.33]
Event intensity	0.25	0.01	$t(2871) = 29.09$	< .001	[0.23, 0.27]
Type of Self-Talk × Event Intensity	−0.01	0.02	$t(2293) = -0.53$	.599	[−0.04, 0.02]
Study 2					
Type of self-talk	−0.62	0.08	$t(47) = -7.91$	< .001	[−0.77, −0.46]
Event intensity	0.30	0.02	$t(2719) = 15.49$	< .001	[0.26, 0.34]
Type of Self-Talk × Event Intensity	−0.02	0.04	$t(2153) = -0.51$	.611	[−0.09, 0.06]
Pooled analysis (Studies 1 and 2)					
Type of self-talk	−0.55	0.05	$t(97) = -10.01$	< .001	[−0.65, −0.44]
Event intensity	0.26	0.008	$t(5658) = 33.07$	< .001	[0.24, 0.27]
Type of Self-Talk × Event Intensity	−0.01	0.02	$t(4580) = -0.68$	.495	[−0.04, 0.02]

Note: Models test the fixed effects of type of self-talk (distanced = .5, immersed = −.5), event intensity, and the interaction between the two for Studies 1 and 2. Models include random intercepts and slopes for the effect of type of self-talk at the participant level. Unstandardized regression coefficients are reported. The *lmerTest* package (Version 3.1-1; Kuznetsova, Brockhoff, & Christensen, 2019) for R was used to obtain *p* values using Satterthwaite approximations for effective denominator degrees of freedom, which were rounded to the nearest whole number. To increase statistical power to observe a potential Type of Self-Talk × Event Intensity interaction, we conducted an additional pooled analysis with the observations from Studies 1 and 2 (participants: $N = 99$; observations: $N = 5{,}773$).

negative emotional reactivity, $b = -0.48$, $p < .001$. Specifically, participants felt 10% less negatively when they reflected on their emotions using distanced self-talk ($M = 2.67$, $SE = .07$) as opposed to immersed self-talk ($M = 3.14$, $SE = .07$). Participants also reported higher emotional reactivity when reflecting on more intense future experiences, $b = 0.25$, $p < .001$. The effectiveness of distanced self-talk (compared with immersed self-talk) for reducing negative emotional reactivity did not vary depending on how intense the event was rated at baseline, Type of Self-Talk × Event Intensity interaction, $b = -0.01$, $p = .599$ (see Table 1).

Generalizability analyses. Distanced as opposed to immersed self-talk did not function differently depending on the type of negative experience that participants reflected on, Type of Self-Talk × Event Type interaction omnibus chi-square test, $\chi^2(5) = 2.51$, $p = .777$. As illustrated in Table 2 and Figure 1a, follow-up pairwise comparisons using a single-step method correction indicated that distanced as opposed to immersed self-talk led to significant declines in negative emotional reactivity for each type of experience ($ts \geq |3.21|$, $ps < .001$) except those relating to appearance and self-worth ($t = |1.79|$, $p = .074$).[4]

Additional analyses. The prior analyses demonstrate that distanced self-talk (compared with immersed self-talk) reduces negative emotional reactivity. However, they did not address whether distanced self-talk reduces emotional reactivity relative to how people naturally reflect on their negative experiences. To address this question, we examined whether participants reported lower negative emotional reactivity after using distanced self-talk compared with when they reflected on their experiences during Task 1, at baseline, when they did not receive specific instructions regarding what perspective they should adopt when thinking about their experiences.

A within-subjects multilevel model that included condition as a fixed effect with three levels indicated that participants reported significantly less negative emotional reactivity on distanced self-talk trials ($M = 4.63$, $SE = .18$) compared with baseline trials ($M = 5.62$, $SE = .19$), $b = -0.98$, $SE = .16$, $t(49) = -6.07$, $p < .001$, 95% confidence interval (CI) = [−1.30, −.66]. There was no difference in emotional-reactivity ratings between baseline self-talk trials and immersed self-talk trials ($M = 5.59$, $SE = .20$), $b = -0.02$, $SE = .14$, $t(48) = -0.17$, $p = .865$, 95% CI = [−0.30, 0.26], which is consistent with the idea that people naturally reflect on intense negative experiences from a self-immersed perspective (Ayduk & Kross, 2010; Nigro & Neisser, 1983; J. A. Robinson & Swanson, 1993).[5] As in previous analyses, distanced self-talk led to reductions in emotional reactivity relative to immersed self-talk, $b = 0.96$, $SE = .15$, $t(49) = 6.37$, $p < .001$, 95% CI = [.66, 1.25].

Study 2: Reflecting on Past Negative Experiences

Study 2 had three goals. First, we examined whether the findings from Study 1 generalized to another common emotion-regulation context relevant to the initiation of ruminative processes: reflecting on past negative

Table 2. Efficacy of Distanced Versus Immersed Self-Talk by Type of Emotional Experiences in Studies 1 and 2

Category	*b*	*SE*	*t*	*p*	Magnitude of effect (%)
Study 1					
Achievement	−0.51	0.09	−5.68	< .001	10
Appearance and self-worth	−0.33	0.18	−1.79	.074	7
Existential threats	−0.48	0.14	−3.44	< .001	10
Financial issues	−0.65	0.16	−4.07	< .001	13
Health	−0.45	0.14	−3.21	.001	9
Interpersonal	−0.46	0.09	−5.13	< .001	9
Study 2					
Abandoned	−0.85	0.13	−6.68	< .001	17
Abused	−0.48	0.13	−3.81	< .001	10
Angry	−0.62	0.13	−4.67	< .001	12
Attacked	−0.70	0.16	−4.43	< .001	14
Betrayed	−0.64	0.11	−5.86	< .001	13
Degraded	−0.38	0.13	−2.90	.004	8
Embarrassed	−0.55	0.14	−4.01	< .001	11
Frustrated	−0.67	0.11	−6.03	< .001	13
Personal space	−0.71	0.15	−4.85	< .001	14
Rejected	−0.56	0.13	−4.34	< .001	11
Sickened	−0.69	0.12	−5.58	< .001	14

Note: Pairwise differences examining the efficacy of type of self-talk (distanced = .5, immersed = −.5) for each type of emotional experience. Unstandardized regression coefficients are reported; adjusted *p* values are reported using the single-step method. Magnitude of effect refers to the percentage decrease in negative emotional reactivity predicted by distanced versus immersed self-talk usage.

experiences. Second, we concentrated on memories that participants rated as more intense at baseline to provide a stronger test of whether distanced self-talk promotes emotion regulation for more intense personal experiences. Finally, we explored the efficacy of distanced self-talk for individuals with high trait-like levels of emotional vulnerability. Prior research provides mixed findings regarding whether such individuals benefit more from distanced self-talk compared with their less vulnerable counterparts. Whereas some research indicates that individuals prone to emotional vulnerability benefit more than their less vulnerable counterparts, other research finds that people benefit equally from distanced self-talk regardless of trait differences in aspects of emotional vulnerability, such as worry (e.g., Kross et al., 2014, 2017). By using a within-subjects design, we sought to maximize statistical power and adjudicate between these divergent findings, and we focused specifically on whether more vulnerable individuals benefited from using distanced self-talk to reflect on more intense experiences.

This study consisted of a secondary analysis of the behavioral data reported in Study 2 of Moser et al. (2017), which used a paradigm similar to the one described in Study 1 to examine the neural correlates of reflecting on negative past experiences using immersed and distanced self-talk. However, Moser and colleagues did not examine the three key questions we focus on here: (a) whether event intensity moderates the benefits of distanced self-talk, (b) how individual differences in emotional vulnerability influence the effectiveness of this strategy, and (c) whether the benefits of distanced self-talk generalize to different types of negative experiences. There were several other exploratory variables collected as a part of the original study that are not reported here. Given that our Study 2 consisted of a reanalysis of a preexisting data set (Moser et al., 2017), we relied on the sample size collected in that study.

Method

The design of Study 2 was nearly identical to that of Study 1.

Participants. Forty-nine native English speakers (mean age = 20.27 years, *SD* = 2.72; 30 women) were recruited via flyers and advertisements posted online.[6] The sample was 67.35% White, 16.33% Asian, 8.16% Black, 2.04% Native American, and 6.12% who identified with a category not provided (i.e., "other") or who did not provide demographic data. Data from two participants were excluded

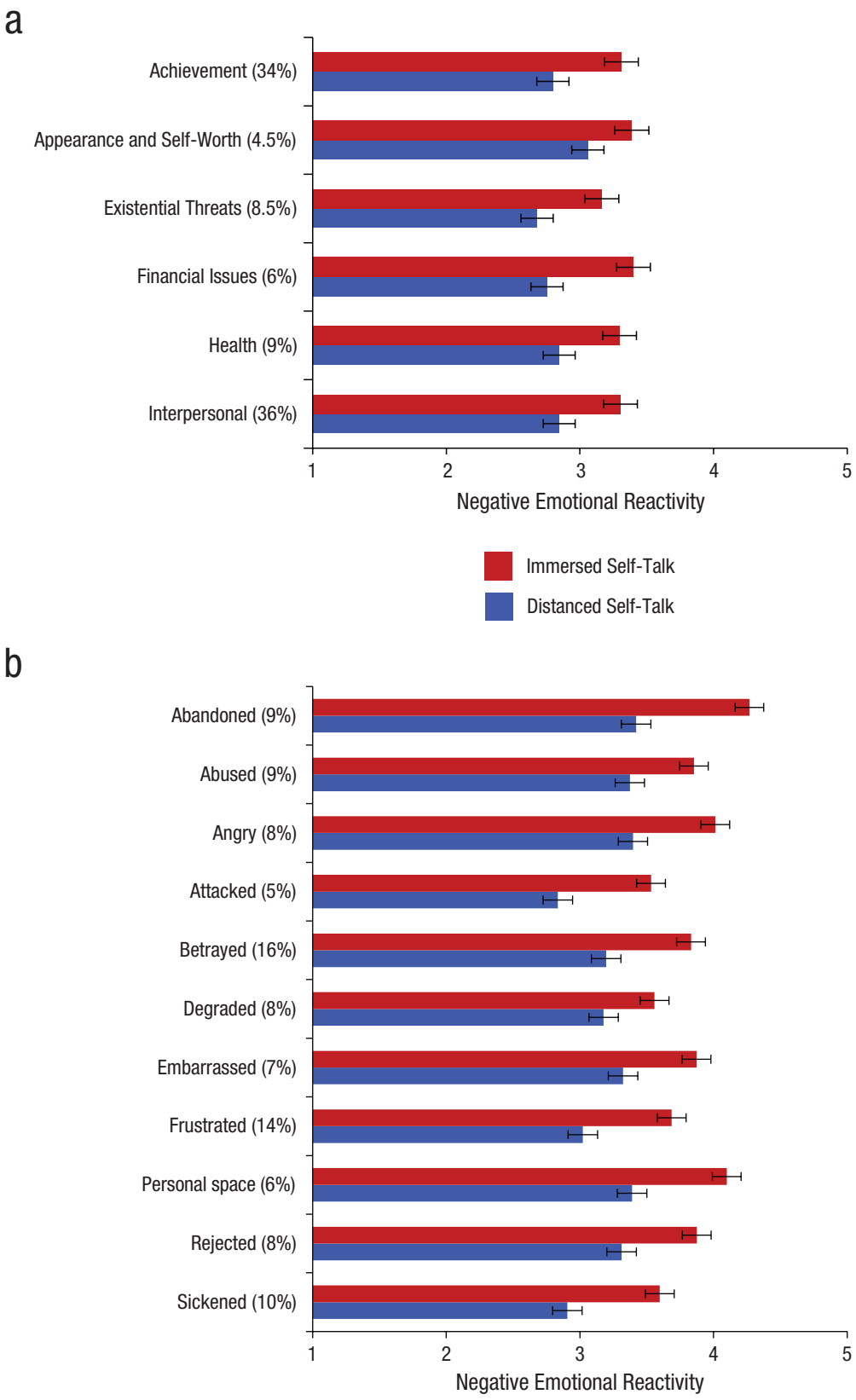

Fig. 1. Effects of immersed and distanced self-talk on negative emotional reactivity on different types of emotional experiences in (a) Study 1 and (b) Study 2. The types of experiences (with percentages) are graphed as a function of negative emotional reactivity (1 = *not at all negative*, 5 = *very negative*). Error bars represent ± 1 *SE*. Note that percentages add to 98% for Study 1 because we excluded the morality and religion category from this analysis because the number of memories did not meet the minimum threshold identified by our a priori power analysis to detect an effect of distanced as opposed to immersed self-talk. See Method section for additional details.

because of an inability to locate their baseline data. We also excluded data from one participant for whom we did not have behavioral rating data.

Procedures. The procedure for Study 2 was analogous to Study 1 with three exceptions. First, participants thought about negative personal events that occurred in the past. Second, during the memory-harvesting task, participants were randomly presented with 13 prompts asking them to recall specific types of negative experiences that were particularly distressing (e.g., a time when they felt betrayed, rejected, etc.). The 13 cues were then grouped into 11 discrete types of events. Participants were cued to relive each experience for 30 s and were then asked to rate its emotional intensity using a scale from 1 (*extremely negative*) to 9 (*extremely positive*); valence ratings were reverse-scored to be consistent with Study 1 so that higher numbers reflect higher event intensity ($M = 7.94$, $SD = 0.97$). To qualify for the study, participants needed to have eight memories that they rated below the original scale midpoint on valence. Two hundred fifty-two participants completed the baseline session. Of those participants, 62 qualified for the self-talk task, and 52 of those completed it approximately 11 days after the baseline session ($M = 10.67$, $SD = 7.98$). Using all available data, we found that there were no significant differences between participants who qualified for the self-talk portion of the study and participants who did not qualify in terms of the individual difference scales administered at baseline or affect at baseline. There were also no significant relationships between qualification status and race, ethnicity, or age variables. There was a significant relationship between gender and qualification status: Female participants were more likely than male participants to qualify for the self-talk portion of the study, $\chi^2(1, 249) = 4.07$, $p < .05$.

Individual difference questionnaires. At the beginning of Session 1, participants filled out a battery of exploratory measures. Three of the questionnaires measured theoretically relevant individual differences in emotional vulnerability: the Patient Health Questionnaire, which assesses depressive symptoms (Kroenke & Spitzer, 2002; $M = 5.45$, $SD = 4.61$); the Penn State Worry Questionnaire (Meyer, Miller, Metzger, & Borkovec, 1990; $M = 50.16$, $SD = 12.81$); and the brooding subscale of the Ruminative Response Scale (Treynor, Gonzalez, & Nolen-Hoeksema, 2003; $M = 1.95$, $SD = .59$). Items from these measures loaded highly onto a single factor, $\alpha = .92$. Thus, after z scoring each scale, we averaged them to create a composite measure of individual differences in emotional vulnerability (for analyses examining each scale separately and additional exploratory measures, see the Supplemental Material).

Results

Preliminary analyses. Preliminary analyses indicated that there was no difference in missing data between conditions (immersed self-talk: $n = 123$, or 8.11% of responses; distanced self-talk: $n = 109$, or 7.19% of responses; $z = 1.05$, $p = .292$). Time on task (i.e., block) was associated with increased negative-emotional-reactivity ratings ($b = 0.03$, $p < .001$). However, type of self-talk did not interact with block ($b = 0.00$, $p = .992$). There was no effect of trial on negative emotional reactivity, nor was there a significant Type of Self-Talk × Trial interaction ($ts \leq |.73|$, $ps \geq .463$).

Emotion regulation. As indicated in Table 1, distanced self-talk (compared with immersed self-talk) led to significant declines in negative emotional reactivity, $b = -0.62$, $p < .001$. Specifically, participants felt 12% less negatively when they reflected using distanced self-talk ($M = 3.07$, $SE = .08$) than when they used immersed self-talk ($M = 3.68$, $SE = .07$). Event intensity again predicted increased negative emotional reactivity, $b = 0.30$, $p < .001$. The effectiveness of distanced self-talk (compared with immersed self-talk) for reducing negative emotional reactivity did not vary depending on how intense the event was rated at baseline, Type of Self-Talk × Event Intensity interaction, $b = -0.02$, $p = .611$.

Individual differences in emotional vulnerability. We next examined whether the effectiveness of distanced self-talk varied depending on individual differences in emotional vulnerability by examining the cross-level interaction between individual differences in emotional vulnerability (Level 2) and type of self-talk (Level 1).

We continued to observe a main effect of type of self-talk, $b = -0.62$, $SE = .08$, $t(46) = -7.94$, $p < .001$, 95% CI = [−.77, −.46]; specifically, people felt 12% less negatively when they used distanced self-talk (compared with immersed self-talk). Of central interest was that the effectiveness of distanced self-talk for reducing negative emotional reactivity did not vary depending on individual differences in emotional vulnerability, Type of Self-Talk × Emotional Vulnerability interaction, $b = -0.15$, $SE = .10$, $t(47) = -1.52$, $p = .135$, 95% CI = [−.18, .17]. There was no main effect of individual differences in emotional vulnerability on emotional reactivity, $b = -0.01$, $SE = .09$, $t(47) = -0.08$, $p = .933$, 95% CI = [−0.33, 0.04].

To further examine the potential clinical significance of distanced self-talk, we next conducted an exploratory analysis in which we restricted our sample to individuals who scored at or above the clinical cutoffs for (a) generalized anxiety on the Penn State Worry Questionnaire (i.e., a score of 61; Behar, Alcaine, Zuellig, & Borkovec,

2003) and (b) moderate depression on the Patient Health Questionnaire (i.e., a score of 10; Kroenke, Spitzer, & Williams, 2001). There were 13 such individuals (27% of the sample).[7]

Each of our key results was directly replicated in this subsample: Distanced self-talk continued to predict significant reductions in emotional reactivity, $b = -0.88$, $SE = .17$, $t(12) = -5.11$, $p < .001$, 95% CI = [−1.23, −.53]. Furthermore, the magnitude of this effect was greater than that of the previous analyses—participants in this subsample reported feeling 18% less negatively when using distanced ($M = 2.94$, $SE = .17$) as opposed to immersed ($M = 3.85$, $SE = .17$) self-talk. Consistent with findings from the entire sample, the main effect of type of self-talk was not moderated by event intensity, $b = 0.06$, $SE = .07$, $t(680) = .78$, $p = .436$, 95% CI = [−.09, .20]. As expected, event intensity was associated with higher emotional reactivity, $b = 0.21$, $SE = .04$, $t(739) = 5.43$, $p < .001$, 95% CI = [.13, .28].

Robustness analyses. An omnibus χ^2 test indicated that distanced self-talk (compared with immersed self-talk) did not function differently depending on the type of negative experience that participants reflected on, Type of Self-Talk × Event Type interaction, $\chi^2(10) = 13.59$, $p = .193$. As shown in Table 2 and Figure 1b, follow-up pairwise comparisons using a single-step method correction indicated that distanced self-talk (compared with immersed self-talk) led to significant reductions in negative emotional reactivity for all types of negative experiences, all ts $\geq |2.90|$, all ps $\leq .004$.[8]

Additional analyses. As in Study 1, distanced self-talk ($M = 5.43$, $SE = .13$) led to reductions in negative emotional reactivity relative to baseline ($M = 7.93$, $SE = .15$), which indicated that distanced self-talk was adaptive compared with the default way of reflecting on one's experiences, $b = -2.50$, $SE = .10$, $t(3129) = -25.65$, $p < .001$, 95% CI = [−2.69, −2.31]. In contrast to Study 1, immersed self-talk ($M = 6.65$, $SE = .13$) also led to reductions in negative emotional reactivity relative to baseline in this study, $b = -1.28$, $SE = .10$, $t(3129) = -13.09$ $p < .001$, 95% CI = [−1.47, −1.09]. Consistent with results reported in the main model, distanced self-talk reduced emotional reactivity relative to immersed self-talk in this model as well, $b = -1.22$, $SE = .06$, $t(3129) = -19.22$, $p < .001$, 95% CI = [−1.35, −1.10].[9]

General Discussion

The ability to adaptively reflect on negative experiences, ranging from those that are less intense to those that elicit strong negative feelings, is a recurring challenge that people face. The current findings suggest that distanced self-talk may provide a useful tool toward this end. Across two experiments, distanced self-talk facilitated emotion regulation when people reflected on personal experiences that varied in their emotional intensity. Furthermore, the benefits of distanced self-talk extended to both future (Study 1) and past (Study 2) negative personal experiences and persisted among people who scored high on individual difference measures of emotional vulnerability (Study 2). These findings also generalized across the range of negative events that participants reflected on (Studies 1 and 2).

Note that these findings are not a function of sampling a restricted range of low-intensity memories. Memories from both studies were distributed across the full range of negative intensity scores. Moreover, even in Study 1, which sampled a wider range of memories, 10% of the negative experiences that participants reflected on at baseline were rated using the highest point on the scale (i.e., extremely negative). In Study 2, 34% of the memories that participants reflected on at baseline were rated using the highest point on the scale (i.e., extremely negative).

Although the term *distance* is often associated with emotional avoidance, it is important to emphasize that participants were explicitly directed to reflect on, rather than avoid, the emotional aspects of their distressing past experiences and anxiety-provoking future experiences. The goals of distanced self-talk as employed in the current studies, then, are similar in spirit to those laid out by many clinical approaches to intervention, including cognitive-behavioral therapy and acceptance and commitment therapy (ACT), which encourage individuals to reduce their immersed, egocentric perspective and gain psychological distance as a means to understand negative emotions (Beck, 1970; Bernstein et al., 2015; Hayes, Luoma, Bond, Masuda, & Lillis, 2006). The current findings identify a linguistic mechanism that promotes people's ability to do this.

These findings highlight at least three pressing questions for future research. First, does distanced self-talk promote emotion regulation under high-intensity conditions more effectively than traditionally studied cognitive reappraisal strategies (e.g., instructing participants to adopt the perspective of a detached observer; Buhle et al., 2014; Shiota & Levenson, 2009)? Research indicates that cognitive reappraisal works less well than less effortful emotion-regulation strategies (e.g., distraction) under high-intensity conditions (Shafir, Schwartz, Blechert, & Sheppes, 2015; cf. Silvers, Weber, Wager, & Ochsner, 2014) and is challenging for individuals characterized by depression and anxiety (Campbell-Sills et al., 2011; Erk et al., 2010; Johnstone et al., 2007; Moser et al., 2014; Nasso et al., 2019). The findings from the current research suggest that distanced self-talk may

function as a viable alternative. Future research should directly test this hypothesis.

Second, additional research is needed to examine whether the current findings generalize to clinical samples who routinely grapple with intense emotions surrounding negative past or anxiety-provoking future experiences. The exploratory analyses reported in Study 2 provide preliminary evidence suggesting that those at high risk for depression and anxiety (on the basis of their responses to the Patient Health Questionnaire and the Penn State Worry Questionnaire, respectively) benefit from distanced self-talk; however, future research should continue to examine this issue with larger clinically diagnosed samples. In this vein, a third challenge for future research concerns identifying whether distanced self-talk can be profitably incorporated into existing cognitive-therapy treatments to enhance their benefits or used as a standalone intervention that individuals who are characterized by anxiety or depression can implement in their daily lives.

One question raised by the current findings is why we failed to observe a relationship between individual differences in emotional vulnerability and negative emotional reactivity in Study 2. We suspect this may be due to the nature of experiences that were sampled in Study 2, which were all quite intense (rated above the midpoint of the scale at baseline). Thus, the emotional intensity of the event may have overridden individual differences in terms of influencing emotional response. Future research should investigate this possibility further.

In sum, these findings highlight the functionality of a theory-driven, easily implemented linguistic tool that can help people regulate negative emotions surrounding a range of negative experiences. They further add to a growing body of research illuminating how subtle shifts in language can be leveraged to adaptively alter a person's self-perspective in ways that have implications for how they think and feel.

Transparency

Action Editor: Stefan G. Hofmann
Editor: Scott O. Lilienfeld
Author Contributions

E. Kross, J. Jonides, P. Verduyn, and O. Ayduk developed the study concept and contributed to the study design. B. Drake performed testing and data collection. A. Orvell and B. D. Vickers analyzed and interpreted the data under the supervision of E. Kross and P. Verduyn. A. Orvell drafted the manuscript, and E. Kross provided critical revisions. All of the authors approved the final manuscript for submission.

Declaration of Conflicting Interests

The author(s) declared that there were no conflicts of interest with respect to the authorship or the publication of this article.

Funding

We are grateful for funds provided by the University of Michigan (No. 349798) and the John Templeton Foundation (No. 348747) to E. Kross, which supported this research.

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Acknowledgments

We thank Gal Sheppes for his thoughtful feedback.

Supplemental Material

Additional supporting information can be found at http://journals.sagepub.com/doi/suppl/10.1177/2167702620951539

Notes

1. Pilot studies indicated that participants were able to generate no more than eight highly distressing events.
2. The event types for two participants were coded by a separate set of coders because they had been overlooked during initial coding. Reliability between coders for these two participants was acceptable, $\kappa = .62$
3. We considered fitting a model that accounted for the random effect of block, but models including this parameter did not consistently converge. Thus, we report the simpler model for all analyses. Note that when models did converge with this parameter, the results did not substantively differ from those reported in the main text.
4. Controlling for event intensity in this analysis revealed a similar pattern of results.
5. To conduct this analysis, we rescaled the Time 2 negative-emotional-reactivity ratings from a 1-to-5 scale to a 1-to-9 scale because all Time 1 ratings were captured using the latter scale.
6. Participants who reported two native languages, one of which was English, were included.
7. All but one participant included in the subsample scored at or above the clinical cutoff on both measures. Removing this participant from the analysis did not influence any of the results.
8. Controlling for event intensity in this analysis revealed a similar pattern of results.
9. The model did not converge when we allowed for the slope of type of self-talk to vary across participants, so we allowed for random intercepts only.

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