Supplemental Online Materials (SOM) for

Relational Attributions for One's Own Resilience Predict Compassion for Others

Table of Contents

Note. This document contains supplemental materials for all studies in our paper, and reports studies not presented in the main text for reasons outlined in each study's write-up below. In this document, we focus on key additional analyses not in the main text, but note that additional measures, study materials, and data (including exploratory variables) are available via OSF (https://bit.ly/3nGflGw). Please also see the OSF page for a living version of this document.

Additional Measures and Analyses not in the Main Text

Study 1: Additional Results

Exploratory Factor Analysis. A principal component analysis using principal axis factoring with maximum likelihood estimation and a varimax rotation examined whether resilience attributions across the three factors (internal, relational, and situational) were distinct. The analysis revealed the expected three-factor solution (eigenvalues 1.95, 1.71, and 1.01, respectively).

Discriminant Validity. To test that the three components of resilience attributions (internal, relational, and situational) are distinct from six closely related constructs (communal orientation, interdependent self-construal, independent self-construal, locus of control, extraversion, and agreeableness), we conducted confirmatory factor analyses using lavaan (Rosseel, 2012) in R with maximum likelihood estimation, following recommendations in the scale validation literature (Bentler & Dudgeon, 1996; Rossell et al., 2018). A nine-factor model did not display acceptable fit with the data, χ^2 (2,241, N = 400) = 8,852.34, CFI = .83, RMSEA = .09, SRMR = .09. We found similar results when excluding the item about faith in power as a situational factor χ^2 (2,174, N = 400) = 8,559.14, CFI = .84, RMSEA = .09, SRMR = .09. Upon further investigation, we found that the items of interdependent self-construal, independent self-construal, locus of control, extraversion, and agreeableness did not load as six separate factors, χ^2 (1,814, N = 400) = 7,515.82, CFI = .83, RMSEA = .09, SRMR = .10. As a result, we present six separate factor analyses comparing each separate factor from internal, relational, and situational resilience attributions.

We also conducted six separate chi squared difference tests to examine whether a four-factor model that distinguishes our three resilience attributions against a related construct is a better fit

as compared to a model that merges the relational construct with one of the related dimensions in the attributions scale. For example, we compared whether a four-factor model that treated the three resilience attribution factors (internal, relational, and situational) as distinct from communal orientation against a three-factor model that combined communal orientation with relational resilience attributions.[1] Across our analyses, we found that a four-factor model was a better fit of the data relative to a three-factor model in which a related construct was integrated with one of the attribution dimensions, $\Delta\chi s^2 (\Delta 3, N = 402) > 42.28, ps < .001$. We present the main results in Table S1. We also find similar patterns when excluding the faith in higher power item, $\Delta\chi s^2 (\Delta 3, N = 402) > 47.59$, and present these results in Table S2.

[1] A confirmatory factor analysis for the two self-construal subscales (independent and interdependent) did not meet standard thresholds for a two-factor model, $\chi 2$ (1,349, N = 400) = 2,716.42, CFI = .81, RMSEA = .12, SRMR = .10. As a result, we tested our resilience attributions against independent and interdependent self-construal in two separate models, rather than in one. We further note that our preregistration document mistakenly collapsed across these subscales (treating them as one measure of trait self-construal), when they were to be analyzed separately.

Table S1. Confirmatory Factor Analysis (CFA) in Study 1.

	Three factor model					Four factor model					
Model	$\chi 2$	*df*s	CFI	TLI	RMSEA	$\chi 2$	*df*s	CFI	TLI	RMSEA	$\Delta\chi 2$
Interdependent Self-Construal	1,005.85	206	.91	.90	.10	831.52	203	.93	.92	.09	116.19***
Independent Self-Construal	1,893.41	206	.79	.76	.14	1,110.68	203	.89	.87	.11	232.37***
Communal Orientation	1,240.90	167	.92	.91	.13	934.08	164	.94	.93	.11	177.72***
Locus of Control	738.52	167	.83	.81	.09	383.44	164	.94	.93	.06	112.61***
Extraversion	311.72	32	.90	.86	.15	99.71	29	.97	.96	.08	162.26***
Agreeableness	114.13	32	.97	.96	.08	50.76	29	.99	.99	.04	42.28***

Note: This table compares a four-factor CFA treating the three components of resilience attribution (internal, relational, and situational) against a three-factor CFA to test whether the three resilience attributions are distinct from related constructs. The three factor models merged relational resilience items with the related construct for interdependent self-construal, communal orientation, extraversion, and agreeableness. For the remaining constructs (independent self-construal and locus of control), we merged the internal attribution items with the related construct.

Table S2. Confirmatory Factor Analysis (CFA) in Study 2 excluding faith in higher power item.

	Three factor model					Four factor model					
Model	$\chi 2$	*df*s	CFI	TLI	RMSEA	$\chi 2$	*df*s	CFI	TLI	RMSEA	$\Delta\chi 2$
Interdependent Self-Construal	893.35	186	.92	.92	.10	732.35	183	.94	.93	.09	105.12***
Independent Self-Construal	1,849.27	186	.79	.76	.15	1,052.40	183	.89	.87	.11	257.60 ***
Communal Orientation	1,151.27	149	.92	.91	.13	879.73	146	.94	.93	.11	199.72***
Locus of Control	647.52	149	.85	.83	.09	282.44	146	.96	.95	.05	128.79***
Extraversion	271.52	24	.91	.86	.16	44.71	21	.99	.99	.05	152.96***
Agreeableness	81.97	24	.98	.97	.08	20.20	21	>.99	>.99	<.001	47.59***

Note: This table compares a four-factor CFA treating the three components of resilience attribution (internal, relational, and situational) against a three-factor CFA to test whether the three resilience attributions are distinct from related constructs. The three factor models merged relational resilience items with the related construct for interdependent self-construal, communal orientation, extraversion, and agreeableness. For the remaining constructs (independent self-construal and locus of control), we merged the internal attribution items with the related construct. These analyses exclude the "faith in higher power" item in the situational resilience attribution scale.

Table S3. Means, standard deviations, and correlations for each resilience attribution item and all other variables measured in Study 1

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Internal: effort and perseverance	5.54	1.22												
2. Internal: ability	5.54	1.20	.74**											
3. Relational: emotional support	4.57	1.63	.11*	.07										
4. Relational: tips and advice	4.14	1.67	.11*	.10*	.52**									
5. External: chance and luck	4.49	1.48	-.08	-.06	.12*	.19**								
6. External: situation changed	3.72	1.61	-.07	-.04	.14**	.14**	.26**							
7. External: faith in higher power	2.37	1.83	.05	.06	.23**	.21**	.06	.18**						
8. Communal Orientation	4.94	0.83	.21**	.25**	.28**	.18**	.02	-.04	-.03					
9. Interdependent Self-Construal	4.45	0.76	.14**	.13**	.34**	.35**	.10*	.15**	.21**	.41**				
10. Independent Self-Construal	4.64	0.74	.24**	.25**	<.001	.06	.03	.07	.08	.08	<.001			
11. Locus of Control	5.47	2.47	.25**	.21**	-.04	.05	-.26**	-.02	.07	-.11*	<.001	.31**		
12. Extraversion	2.66	1.02	.17**	.14**	.03	.06	-.05	<.001	.19**	.06	-.02	.41**	.31**	
13. Agreeableness	3.90	0.91	.14**	.18**	.23**	.20**	.02	.01	.06	.56**	.44**	-.01	-.01	.06

* indicates $p < .05$. ** indicates $p < .01$.

Study 2: Coding Manual and Additional Results

Resilience Attribution Coding Manual:

	Examples	*1*	*2*	*3*	*4*	*5*
Internal	*Ability, effort, personality (e.g. resilience)*	Not at all		50% Internal		Entirely
Relational	*Other people, community*	Not at all		50% Relational		Entirely
Situational	*Luck, time, it just worked out (i.e. something that is not internal or relational)*	Not at all		50% External		Entirely

Emotional Supportiveness Coding Manual:

Please rate your agreement with the following statement: "This response is emotionally supportive" (1 – strongly disagree to 7 – strongly agree)

Examples

- "Don't sit and mope in your misery" (1)
- "Forget about it" (2)
- "Remember, it's just a job and isn't worth getting upset over" (3)
- "It's temporary and it does get better (4)
- "Make time for yourself, and don't try to do everything on your own (5)
- "Don't be afraid to ask for help and compassion. You're not the first and only person to struggle, so be open and willing to accept support" (6)
- "Listen to your heart, be strong and get all the help you can – you deserve it!" (7)

Additional Results:

In this study, we also examined how attributions and emotional supportiveness may have varied by event type (see Figure S1 and Table S4), which did not show much variation by event type.

Figure S1. Means of Attributions and Supportiveness Across Event Types (+/- 1 SD).

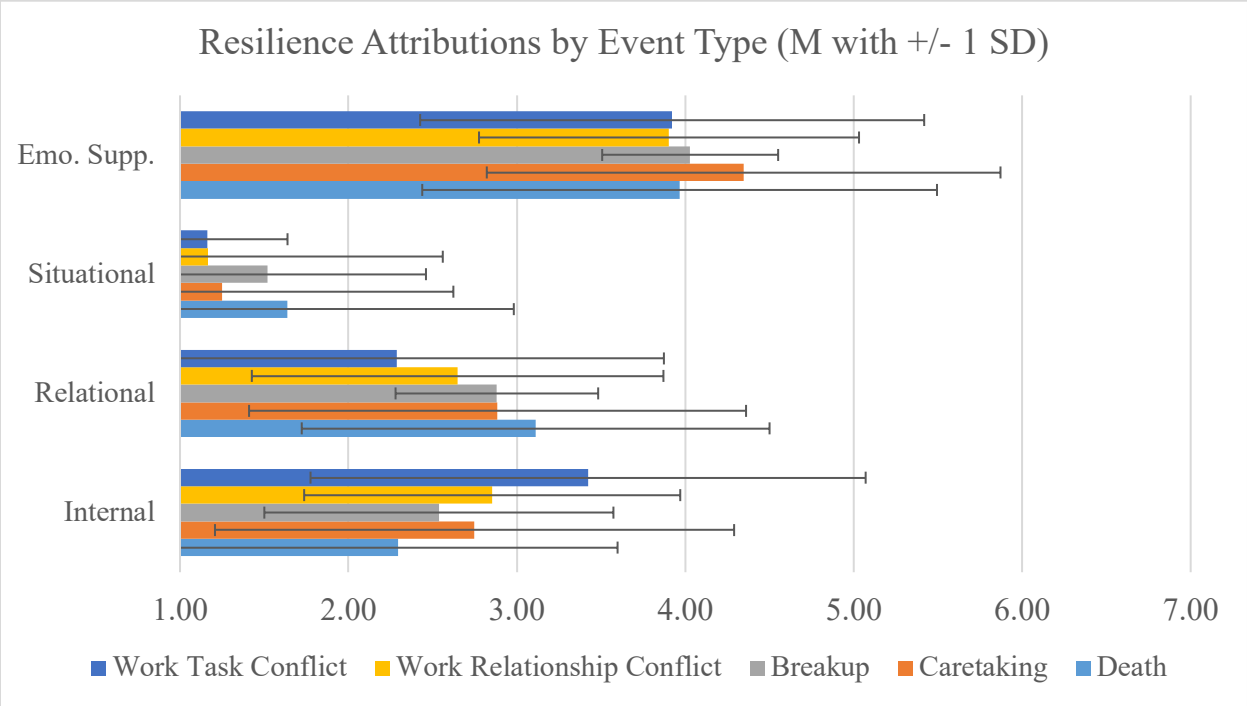


Table S4. Event-level correlations for resilience attributions and event type, Study 2.

	1	2	3	4	5	6	7	8
1. Internal	--							
2. Relational	-.80**							
3. Situational	-.10**	-.27**						
4. Emo. Support	-.10**	.12**	-.02					
Event Type (dummy coded)								
5. Death	-.18**	.13**	.23**	-.03				
6. Caregiving	.03	.01	-.08*	.12**	-.33**			
7. Breakup	-.03	.01	.06	.004	-.26**	-.16**		
8. Work Relationship Conflict	.09**	-.08*	-.17**	-.06	-.47**	-.28**	-.22**	
9. Work Task Conflict	.17**	-.11**	-.08**	-.02	-.23**	-.14**	-.11**	-.19**

While the paper and the above analyses look at the data at the event level of analysis, we can also aggregate the data to the participant-level, which allows us to examine how participants' first-described event's resilience attributions and emotional supportiveness might correlate with their second-described resilience attributions and emotional supportiveness. This aggregation of the data can show us how, for instance, do participants' relational attributions in their first-described event predict compassion in their second-described event?

We also explored the participant-level correlations (see Table S5). We observed that of the three resilience attributions, only participants' relational attributions correlated with the emotional supportiveness of their advice ($r_{event\ A} = .07, p = .09, r_{event\ B} = .15, p < .01$), whereas situational attributions were unrelated to emotional supportiveness, and internal attributions were negatively related for Event B. We saw small to moderate significant positive correlations between resilience attributions across participants' events, ranging from $r = .23$ to $r = .41, p < .001$, as well as the emotional supportiveness across participants' two events ($r = .30, p < .001$). However, importantly, relational attributions for one event were not related to emotional supportiveness for the other event, suggesting they were event-specific rather than indicative of underlying traits (*p*s>.18). In other words, compassion seems connected to specifically formed resilience attributions as opposed to capturing some third variable (e.g., general trait-level prosociality).

Table S5. Person-level correlations for resilience attributions across different events, Study 2.

		1	2	3	4	5	6	7
Event A								
1.	Internal	--						
2.	Relational	-.79**						
3.	Situational	-.11**	-.30**					
4.	Emo. Support	-.04	.07+	-.02				
Event B								
5.	Internal	.24**	-.15**	-.11*	.002			
6.	Relational	-.18**	.23**	-.04	.06	-.80**		
7.	Situational	-.05	-.11	.41**	-.05	-.08	-.23**	
8.	Emo. Support	-.07	.08	-.04	.30**	-.13**	.15**	-.02

** $p < .01$ * $p < .05$; *N* ranges from 293-598 participants, depending on missing data.

Study 3a: Additional Results

In this study (Study 3a in the main text), we also collected additional exploratory variables to examine how resilience attributions might be distinguished from other related constructs, including guilt and shame over smoking, the perceived permanence and controllability of quitting, and autonomous versus controlled regulation over quitting. To assess shame and guilt, participants completed three items assessing shame (e.g., "I felt like I was a bad person") and three items assessing guilt (e.g., "I felt like apologizing to the people exposed to my smoking") (which loaded onto one factor in this study and are thus analyzed together; Eigen values > .70, $\alpha = .92$). To assess autonomous versus controlled motivation, participants completed six items assessing controlled motivation (e.g., "I quit because other people would be mad at me if I didn't"; $\alpha = .76$), and autonomous motivation (e.g., "I found it a personal

challenge to do so"; α = .69), all on scales from 1(*Strongly disagree*) to 7(*Strongly agree*). See Table S6 below for the correlations among these variables, providing support for convergent and divergent validity. Table S7 presents the regression table for the results of our key predictors with the demographic control variables.

Table S6. Correlations among the Variables in Study 3a.

Variables	1	2	3	4	5	6	7	8	9	10
1. Internal Resilience Attribution										
2. Relational Resilience Attribution	-.26**									
3. Situational Resilience Attribution	-.07	.41**								
4. Compassion	-.14	.26**	.09							
5. Permanence	-.10	-.12	.03	.10						
6. Control	.15	.10	.05	-.19*	-.24**					
7. Autonomous Regulation	-.01	.16*	.07	.27**	-.03	.04				
8. Controlled Regulation	-.02	.20**	.23**	.18*	.02	-.01	.42**			
9. Difficulty (Reverse-coded)	.16*	-.35**	-.06	-.33**	.01	.04	-.31**	-.15		
10. Shame and guilt	-.02	.21**	.24**	.14	-.05	.03	.40**	.68**	-.06	
11. Gender (1 = male)	.17*	.08	.02	.07	-.02	.01	.06	.13	-.02	.01

** $p < .01$. * $p < .05$.

Table S7. Regression Analysis in Study 3a.

	Model 1	Model 2
Internal Attributions	-.08 [.15]	-.12 [.15]
Relational Attributions	.25** [.08]	.21* [.09]
Situational Attributions	-.06 [.09]	.03 [.10]
Age		.10 [.01]
Religiosity		.08 [.06]
Education		.05 [.13]
Ethnicity		.14 [.14]
Gender		-.04 [.30]
Adjusted R^2	0.07	0.08

Dependent variable is compassion. *$p < .05$, **$p < .01$, ***$p < .001$.

Study 3b: Additional Results

Consistent with our preregistration document, we also analyzed the correlations between compassion and the relational attributions, again finding that only relational attributions significantly correlated with compassion, $r = .16$, $p = .004$ ($r_{internal} = .03$, $p = .634$; $r_{situational} = .005$, $p = .938$). We also preregistered an additional analysis examining whether anticipating re-experience with bullying would predict compassion, and we did not find support for this prediction ($p = .865$). This hypothesis is less relevant to the current paper, and thus is not reported in the main text.

Study 4a: Additional Results

Table S8. Regression Analysis including Event-Level Controls in Study 4a.

	Model 1	Model 2
Internal Attributions	.10 [.07]	.15* [.07]
Relational Attributions	.23*** [.05]	.23*** [.06]
Situational Attributions	-.04 [.07]	-.01 [.07]
Satisfaction		-.12 [.07]
Personal Desire		-.11 [.06]
Partner Desire		.17+ [.06]
Mutual Desire		-.18* [.05]
Time Since Divorce		.07 [.001]
R^2	0.07	0.12

Dependent variable is compassion. *+ p < .10, *p < .05, **p < .01, ***p < .001*.

Additional Mediation Analyses across Studies

In this section, we describe additional findings not described in the main text that explore potential mechanisms driving the link between relational resilience attributions and compassion.

Gratitude. Because of the correlational nature of these studies, we interpret these results with caution, and present these results below.

Study 3b. In Study 3b, gratitude was significantly related to compassion, $\beta = 0.18$, $p < .001$, and relational resilience attributions were significantly related to gratitude, $\beta = 0.31$, $p < .001$. Gratitude significantly mediated the relationship between relational resilience attributions and compassion, 95% CI [.01, .07]. When controlling for gratitude, the effect of the relational resilience attributions remained marginally significant ($\beta = .08$, $t = 1.96$, $p = .051$).

Supplemental Study 6 (described in Section 2 of this document). Gratitude again significantly predicted compassion, $\beta = 0.17$, $p = .001$, and relational resilience attributions were significantly related to gratitude, $\beta = 0.21$, $p < .001$. Gratitude significantly mediated the relationship between relational resilience attributions and compassion, 95% CI [.002, .08]. When controlling for gratitude, the effect of the relational resilience attributions remained ($\beta = .18$, $t = 2.96$, $p = .003$), indicating partial mediation.

Study 4a. Gratitude was again significantly related to compassion, $\beta = 0.20$, $p = .001$, and relational resilience attributions were significantly related to gratitude, $\beta = 0.45$, $p < .001$. Gratitude did not significantly mediate the relationship between relational resilience attributions and compassion, 95% CI [-.01, .10]. However, in this study, the gratitude items were presented with a self-compassion scale, which may have affected responding. With this error corrected in Supplemental Study 6, mediation by gratitude was observed.

Responsibility Judgments. One additional possibility raised[2] is that relational resilience attributions shift expectations away from personal responsibility to cope with distress and toward receiving help. We assessed this possibility in Studies 4a and 4b in the main text.

Study 4a. Participants indicated how personally responsible the target was to cope ("To what extent do you think it is completely Daniel's responsibility to cope with divorce?"), as well

[2] We thank an anonymous reviewer for this insight.

as their own felt responsibility toward Daniel ("… to what extent do you think you might feel some degree of responsibility for Daniel's ability to cope with divorce?"), on 7-point scales.

We examined the extent to which the positive relationship between relational attributions and compassion was driven by these responsibility judgments (using PROCESS Model 6). The results revealed that participants' felt responsibility to help did not mediate this relationship, 95% CI [-.005, .06], but perceptions of personal responsibility did, 95% CI [.02, .10]. Specifically, perceived personal responsibility was negatively related to compassion, $b = -.30$, $p < .001$, and relational attributions were negatively related to perceived personal responsibility, $b = -.19$, $p = .001$. The decreased tendency to place personal responsibility to cope on those in distress among those higher in relational resilience attributions drove the effect.

Study 4b. Participants completed the same items as in Study 3, but in the context of the pandemic.

We examined the extent to which the positive relationship between relational attributions and compassion was driven by perceptions of responsibility. We found that feelings of responsibility to help the target mediated the relationship between relational attributions and compassion, *indirect effect* = .10, *SE* = .03, 95% CI [.05, .15], but perceptions of the target's personal responsibility did not, *indirect effect* = .008, *SE* = .03, 95% CI [-.05, .07].

Given that, in this study, internal attributions were negatively linked to compassion, we also examined the links between these potential mediators, internal attributions, and compassion. We found that, while there were still positive indirect effects for felt responsibility to help, 95% CI [.003, .08], the negative relationship appeared to be driven by perceptions of the target's personal responsibility, *indirect effect* = -.12, *SE* = .03, 95% CI [-.19, -.06]. Thus, people who

formed more internal resilience attributions believed that the target had more personal responsibility for coping, which decreased compassion for their plight.

Taken together, there is some initial evidence that perceptions of responsibility for coping contribute to these effects; however, the pattern of results are not entirely consistent, and we believe that the perceptions of responsibility of coping warrant future investigation.[3]

Exploratory Self-Efficacy Measure

In Studies 3a and Supplemental Study 6 we also examine the possibility that resilience attributions are associated with differential levels of self-efficacy. One possibility is that, even if relational resilience attributions can facilitate compassion, they may come at the cost of individuals' own feelings of efficacy in facing similar distressing events in the future. Appraisal theory of stress stipulates that people make assessments of the resources they have available to be able to cope with distressing events, such as personal adequacies and social support (Lazarus & Folkman, 1984; Taylor, 1983). When people form internal resilience attributions, they might feel a greater sense of personal competence, control, and confidence in sustaining their adaptive achievement (for example, to keep from relapsing into an addiction or unemployment, or to avoid the failure of another romantic relationship). This perspective is consistent with theorizing within attribution theory, such as Kelley's (1971) notion of "effective control." By contrast, if people were to attribute their resilience to luck or fate, this implies that they have little control

[3] We further note that in Studies 4a, 4b, and 7 of the main text, we included some additional exploratory variables not included above (namely, measures of self-compassion, general affect, and counterfactuals regarding the event). These variables were not found to significantly mediate the effects, but all data are available online. We further note that in Studies 4 and 7, we collected data on pay-it-forward motivation (Willer et al., 2019) using 3-items (e.g., "To the extent that I received support or assistance, I feel motivated to "pay it forward"). Although we found some evidence of mediation for these items, the prompt "to the extent that I received support or assistance" may have been only relevant to those with high relational resilience attributions, and given this empirical issue, these data are available online, but not discussed here.

over ensuring that the situation will not recur, therefore depleting their perceived ability to cope with stressful situations (Kelley, 1971; Lazarus, 1966; Houston, 1972). Given the lack of research on relational attributions, it is unclear how relational attributions may be related to self-efficacy.

Study 3a

Procedure. In Study 3a, we measured self-efficacy in two ways. First, participants completed a measure developed to assess the self-efficacy of former smokers to continue to refrain from smoking (Etter et al., 2000). Participants completed this 12-item scale which asked them to indicate how sure they were, on a scale from 1 (*Not at all sure*) to 7 (*Absolutely sure*), that they could refrain from smoking in a range of situations (e.g., When I feel nervous). This measure demonstrated high interitem reliability ($\alpha = .96$). Participants also completed an anticipated re-experience measure (Hertel et al., 2011), which asked them to indicate how confident they were that they would not start smoking again on a scale from 1 (*Not at all confident*) to 7 (*Very confident*) across four time points from *In the next 7 days* to *In the next year*, and *totally and for good* ($\alpha = .91$).

Results. In examining self-efficacy, we found that internal resilience attributions were positively related to self-efficacy in refraining from smoking, $\beta = 0.27$, $SE = 0.10$, $p < .001$, while relational resilience attributions, $\beta = -0.005$, $SE = 0.06$, $p = .949$, and situational resilience attributions, $\beta = -0.11$, $SE = 0.06$, $p = .166$, were not.

Similarly, we found that internal attributions were positively related to confidence in not relapsing, $\beta = 0.19$, $SE = 0.08$, $p = .014$, as were relational attributions, $\beta = 0.18$, $SE = 0.05$, $p = .039$. We also found that situational resilience attributions were negatively related to confidence in not relapsing, $\beta = -0.16$, $SE = 0.65$, $p = .006$.

Supplemental Study 6 (Results Reported in Full in Supplemental Studies Section)

Procedure. Participants again completed a self-efficacy measure, based on the anticipated re-experience measure in the previous smoking study that asked, "How likely is it that you may struggle to cope with your previous divorce again?" across five time points from *In the next month* to *In the next 10 years*.

Results. Examining the relationships between the resilience attributions and self-efficacy, we did not find evidence that internal, $\beta = -0.07$, $SE = 0.05$, $p = .228$, relational, $\beta = 0.02$, $SE = 0.04$, $p = .622$, and situational resilience attributions, $\beta = 0.03$, $SE = 0.06$, $p = .544$ (without the faith item: $\beta = 0.03$, $SE = 0.05$, $p = .648$), significantly predicted anticipated re-experience of suffering from their divorce. It could be that the phenomenon of divorce is fundamentally different from addiction to cigarettes. Alternatively, given that relationships inherently involve another party, people may feel like they have less personal control over this particular domain, and thus their own resilience attributions feel less informative for these judgments. However, future research should further investigate the link between self-efficacy and resilience attributions across different event types. Regardless, the results of both studies suggest that relational resilience attributions do seem to increase compassion, while also not harming self-efficacy.

Taken together, we found mixed evidence that internal resilience attributions are related positively to self-efficacy, suggesting that these attributions might have an intrapersonal function to boost confidence in facing potential future life stressors. Importantly, we also found that there was no negative relationship between relational resilience attributions and self-efficacy, suggesting that, just as relational resilience attributions may facilitate compassion, they do not seem to come at a direct cost to individuals' feelings of self-efficacy.

Supplemental Scale Validation Information

Given that we used a measure developed for this research and made adjustments over the course of conducting this research, we offer additional scale information below. All data are available via OSF. We also conducted two separate studies that use confirmatory factor analyses to test for the factor structure and discriminant validity of the resilience attributions scales in Supplemental Studies 12 and 13.

Exploratory Factor Analyses

Study 3a. Conducting an exploratory factor analysis with direct oblimin rotation revealed a two-factor solution. The eigenvalues were 2.24 for the first factor , and 1.72 for the second factor. Given that this was the only study in which the situational and relational items loaded onto a single factor, and given our theorizing and preregistered analysis plans, we keep these three subscales separate in our analyses.

Study 3b. Conducting an exploratory factor analysis with direct oblimin rotation revealed a three-factor solution. The eigenvalues were 1.98 for the first factor (effort, ability items; factor loadings > .83), 1.55 for the second factor (help, advice items; factor loadings > .63), and 1.23 for the third factor (the situation, luck/chance items; factor loadings > .25). The higher power item did not load highly onto any of these three factors (factor loadings < .18).

Supplemental Study 6. Conducting an exploratory factor analysis with direct oblimin rotation revealed a three-factor solution. The eigenvalues were 2.05 for the first factor (factor loadings > .71), 1.51 for the second factor (factor loadings > .66), and 1.04 for the third (factor loadings > .33). The higher power item did not load highly onto these three factors (factor loadings < .13).

Results for Situational Resilience Attributions Excluding Faith in Higher Power Item

As noted above and in text, the "faith in a higher power" item often did not load onto the same factor as the other resilience attribution items. To be consistent with our preregistration documents, we maintain this item in our analyses in the main text, but report the results without this item below (when applicable):

Study 3b. Situational resilience attributions were again not related to compassion, $\beta = -0.03$, $SE = 0.05$, $p = .652$.

Study 4a. Situational resilience attributions were again not related to compassion, $\beta = -0.06$, $SE = 0.06$, $p = .350$.

Study 4b. Situational resilience attributions were related to compassion in this study when the faith in a higher power item was excluded, $\beta = 0.15$, $SE = 0.07$, $p = .010$.

Results for Attributions-Compassion Correlations at the Item Level

Table S9. Correlations Between Resilience Attributions and Other Variables in Study 3a.

	1	2	3	4	5	6	7
1. Internal: Effort	--						
2. Internal: Ability	.78**						
3. Relational: Help	-.02	-.03					
4. Relational: Obligations	-.33**	-.37**	.24**				
5. Situational: Aids	-.01	.03	.17*	.13			
6. Situational: Luck	-.10	-.05	.54**	.11	.24**		
7. Situational: Situation	-.06	-.09	.17*	.25**	.29**	.27**	
8. Compassion	-.13	-.14	.12	.30**	.06	.08	.05

** $p < .01$, *$p < .05$; $N = 166$

Table S10. Correlations Between Resilience Attributions and Other Variables in Study 3b.

	1	2	3	4	5	6	7
1. Internal: Effort	--						
2. Internal: Ability	.83**						
3. Relational: Help	.16**	.12*					
4. Relational: Tips & Advice	.05	.05	.62**				
5. Situational: Luck & Chance	-.04	-.03	.06	.07			
6. Situational: Situation	.04	.02	.07	-.07	.24**		
7. Situational: Faith in higher power	.07	.07	.10	.18**	.05	-.01	
8. Compassion	.03	.02	.15**	.13**	-.11*	.06	.04

** $p < .01$, *$p < .05$; $N = 315$

Table S11. Correlations Between Resilience Attributions and Other Variables in Study 4A.

	1	2	3	4	5	6	7
1. Internal: Effort	--						
2. Internal: Ability	.85**						
3. Relational: Help & Emotional Support	.24**	.19**					
4. Relational: Tips & Advice	.22**	.20**	.55**				
5. Situational: Luck & Fate	.08	.07	.15*	.20**			
6. Situational: The Situation	.04	.03	.03	.01	.14*		
7. Situational: Faith in higher power	.10	.03	.26**	.22**	-.003	.02	
8. Compassion	.16**	.13*	.25**	.19**	-.03	-.06	.13*

** p <.01, *p<.05; N = 252 due to missing data

Table S12. Correlations Between Resilience Attributions and Other Variables in Study 4B.

	1	2	3	4	5	6	7
1. Internal: Effort	--						
2. Internal: Ability	.82**						
3. Relational: Help & Emotional Support	.31**	.31**					
4. Relational: Tips & Advice	.33**	24**	.50**				
5. Situational: Luck & Fate	.14**	.10	.10	.26**			
6. Situational: The Situation	.20**	.20**	.16**	.36**	.31**		
7. Situational: Faith in higher power	.12*	.10	.13*	.19**	.07	.07	
8. Compassion	.00	-.05	.26**	.14*	.13*	.11	.07

** p <.01, *p<.05; N = 308

Perceived Event Difficulty and Relational Resilience Attributions

Given that perceived event difficulty was often correlated with compassion, and relational resilience were also correlated with compassion, it is possible that people who have a more difficult time with the event in question are also more likely to form relational resilience attributions, which, in turn, predicts compassion. It may be, for example, that these individuals are more likely to seek out and rely on help, which makes these interpersonal factors more salient. We investigated this possibility by regressing relational attributions onto the perceived event difficulty items in our correlational data.

In Study 3a, we did find that perceived difficulty of one's own experience (reverse-coded) predicted *increased* relational resilience attributions, $\beta = -0.31$, $SE = 0.06$, $p < .001$ among ex-smokers. In Study 3b, we did not find that perceived difficulty predicted relational

resilience attributions in the bullying context, $\beta = -0.08$, $SE = 0.06$, $p = .140$. In Study 4a, perceived difficulty surprisingly predicted *decreased* relational resilience attributions, $\beta = -0.15$, $SE = 0.06$, $p = .014$ among those who overcame divorce. In Study 4b, the perceived difficulty of pandemic quarantines predicted *increased* relational resilience attributions, $\beta = 0.26$, $SE = 0.05$, $p < .001$. In Study 6, examining time 1 resilience attributions only, perceived program difficulty (as operationalized by how many students were kicked out or dropped out) did not predict relational resilience attributions, ps $> .796$. Taken together, we find quite mixed evidence about the link between difficulty and relational attributions. It is possible that event-based heterogeneity contributes to these mixed results, and this also warrants further investigation.

Studies Not Reported in Main Text

Supplemental Study 1: Content Validation

In Supplemental Study 1, we conducted a content analysis based on the recommendations of Hinkin and Tracey (1999) and Colquitt and colleagues (2019) to ensure that the items for each given type of resilience attribution were indeed measuring that resilience attribution and not the others.

Participants. We recruited 250 North American adults on Prolific. Fourteen participants failed a 1 item forced-choice attention check asking them to indicate, "What will your task be today?" where the options were answering questions about color preference, judging the extent to which different statements measure concepts and definitions, and coming up with different concepts, definitions, and measures. The results below are from the remaining 236 participants (42.8% female; M_{age} = 36.69, SD_{age} = 12.56).

Procedure. Participants were provided with the construct definitions for internal, relational, and situational attributions, and asked to indicate the extent to which each of the seven items (presented in random order) were consistent with each of the three construct definitions on a 7-point scale from *Strongly disagree that this statement measures [the construct]* to *Strongly agree that this statement measures [the construct]*. The items included two items for internal attributions (my own effort and perseverance; my own ability), two items for relational attributions (help and emotional support from people in my life; concrete tips and advice about how to manage the situation from people in my life), and three items for situational attributions (luck and fate; the situation changed; faith in a higher power).

Results. We first conducted repeated measures ANOVAs to assess each items' content validity by comparing the mean rating for each item across each of the three construct definitions, *F*s ranged from 25.82 to 245.34 (*p*s < .001, η_p^2s > .09) (see Table S13)

Next, we followed the recommendations of Colquitt et al. (2019) to examine the *definitional correspondence* and the *definitional distinctiveness* of each of our items using approaches outlined by Anderson and Gerbing (1991) and Hinkin and Tracey (1999). First, the Hinkin Tracey correspondence (*htc*) captures the extent to which a given item matches the focal construct (e.g., the extent to which participants agreed that 'ability' is consistent with the definition of internal attributions). To compute the *htc* index we averaged the evaluations for items corresponding to each construct and divided the average by 7 (the number of anchors in our Likert scale). For instance, if all participants said 'ability' was 7/7 in capturing internal attributions, the computation would be 7/7 = 1. Thus, values close to 1 indicate a strong fit between items measured and the construct definition. *Htc* scores below .59 are thought to lack content adequacy. We found all items to have sufficient content adequacy (*htc*s > 0.65), but the items ranged from very strong (effort, ability items), to strong (help), to moderate (tips), to weak (luck, situation, and faith) (see Colquitt et al., 2019 for evaluation criteria).

To test for construct distinctiveness, we calculated the Hinkin Tracey distinctiveness (*htd*) index. The *htd* is calculated based on the difference between the definitional correspondence rating of an item on its intended construct and the ratings on unintended, orbiting constructs. This difference is then divided by k – 1, where k is the max number of anchors (here = 6). Thus, *htd* values are above 0 when items receive higher ratings on the intended construct than on orbiting ones. *Htd* scores of lower than .03 are said to lack construct distinctiveness. All of our items demonstrated sufficient construct distinctiveness (*htd*s > 0.40), with all items

demonstrating 'very strong' *htd* scores except for the faith item, which was 'weak' (though above threshold).

Table S13. Results from Study S1 representing fit between item and construct definition.

Item	Internal	Relational	Situational	*F* Stat, η^2	*Htc*	*Htd*
My own effort and perseverance	**6.46 (0.80)**	3.45 (2.16)	3.59 (2.20)	245.34, .51	0.92	0.49
My own ability	**6.42 (0.91)**	3.52 (2.17)	3.58 (2.15)	229.42, .49	0.92	0.48
Help and emotional support	3.41 (1.91)	**6.07 (1.31)**	3.31 (2.08)	208.74, .47	0.87	0.45
Concrete tips and advice	3.30 (1.80)	**5.76 (1.33)**	3.27 (1.99)	170.52, .42	0.82	0.41
Luck and fate	2.61 (1.80)	2.69 (1.71)	**5.38 (1.79)**	221.54, .49	0.77	0.45
The situation changed	2.86 (1.73)	3.36 (1.84)	**5.54 (1.54)**	196.91, .46	0.79	0.41
Faith in a higher power	3.92 (2.07)	3.46 (2.00)	**4.52 (2.01)**	25.82, .09	0.65	0.15

Thus, these results demonstrated that our measures distinctly capture internal, relational, and situational resilience attributions. The items measuring internal, relational, and situational resilience attributions were rated significantly higher on the intended construct than on any other construct. We note that, although the faith item was above threshold, it was weak, consistent with other data in the paper. This is discussed further in the main text.

Supplemental Study 2: Scale Validation 1

As a first step to validating the resilience attribution scale, we conducted an exploratory factor analysis to test whether the scale is comprised of three components (internal, relational, and situational) and a confirmatory factor analysis to test the scale's factor structure.

Participants and Procedure. Two hundred participants (42.5% female; M_{age} = 33.82, *SD* = 11.98) recruited from Prolific Academic completed an online study in exchange for $1.00. Participants answered the seven resilience attribution items featured in the main paper: two items for internal (r = .61), two for relational (r = .56), and three for situational (α = .40). At the end, participants provided their demographic information (gender, age, and ethnicity).

Exploratory Factor Analysis. An exploratory factor analysis using principal axis factoring with maximum likelihood estimation and a varimax rotation examined whether the three resilience attributions were distinct. Across all items, the analysis revealed a three-factor solution (eigenvalues 2.04, 1.66, and 1.06, respectively) without cross loadings, and the three factors explained 69% of the variance. These findings provide initial evidence that resilience attributions reside across the three components: internal, situational, and relational.

Confirmatory Factor Analysis. We then conducted confirmatory factor analyses to test whether resilience attributions fall into three categories: internal, situational, and interpersonal. To conduct these analyses, we used lavaan (Rosseel, 2012) in R with maximum likelihood estimation (Bentler & Dudgeon, 1996; Rosseel, 2012). A one-factor model displayed poor fit with the data, χ^2 (14, N = 200) = 146.67, CFI = .49, RMSEA = .22, SRMR = .14. In contrast, the expected three-factor model displayed good fit with the data, based on recommendations from Hu and Bentler (1999), χ^2 (11, N = 200) = 32.93, CFI = .92, RMSEA = .10, SRMR = .07. Supporting the distinctiveness of the three components of resilience attributions, a chi-squared

difference test showed that the model fit improved significantly from the one-factor to three-factor model, $\Delta\chi^2$ ($\Delta 3$, $N = 3$) = 113.74, $p < .001$.

Supplemental Study 3: Scale Validation 2

As a second step to validating the resilience attribution scale, we conducted a test of discriminant validity to examine whether the three resilience attributions are distinct from related constructs, including locus of control, self-construal, openness, extraversion, and communal orientation.

Participants. Two hundred participants (47.8% female; M_{age} = 40.91, SD = 13.90) recruited from Prolific Academic completed an online study in exchange for $1.60.

Procedure. Participants answered the seven resilience attribution items featured in the main paper: two items for internal (r = .73), two for relational (r = .66), and three for situational (α = .30).

Participants then completed the Locus of Control scale as in Study 1a (Rotter, 1966), self-construal scale as in Study 1b (α = .82; Singelis, 1994), extraversion (α = .78) and openness (α = .64) items from the ten-item personality inventory as in Study 3 (Gosling et al., 2003), and communal orientation scale in Study 4 (α = .86; Clark et al., 1987; Mills & Clark, 1994). We note that given the length of the self-construal scale, we used an abridged 7-item version that excluded the reverse coded items. All other scales were used based on versions that appeared in the main manuscript.

At the end, participants provided their demographic information (gender, age, and ethnicity).

Results and Discussion.

We report means, SDs, and bivariate correlations of our measures in Table S14.

Resilience Attributions: 3 Factor Structure. We conducted a series of confirmatory factor analyses using R to confirm the factor structure of the resilience attributions measure and further distinguish it from similar constructs. To test that resilience attributions reside as three separate factors (internal, relational, and situational), we conducted confirmatory factor analyses using lavaan (Rosseel, 2012) in R with maximum likelihood estimation (Bentler & Dudgeon, 1996; Rosseel, 2012). As in Supplemental Study 1, a one-factor model displayed poorer fit with the data, χ^2 (14, N =400) = 405.70, CFI = .42, RMSEA = .26, SRMR = .19. In contrast, the expected three-factor model displayed better fit with the data, χ^2 (17, N = 400) = 53.02, CFI = .94, RMSEA = .10, SRMR = .07. Supporting the distinctiveness of the three components of resilience attributions, a chi-squared difference test showed that the model fit improved significantly from the one-factor to three-factor model, $\Delta\chi^2$ (Δ3, N = 400) = 352.68, $p < .001$.

We find similar results for the shortened scale with the two-item situational factor that excluded the faith item: a one-factor model displayed poorer fit with the data, χ^2 (12, N =400) = 373.02, CFI = .44, RMSEA = .32, SRMR = .21. In contrast, the expected three-factor model displayed better fit with the data, χ^2 (6, N = 400) =21.83, CFI = .98, RMSEA = .08, SRMR = .04. Supporting the distinctiveness of the three components of resilience attributions, a chi-squared difference test showed that the model fit improved significantly from the one-factor to three-factor model, $\Delta\chi^2$ (Δ3, N = 400) = 351.19, $p < .001$.

Discriminant Validity. To test that the three components of resilience attributions (internal, relational, and situational) are distinct from five closely related constructs (locus of control, self construal, openness, extraversion, and communal orientation), we conducted confirmatory factor analyses using lavaan (Rosseel, 2012) in R with maximum likelihood estimation, following recommendations in the measurement literature (Bentler & Dudgeon,

1996; Rossell et al., 2018). The expected eight-factor model displayed acceptable fit with the data, χ^2 (874, N = 400) = 3,432.55, CFI = .92, RMSEA = .09, SRMR = .10. When excluding the item about faith in a higher power as a situational factor, the expected eight-factor model displayed good fit with the data, χ^2 (832, N = 400) = 2,975.47, CFI = .93, RMSEA = .08, SRMR = .09.

Table S14. Means, standard deviations, and correlations for the variables measured in Supplemental Study 3

Variable	Mean	SD	1	2	3	4	5	6	7
1. Internal Attributions	6.01	0.85							
2. Relational Attributions	4.41	1.54	<.001						
3. Situational Attributions	3.55	1.22	-.08	.43**					
4. Extraversion	3.38	2.10	.21**	.25**	.08				
5. Openness	5.36	1.71	.18**	.20**	.06	.31**			
6. Locus of Control	6.30	2.86	.28**	<.001	-.14**	.32**	.08		
7. Self-Construal	4.36	1.11	-.07	.24**	.25**	-.02	-.02	-.06	
8. Communal Orientation	3.71	0.57	-.14**	-.02	.13**	-.08	-.18**	-.19**	.07

***p < .001, **p < .01, *p < .05, ^{+}p < .10

Supplemental Studies 4a and 4b: Baseline Attributions

The aim of the first set of supplemental studies was to examine people's baseline resilience attributions –that is, to measure their self-generated reasons for successfully overcoming distressing life events. We expected that North Americans would form stronger internal attributions than relational or situational attributions. We surveyed samples of individuals who completed advanced degree programs (Supplemental Study 4a) and overcame unemployment (Supplemental Study 4b), two different forms of life experiences documented to

be challenging and distressing (e.g., Hyun et al., 2007), to test the generalizability of these patterns when controlling for related constructs.

In Supplemental Study 4a, we test whether resilience attributions are distinct from the individual differences of locus of control, which captures the extent to which individuals believe that they (vs. external forces) have control over their lives. In Supplemental Study 4b, we test whether resilience attributions are distinct from self-construal—that is, an individual difference capturing how much elements of the social world are included in the self (Markus & Kitayama, 1991). Together, these studies test our prediction that resilience attributions for distressing events are distinct from people's broad tendency to think about the self as relatively interdependent versus independent from others.

Method

Participants. In both studies, we aimed for 100 American participants who were recruited via a Prolific panel of participants who completed advanced degrees (1a) and an MTurk Prime Panel of participants who indicated being formerly unemployed (1b). A G*Power analysis (Faul et al., 2007) revealed that we would have 93% power to detect a small-to-medium effect size. Anticipating potential attrition, we posted for 110 participant slots. See Supplemental Table 15 for how many participants completed each study as well as means and standard deviations regarding age and gender. Note that sample sizes in Supplemental Table 15 refer to participants who completed all items.

Procedure. Participants in both Supplemental Studies 4a and 4b completed a seven-item resilience attributions measure, which we developed by adapting items used in more general assessments of attributions (e.g., McFarland & Ross, 1982). Participants indicated the degree to which each of seven factors contributed to their ability to successfully overcome the distressing

event on a scale from 1 (*Not at all*) to 7 (*Very much so*). We included two items assessing internal attributions (e.g., "My own effort and perseverance"; $r > .55$), two items assessing relational attributions (e.g., "Emotional support and help from the people in my life"; $r > .66$), and three items assessing situational attributions (e.g., "luck and chance" $\alpha > .66$)[4].

To examine whether our resilience attributions measures relate to compassion above and beyond other constructs, in Supplemental Study 4a participants completed the 13-item forced-choice Locus of Control scale (e.g., "Heredity plays the major role in determining one's personality" or "It is one's experience in life which determine what they're like") (Rotter, 1966). Scores across the items were summed, such that a low score indicated an external locus of control, and a high score indicated an internal locus of control. In Supplemental Study 4b, participants also completed the Self-Construal Scale, indicating the degree to which each of the 17 items (e.g., "It is important for me to maintain harmony within my group") described them on a scale from 1 (*Does not describe me well*) to 7 (*Describes me very well*) ($\alpha = .79$; Singelis, 1994). We also measured several event-specific potential control measures in each study (see OSF).

Results. Repeated measures ANOVAs found differences in the extent to which individuals made internal, situational, and relational resilience attributions, such that participants made stronger internal attributions than they did relational attributions, paired ts > 8.07, ps < .001, ds > 0.83, and situational resilience attributions, paired ts > 14.50, ps < .001, ds > 1.48. Participants also indicated higher levels of relational than situational attributions, paired ts > = 5.69, $p < .001$, ds > 0.57 (see Supplemental Table 15).

[4] We present Spearman Brown correlations which are preferred for two item scales across all studies (Eisinga, Te Grotenhuis, & Pelzer, 2013; Romero, Villar, Gomez-Fraguela & López-Romero, 2012).

Offering support for the convergent and divergent validity of our resilience attribution measures, in Study 1a, greater internal locus of control was positively and marginally correlated with internal attributions, $r = .19$, $p = .062$, but was not significantly correlated with relational, $r = .124$, $p = .225$, or situational attributions, $r = .014$, $p = .888$. In Study 1b, self-construal did not correlate with relational, $r = -.14$, $p = .169$, or situational attributions, $r = .14$, $p = .269$, but negatively correlated with internal attributions, $r = -.29$, $p = .003$. Therefore, a more interdependent self-concept is related to lower levels of internal attributions, supporting the convergent validity of our construct, but these nonetheless appear to be distinct constructs.

Supplemental Table 15. Sample Descriptions and Results in Supplemental Study 4.

Study	Context	*N*	Age *M* (*SD*)	Gender % female	Internal Attribution *M*, *SD*, 95% CI	Relational Attribution *M*, *SD*, 95% CI	Situational Attribution *M*, *SD*, 95% CI	Omnibus Test
S4a	Advanced degrees	97	32.22 (7.87)	44.30%	5.97, 0.81, 95% [5.81, 6.13]	4.89, 1.22, 95% CI [4.64, 5.14]	3.32, 1.36, 95% CI [3.04, 3.59]	$F(2, 95) = 139.31$, $p < .001$, $\eta^2 = .59$
S4b	Unemployment	102	37.13 (10.22)	38.20%	5.95, 0.88, 95% CI [5.78, 6.12]	4.49, 1.63, 95% CI [4.17, 4.81]	3.64, 1.31, 95% CI [3.38, 3.89]	$F(2, 100) = 120.74$, $p < .001$, $\eta^2 = .71$

Discussion. In Supplemental Study 4, across the different contexts of struggling to earn an advanced degree and overcoming unemployment, North Americans have stronger internal resilience attributions than they do situational or relational resilience attributions. Additionally, we present evidence that resilience attributions are related to, but distinct from both from locus of control and self-construal, two conceivably similar psychological constructs.

Supplemental Study 5: How I Built This

The aim of this study was to investigate the prevalence of internal, situational, and relational attributions amongst entrepreneurs who had overcome challenges in growing their startups. We chose the context of entrepreneurship for the study as increasing evidence has pointed to high levels of psychological distress associated with the pursuit of building a successful start-up (Freeman et al., 2019; Gorgievski & Stephan, 2016). To investigate the spontaneous attributions individuals make, we transcribed interview responses of 143 entrepreneurs from the podcast "How I Built This," in which the host Guy Raz asks entrepreneurs to make attributions for their resilience and success. Two research assistants then coded these entrepreneurs' responses for how much these entrepreneurs' responses captured internal, situational, and relational attributions.

Procedure. We collected 164 interviews of the "How I Built This Podcast" aired between November 6, 2016 and November 23, 2020. In 120 of these interviews, the host Guy Raz asked entrepreneurs to make attributions to their success (e.g., "What is the most important quality that you have or either developed over time that's allowed you to be successful as an entrepreneur?"). In 23 of these interviews, the interviews were conducted with both co-founders who each provided responses to these questions, yielding a total of 143 unique responses.

For each of these responses, two research assistants coded the question asked (i.e., whether the question specifically referenced hard work, skill, or luck), and the extent to which entrepreneurs' responses made internal, situational, and relational attributions on a 7-point scale from 1 (*Not at all*) to 7 (*A lot*). We achieved good interrater reliability between the two raters for each resilience attribution dimension ($ICC_{internal}$ = .88, $ICC_{situational}$ = .93, $ICC_{relational}$ = .96). We

provide examples of quotes and their respective codings on each of the three resilience attributions in Table S16 below.

Results. A repeated measures ANOVA found differences in the extent to which individuals made internal, situational, and relational attributions, $F(2, 417) = 37.369$, $p < .001$, $\eta^2 = .15$. In particular, we found that individuals were less likely to make relational attributions ($M = 2.66$, $SD = 1.83$, 95% CI [2.38, 2.97]) relative to internal ($M = 4.14$, $SD = 1.83$, 95% CI [3.84, 4.43]), $b = -1.46$, $p < .001$, and situational attributions ($M = 4.36$, $SD = 1.64$. 95% CI [4.06, 4.65]), $b = -1.69$, $p < .001$. We did not find differences between internal and situational attributions, $b = 0.22$, $p = .297$. These effects held when controlling for the content of the questions asked, valuation, and number of employees in the company (see Table S17).

Table S16. Example entrepreneurs' responses in Supplemental Study 2.

QUOTE	SITUATIONAL	INTERNAL	RELATIONAL
"I think luck is the majority of it. I mean, there's just so many elements of luck, so many times when luck plays a part. I think it's specifically true in start-ups because in start-ups, what you have is this moment in time when a company is possible. Anything before that, it's too early. Anything after that, it's way too late and there's too much competition. And so, the timing, being there at the right time, is everything." *"Guy, I'll take the luck. So, in all humility, a lot of it was luck. I look back, and things could have gone wrong. Y'know, the brew kettle could've exploded or, y'know, that first guy could've told me "this is a really stupid idea, go back to your job." A lot of things didn't go wrong that could've."*	7	1	1
"I feel like it's it's hustle, it's hard work, but it's smart, hard work. And it's being able to identify opportunities when when other people don't or maybe can't see those opportunities. I can see it. Yeah. And	1	7	1

then I think in terms of luck, I don't know if I believe in luck. I think I think you you prepare yourself, you're ready. And then if if an opportunity presents itself, then you're the right person, the right place at the right time." *"I think it's persistence, so I think this deep rooted knowledge that you know you're never going to give up and you're going to find a way and there's no other option is just something that just has connected all these dots for me. People have to believe that you're just going to do it and you're not going to stop at anything getting in the way. So this crazy amount of persistence is really what's gotten me to where I'm at."*			
"I attribute it to mostly other people. There's nothing that I could have accomplish without a bunch of other people making great things happen. If it wasn't for my teachers, I wouldn't be here. If it wasn't for my mom and dad, I wouldn't be here. My brother and my wife, I don't think I'd be here. A thousand people at Belkin, thousands of people inside of FIT. It's each and every one of them making things happen every day. You know, more than anything else it's because of the work of other people that I've been able to do what little that I've done."	1.5	1.5	7
"So I think everybody's lucky, right? I think the very fact that I didn't get hit by a bus today, that's lucky. Right. And same thing for you. The fact that that didn't happen to you, that's luck. And, you know, I look at the family I was born into. I think your family really determines your your ceiling in life and IInd your floor as well. Like how high? Both how high or low both of those things are. And I had no say in the family that I was born into. So I feel incredibly lucky there. I picked the right	6	5	5

industry, you know, when I was growing like crazy. So all those things are definitely luck, but I think so. I think we are lucky. But I think what amplifies that luck and what makes one successful is hard work. It's skill, it's resilience. It's an appetite for risk taking. So that's my view. I think it's a combination of both. But I think when you add those four things, it just takes a whole different level."			
"We've been really privileged to be able to live our lives and meet that in our work with shared values. It's exceptional and it's a beacon to show that it's very possible. If we can do it, you know, you can do it."	2.5	2.5	1

Table S17. Regression Analysis in Supplemental Study 5

	Model 1	Model 2	Model 3
Entrepreneur Response			
Situational attribution category	0.22 [.22]	0.22 [.22]	0.24 [.30]
Relational attribution category	-1.46*** [.22]	-1.46*** [.22]	-1.33*** [.30]
Question Mentions			
Hard work		0.97 [.62]	0.46 [1.12]
Skill		0.11 [.27]	1.06*** [.37]
Luck		-0.16 [.20]	0.42 [.29]
Firm Characteristics			
Valuation			<.001 [<.001]
Number of employees			<.001 [<.001]
Adjusted R^2	0.15	0.16	0.15

Dependent variable is the extent to which individuals make attributions across internal, situational, and relational categories. $^{+}$ *p < .10, *p < .05, **p < .01, ***p < .001*.

We find evidence that individuals—in this case, successful entrepreneurs in the field—are less likely to make relational resilience attributions relative internal and situational resilience attributions. While this study provided externally valid data in a difficult to reach sample (highly successful entrepreneurs), the host varied the prompt across episodes (sometimes asking about hard work versus luck, specifically), which may have artificially decreased the salience of

relational resilience attributions. Moreover, unexpectedly, the strength of internal and situational resilience attributions did not differ, perhaps because the public context invoked humility norms, discouraging an overreliance on skill-based claims (e.g., Vonk, 1999).

Building on this observational study, the next studies presented in the main text sought to address these issues and to broaden this examination across different types of distressing experiences, and establish discriminant validity of the three dimensions of resilience attributions by surveying individuals who have overcome distressing life events.

Supplemental Study 6: Divorce Correlational Study

The goal of this study was to test our hypotheses in the context of another type of distressing event: divorce. We preregistered our design and analysis plan (http://aspredicted.org/blind.php?x=qm4iu5).

Participants. We aimed for 250 participants recruited via a panel on Prolific Academic. Participants came from the United Kingdom, the United States, and Canada. Assuming possible attrition, we posted for 288 participant slots and successfully recruited 286 participants with complete data (24.8% men; $M_{age} = 48.63$). Three participants were removed for spending less than 5 minutes reading the vignettes. The results are consistent whether or not these participants are included.

Procedure. Participants completed the resilience attributions scale used in the previous studies. Participants then read a vignette about an individual who was struggling with the emotional distress of the divorce and who did not show up for a presentation at work. The main dependent measure was again participants' compassion toward the target using the same measure as in the previous study. Participants also again completed descriptive measures surrounding their experience with divorce and demographics.

Results. Providing support for our main hypothesis, participants who held higher levels of relational attributions were significantly more compassionate toward the target, $\beta = 0.23$, $SE = 0.05$, $p < .001$. Situational attributions were not related to compassion, $\beta = 0.02$, $SE = 0.06$, $p = .730$, nor were internal attributions, $\beta = -0.02$, $SE = 0.06$, $p = .690$. Relational attributions remained a significant predictor of compassion after we controlled for the demographic characteristics (political orientation, age, education level, gender, religiosity) and event-based controls (length of time since divorce, mutual desire for a divorce, difficulty of the event), $\beta = 0.22$, $SE = 0.05$, $p < .001$ (see Table S18).

Table S18. Regression Analyses in Supplemental Study 6.

	Model 1	Model 2
Internal Attributions	-.02 [.06]	-.07 [.06]
Relational Attributions	.23*** [.05]	.22*** [.05]
Situational Attributions	.02 [.06]	-.03 [.06]
Time Since Divorce		.03 [.01]
Difficulty (reverse-coded)		-.26** [.04]
Mutual Decision		-.10^{+} [.04]
Political Orientation		-0.17** [.05]
Age		.02 [.01]
Education		-.01 [.07]
Religiosity		.20** [.05]
Gender		.05 [.17]
Adjusted R^2	0.04	0.17

Dependent variable is compassion. $^{+}$ $p < .10$, $^{*}p < .05$, $^{**}p < .01$, $^{***}p < .001$.

Taken together, the results of Supplemental Study 6 support the prediction that relational resilience attributions are related to compassion. We present this study in the Supplement because of redundancy with Study 4 in the main text.

Supplemental Study 7: Pregnancy Multiple Targets

We conducted a within-subjects correlational study to examine the specificity of resilience attributions to particular events. That is, if individuals form resilience attributions for a particular event, it should shape their compassion for others currently enduring that specific event. This study was preregistered at https://aspredicted.org/LPP_49J.

Participants. We aimed to recruit 250 American participants who had been pregnant. To do so, we first recruited participants who indicated that they had children and identified as women via Prolific, independently from our study. We successfully recruited 252 participants who completed the study (M_{age} = 45.96, SD = 12.78). Two participants indicated being male/not having been pregnant, and one indicated being currently pregnant, and were removed from the analyses.

Procedure. Participants completed the resilience attributions measures for their pregnancy (and if they had more than one, they chose the more difficult experience). This included two items assessing internal resilience attributions (e.g., "My own effort and perseverance"; r = .91), two items assessing relational resilience attributions (e.g., "Emotional support and help from the people in my life"; r = .72), and three items assessing situational resilience attributions (e.g., "Luck and chance"; ω = .43). Participants then completed a filler task, where they were presented with two black and white images and asked to fill out what comes to mind when they viewed them in text form (The Snowy Pictures Task; Snow et al., 1992). Participants were then told that they would read about three other individuals' experiences and to imagine it as vividly as possible. They were then presented (in random order) short vignettes about different women that were suffering from COVID lockdowns, a difficult pregnancy, and diabetes, after which they rated their compassion and sympathy for each

individual on the same 7-point likert scale (r = .86 - .90). We asked participants how similar they felt towards each target (from 1=*not at all similar* to 5=*extremely similar)*, and then we included another filler question on their opinion of online courses before measuring demographics (including the extent to which they had experienced difficulties with the COVID-19 pandemic on a seven-item scale, and if they had diabetes). Participants completed additional measures, such as the length of time since they had been pregnant and how many times they had been pregnant.

Results. Participants indicated an average of 5.29 (*SD* =1.39) for internal attributions, 3.75 (*SD* =1.31) for situational, and 4.30 (*SD* =1.54) for relational resilience attributions for successfully coping with pregnancy. Counter to predictions, none of these attributions correlated significantly with compassion for any of the targets (*p*s >.11), nor were they predictive of compassion towards the targets when entered simultaneously in regression (*p*s >.212). However, relational attributions did emerge as a significant predictor after we controlled for demographics (political orientation, age, education level, gender, religiosity), number of pregnancies, and time since pregnancy (see Table S19).

Table S19. Regression Analyses in Supplemental Study 6.

	Model 1	Model 2
Internal Attributions	-.04 [.06]	-.04 [.06]
Relational Attributions	.07 [.05]	.15* [.06]
Situational Attributions	.08 [.07]	.04 [.07]
Time Since Pregnancy		.04 [.00]
Number of pregnancies		.03 [.06]
Political Orientation		-0.31** [.05]
Age		.02 [.01]
Education		-.16* [.07]
Religiosity		.10 [.05]
Ethnicity		.05 [.23]
Adjusted R^2	0.003	0.07

Dependent variable is compassion toward the pregnant target. $^{+}$ $p < .10$, *$p < .05$, **$p < .01$, ***$p < .001$.

We also note that exploratory moderation analyses revealed a significant interaction between relational resilience attributions and perceived similarity (interaction B = -.08, SE = .04, $t(245)$ = -2.20, p = .029) suggesting a possible ceiling effect at high levels of perceived similarity with the pregnant target. That is, relational resilience attributions positively predicted compassion for the pregnant target, but only at lower levels of perceived similarity [conditional effect of relational attributions (-1SD) = .19, SE = .07, $t(245)$ = 2.72, p = .007; (+1SD) effect = -.02, SE = .07, t(245) = -.25, p = .81]. There was no such interaction for situational or internal resilience attributions (ps >.46). In terms of ceiling effects, the mean compassion toward the pregnant woman was 5.87 out of 7 (SD = 1.26) (versus M = 4.54, SD = 1.72 for COVID; M = 4.88, SD = 1.65 for the target with diabetes). Moreover, we did not collect resilience attributions for the other events, which makes it difficult to determine whether there may have been correlations across event types (see Study 2 in the main text for more discussion of this point). Therefore, we concluded that this paradigm was not ideal.

Supplemental Study 8: High School Students Experiment

In Supplemental Study 8, we again provide a causal test of relational resilience attributions on compassion, focusing this time on behavioral compassion in a field experiment. In particular, we measured the impact of relational resilience attributions amongst high school students as they have had to navigate academic challenges related to their coursework. We randomly assigned high school students to consider their past resilience as a function of relational, situational, or internal factors. By subsequently giving these students opportunities to help a struggling peer, we also investigated the behavioral consequences of adopting these attributions. We predicted that adopting more relational resilience attributions would increase

compassionate helping behaviors relative to those in the internal or situational resilience attribution conditions.

Participants. One hundred seventy-two high school students (eighth through 12th graders) located in the United States were recruited through the Character Lab Research Network (CLRN),[5] a consortium of schools across the country collaborating with scientists to advance character development research. An analysis in G*Power revealed we had 84% power to detect a medium-sized effect. Four participants did not finish the study and 11 participants were excluded for not following the instructions, resulting in a final sample of 157 students. We find the same results when including these participants. The final sample (M_{age} = 15.96, SD_{age} = 1.34) was 73.2% female with 6.41% in eighth grade, 13.46% in ninth grade, 28.21% in tenth grade, 28.21% in eleventh grade, and 23.72% in twelfth grade.

Procedure. Participants were randomly assigned to one of three conditions in a between-subjects design: relational, internal, and situational resilience attributions. For our manipulation, students provided information about a subject area in which they "struggled initially," but later "during [their] time in high school learned how to overcome their struggles." In the relational condition, students wrote about two factors from a list of five relational reasons that could have influenced their ability to overcome their struggle in the subject area (e.g., "I had a lot of social support from family, friends, and others," "Other people encouraged me to study," and "The people in my life helped me stay on track"). In contrast, students in the internal condition wrote about two reasons from a list of five internal reasons (e.g., "My will power," "I was very motivated," and "I was very disciplined"), and those in the situational condition wrote about two reasons from a list of five situational reasons provided (e.g., "I was lucky to find the right study

[5] https://characterlab.org/research-network

aids," "I was lucky to have no majors stressors in my life at the time," and "The test was not that difficult"). At the beginning of the study, participants also completed the self-construal scale for discriminant validity (Singelis, 1994).

Participants then read about a student who struggled to perform well on a major final exam, provided advice to that individual, and were given the opportunity to offer social support (i.e., behavioral compassion). At the end of the study, participants answered a series of questions assessing their self-rated compassion, resilience attributions, and perceived performance on their own past exam (see all measures via OSF).

Measures.

Behavioral compassion. As our main measure of compassion, participants were presented with the opportunity to help the struggling student in six domains (e.g., "Would you want to be contacted via text message if the student has additional questions?" and "Would you like to donate your old books and resources in this area for other students?"). Compassionate behavior was measured based on the number of instances students agreed to offer support to the student.

Self-reported Compassion. Participants rated how much of the following they felt toward the student on a 7-point scale (1=*not at all* to 7=*very much so*): sympathy, compassion, and moved ($\alpha = .79$).

Gratitude. Participants rated how grateful, thankful, and appreciative they felt ($\alpha = .95$).

Luck. Participants rated how blessed, lucky, and relieved they felt ($\alpha = .69$).

Manipulation checks. As our primary manipulation check, participants rated the extent to which the following factors contributed to their ability to get through the event they described, using the same 7-point scale as previous studies: internal effort (effort, ability), relational support

(help and advice from others), and situational factors (study aids, luck). Given the relatively young age of respondents, and the potentially confusing nature of responding to Likert scales about complex constructs (e.g., Elliott, 2004; Keith & Bracken, 1996), we also conducted a post-hoc LIWC analysis on students' responses to the manipulation by focusing on words related to affiliation (e.g., "ally," "friend," and "social") and sociality (e.g., "talk", "they", "parent").

Results.

Manipulation checks. We did not find a main effect of condition on the resilience attributions participants made about their own success in overcoming prior struggles. Across conditions, participants did not differ on how much they made relational, internal, or situational attributions, Fs(2, 153) < 0.154 , ps > .857.[6]

We note that because these measures were completed towards the end of the experiment, and by a sample of young participants, they may not have adequately measured the impact of our manipulation. Given that this manipulation successfully shifted attributions in Study 5 (and in Supplemental Study 6), we suspect placement of the manipulation checks at the end of the study contributed to these results. Therefore, we conducted an exploratory LIWC analysis on students' response to our manipulation prompt to explore whether our manipulation affected this measure of relationality, by focusing on words students wrote that related to affiliation (e.g., "ally", "friend", and "social"). A one-way ANOVA revealed a significant effect of condition on use of affiliation-related words, $F(2, 154) = 13.63$, $p < .001$, $\eta^2 = .15$. More specifically, participants in

[6] Participants did not make relational attributions differently across the three conditions: $M_{relational} = 4.30$, $SD_{relational} = 1.62$, 95% $CI_{relational}$ [3.85, 4.76]; $M_{internal} = 4.19$, $SD_{internal} = 1.07$, 95% $CI_{internal}$ [3.91, 4.83]; $M_{situational} = 4.32$, $SD_{situational} = 1.39$, 95% $CI_{situational}$[3.95, 4.96]. Internal attributions also did not differ by condition: $M_{relational} = 5.46$, $SD_{relational} = 1.38$, 95% $CI_{relational}$ [5.09, 5.82]; $M_{internal} = 5.35$, $SD_{internal} = 1.43$, 95% $CI_{internal}$ [4.98, 5.72]; $M_{situational} = 5.50$, $SD_{situational} = 1.33$, 95% $CI_{situational}$ [5.10, 5.90]). Similiarly, we did not find that situational attributions differed by condition: $M_{relational} = 4.29$, $SD_{relational} = 1.68$, 95% $CI_{relational}$ [3.92, 4.67]; $M_{internal} = 4.19$, $SD_{internal} = 1.07$, 95% $CI_{internal}$ [3.82, 4.57]; $M_{situational} = 4.32$, $SD_{situational} = 1.39$, 95% $CI_{situational}$[3.90, 4.73].

the relational condition were more likely to use affiliation-related words (M = 5.71, SD = 5.69, 95% CI = [4.51, 6.91]) than were those in the internal condition (M = 2.00, SD = 4.52, 95% CI = [0.78, 3.22]), $t(154) = 4.29$, $p < .001$, $d = 0.72$, and situational condition (M = 1.54, SD = 2.57, 95% CI = [0.23, 2.85]), $t(154) = 4.65$, $p < .001$, $d = 0.92$. We did not observe a difference in affiliation between the internal and situational attribution conditions, $t(154) = 0.507$, $p = .613$.

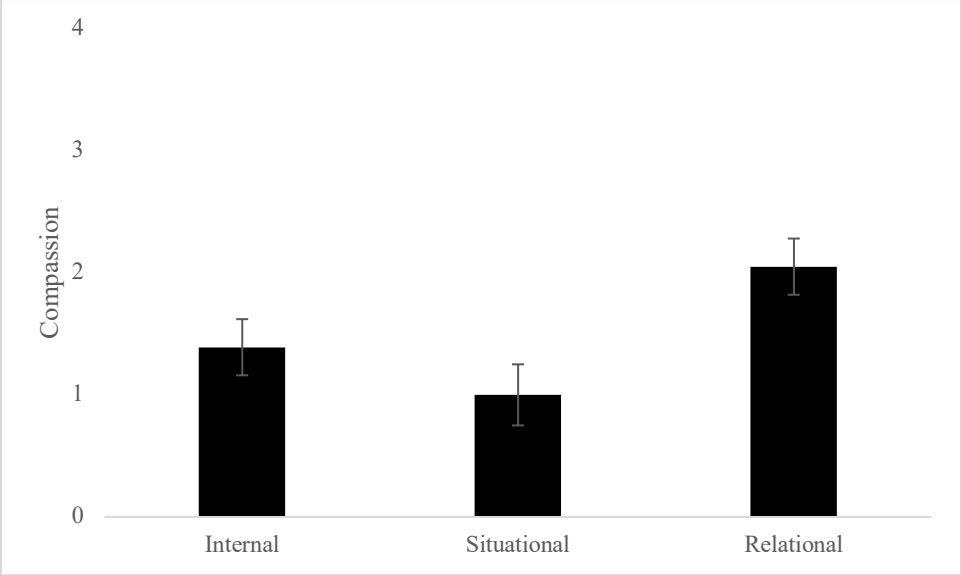
In our exploratory analyses, we also found a main effect of condition on social words used (e.g., "talk", "they", "parent"), $F(2, 154) = 15.38$, $p < .001$, $\eta^2 = .17$, again suggesting validity for our manipulations; participants in the relational condition were more likely to use social words (M = 10.73, SD = 7.93, 95% CI = [8.85, 12.60]) than were those in the internal condition (M = 4.35, SD = 7.95, 95% CI = [2.44, 6.26]), $t(154) = 4.71$, $p < .001$, $d = 0.80$, and the situational condition (M = 3.98, SD = 4.53, 95% CI = [1.93, 6.02]), $t(154) = 6.75$, $p < .001$, d = 1.02. We did not observe a difference in social word use between the internal and situational conditions, $t(154) = 0.263$, $p = .793$. Taken together, our linguistic analysis suggests that our relational attributions manipulation led individuals to write more about relationships, suggesting they were thinking more relationally relative to those in the internal and situational conditions when describing overcoming their academic struggles.

Behavioral compassion. We found a main effect of condition on behavioral compassion, $F(2, 154) = 4.89$, $p = .009$, $\eta^2 = .06$ (see Supplemental Figure 2).[7] Participants in the relational resilience attribution condition offered more social support (M = 2.05, SD = 2.08, 95% CI = [1.60, 2.51]) than did those in the internal resilience attribution condition (M = 1.39, SD = 1.51,

[7] Because our dependent variable imposes a lower and upper bound on the number of compassionate helping behaviors participants could engage (0 to 6), we also conducted a logistic regression with compassionate behavior as a binomial outcome and found similar results. Relative to those in the relational condition, those in the internal condition, $B = -0.54$, $z = -3.13$, $p = .002$, and situational conditions, $B = -0.96$, $z = -4.86$, $p < .001$, were less willing to help.

95% CI = [0.92, 1.86]), $t(154) = 2.00$, $p = .047$ $d = 0.36$, and situational resilience attribution condition ($M = 1.00$, $SD = 1.52$, 95% CI = [0.50, 1.50]), $t(154) = 3.06$, $p = .003$, $d = 0.57$. No significant differences emerged between the internal and situational resilience attribution conditions, $t(154) = 1.21$, $p = .228$. When controlling for self-construal, we found a similar main effect of our manipulation, $F(2, 153) = 4.93$, $p = .008$, $\eta^2 = .06$, but did not find an effect of self-construal, $F(1, 153) = 2.23$, $p = .14$.

Supplemental Figure 2. The effect of resilience attribution condition on behavioral compassion in Supplemental Study 8 (± SE).



Self-reported Compassion. We did not find a main effect of condition on self-reported compassion ($M_{relational} = 4.18$, $SD_{relational} = 1.44$, 95% $CI_{relational} = [3.82, 4.54]$; $M_{internal} = 4.14$, $SD_{internal} = 1.15$, 95% $CI_{internal} = [3.78, 4.51]$; $M_{situational} = 4.34$, $SD_{situational} = 1.50$, 95% $CI_{situational} = [3.95, 4.73]$), $F(2, 154) = 0.29$, $p = .749$, $\eta^2 = .004$. However, this may be due to the age of respondents, such that adolescents respond differently to the word compassion and sympathy than do adults.

Gratitude and luck. We did not find a main effect of condition on feelings of gratitude, $F(2, 154) = 0.004$, $p > .99$, or luck, $F(2, 154) = 0.98$, $p = .38$.

We find causal evidence showing that high school students asked to make relational resilience attributions engage in more compassionate behaviors towards struggling peers relative to situational and internal resilience attributions. In this study, we did not observe shifts in self-reported compassion, and as a result, a limitation is that the compassionate behaviors may stem from an alternative explanation (e.g., increased salience of help provision or demand effects) as opposed to our proposed route via increased compassion stemming from increased relational attributions.

Supplemental Study 9: Experimental Pretest 1

Before conducting our first experimental test of the effect of resilience attributions on compassion, we first conducted pretests to ensure the validity of our experimental manipulations. We designed a quasi-experiment that asked 97 ex-smokers recruited via a Qualtrics panel about the important factors behind *how* they quit in one condition and then *why* they quit in the other condition (all materials and data are available via OSF). A research assistant then coded whether participants were more likely to invoke relational versus internal reasons, and participants also indicated themselves the degree to which the factor that they wrote about was internal versus relational in nature (e.g., "To what extent is [factor] an individual or team endeavor?").

Participants in the "how" condition were significantly more likely to list their primary reason for quitting as a "how" than were those in the "why" condition, $\chi^2(1, 97) = 20.27$, $p < .001$. Likewise, participants in the why condition were significantly more likely to write about a "why" reason, $\chi^2(1, 97) = 23.63$, $p < .001$. However, there was a concerning amount of spillover between the experimental conditions such that over half of the participants in the 'how' condition

were still invoking some kind of 'why' responses. Resulting concerns about the validity of this experimental manipulation led us to omit this study from the current research report and led us to use a less open-ended experimental manipulation as outlined in Experimental Pretest 2 below (and Study 5 in the manuscript). Nonetheless, we note that, consistent with our predictions, the presence of a relational "how" significantly predicted compassion, $\beta = .21$, $p = .039$. In contrast, relational "whys" did not predict compassion, $\beta = -.01$, $p = .890$, an internal "how" did not predict compassion, $\beta = .03$, $p = .743$, and an internal "why" significantly predicted lower levels of compassion, $\beta = -.21$, $p = .043$.

Supplemental Study 10: Experimental Pretest 2

We then ran a pilot of Study 5 in the present manuscript. In this study, MTurk participants who indicated that they had previously smoked were randomly assigned to one of three conditions: an internal attribution, relational attribution, or a situational attribution condition. The third condition had participants reflect on non-social situational reasons that facilitated their quitting (e.g., "I got the "right breaks" and "I was lucky enough to find the right quit-smoking aids"). This allowed us to examine whether our effect was driven by situational attributions more broadly or relational attributions more specifically. In this pretest, participants read the same vignette as in Study 3a, the compassion measures, as well as their trait ratings of the target (e.g., likable; selfish; sincere; Effron et al., 2015) and their own perceived resilience as exploratory measures. The resilience items examined participants' perceived self-efficacy about whether they could refrain from smoking in a range of situations (as described in the self-efficacy section of the SOM). We also included the manipulation checks and a range of control variables, as used in the full study.

The results revealed that smoking group was a significant predictor of compassion, $F(4, 295) = 9.08$, $p < .001$. See Table S20 below for the means and standard deviations, with the caveat that statistical tests should be interpreted with caution due to the low sample size in the experimental conditions.

Table S20. The Effect of Smoker Group on Compassion in Supplemental Study 10.

	Never Smoked	Current Smoker	Ex-Smoker—Internal Resilience Attribution Condition	Ex-Smoker—Situational Resilience Attribution Condition	Ex-Smoker—Relational Resilience Attribution Condition
Compassion	3.95 (1.67)$_{a}$	5.03 (1.41)$_{b}$	4.78 (1.68)$_{ab}$	4.76 (1.49)$_{ab}$	5.40 (1.15)$_{b}$

Supplemental Study 11: Experimental Pretest 3 for Fatiguing Exam

We ran a pretest with 69 participants to ensure that our manipulations were effective and the fatiguing exam was rated as sufficiently fatiguing. Participants indeed rated the recall task as highly difficult and effortful (*M*s = 4.61 and 4.96 and *SD*s = 1.51 and 1.36, on a scale from 1 = *not at all difficult/taxing* to 7 = *very difficult/taxing*). Participants in the relational attribution condition also indicated that more relational factors ("receiving help" and "receiving advice") facilitated success during the fatiguing exam ($M = 4.17$, $SD = 1.67$) than did those in the internal attribution condition ($M = 2.78, 1.94$), $t = 3.17$, $p = .002$, $d = 0.76$. Participants in the relational and internal attribution conditions rated the internal factors ("my own effort" and "my own ability") as similarly facilitating their success ($M = 6.27$, $SD = 0.88$ and $M = 5.93$, $SD = 0.90$, respectively) $t = 1.59$, $p = .12$, $d = 0.38$. We further clarified the language of the manipulation and put the manipulation checks on bipolar scales that required participants to indicate whether

their ability to complete the numerical challenge was driven by primarily internal versus relational factors.

Supplemental Study 12: Fatiguing Exam

In the full version of the fatiguing exam study, we randomly assigned MTurk participants (N = 255 began the study, N = 223 after excluding participants with incomplete data or who did not complete the prompt as specified) to either anticipate re-experiencing a difficult experience (a fatiguing exam) or not, and to resilience attribution conditions. That is, participants were randomly assigned to one of four conditions in a 2 (resilience attribution: relational vs. internal) x 2 (anticipated re-experience: yes vs. no) between-subjects design. The anticipated re-experience variable was an exploratory variable no longer relevant to the current work, and thus this study is omitted from the main text. We predicted that fear of re-experiencing the hardship will resolve differences between those with relational versus internal resilience attribution conditions by lessening the emotional distance inherent in empathy gaps (e.g., Galak & Meyvis, 2011). This study also included a behavioral measure of helping (emotional support offered to another experiencing the distressing event).

The distressing event in question was a strenuous test of mental endurance, which was designed to induce mental fatigue (Nordgren et al., 2005, 2007; Ruttan et al., 2015). All participants first received some tips on how to complete the test, ostensibly from a previous participant who completed the test. After completing the test, participants received additional messages. In the relational resilience attribution condition, participants read text indicating that research suggests that receiving help, support, and advice from others predicts better performance. In the internal resilience attribution condition, the text focused on how test takers' own abilities and effort predict better performance. Next, participants in the anticipated re-

experience condition were informed that they would be soon asked to complete additional trials of the Numerical Challenge, whereas participants in the no re-experience condition were informed that they were finished and would not complete additional trials (Galak & Meyvis, 2011).

Participants next read a vignette about an employee who attempted to complete the same test as part of an employee screening tool, but could not complete it. Participants indicated their compassion toward the employee, and whether the employee's contract should be renewed. As a behavioral measure, participants were able to write any words of advice or support to the employee before re-taking the test. We used this measure to examine whether and how participants' advice to the employee may vary in the emotional support offered by condition. Two independent coders blind to condition coded participants' open-ended responses to the employee. The coders indicated the degree of emotional support offered in the message, along with a variety of other dimensions (interrater reliabilities, rs > .76, ps < .001).

There were no significant interactions between the resilience attribution and re-experience conditions in predicting compassion or willingness to rehire the individual, ps > .104, though there was a significant interaction in predicting the emotional supportiveness of the message, $F(1, 215) = 5.51$, $p = .020$, $\eta^2 = .025$. Among those who would not re-experience the test (the condition most closely mirroring the studies in the main text), participants in the relational condition were directionally more compassionate ($M = 4.56$, $SD = 1.55$) than were those in the internal condition ($M = 4.10$, $SD = 1.40$), $t(112) = 1.66$, $p = .101$, $d = 0.31$; similar patterns were observed for emotional supportiveness ($M_{relational} = 3.58$, $SD = 2.04$; $M_{internal} = 2.98$, SD = 1.56), $t(112) = 1.93$, $p = .057$, $d = 0.36$.

There were some key limitations with this study. Aside from the less relevant anticipated re-experience condition, participants completed the measures relatively quickly after the fatiguing task and were thus likely still in the hot state of fatigue. Moreover, in hindsight, this study was underpowered to detect small-to-medium sized effects.

Supplemental Study 13: Effort Task Pretest

We first conducted a pretest of the task and the attributions manipulation presented in Study 7 in the main text.

At time 1, $N = 450$ participants were recruited via Prolific. They were informed that they were going to complete an employee screening procedure, called the Cognitive Ability and Persistence Battery (CAP-B). They were further informed that there were two versions of the CAP-B, an individual and a team version, both of which they would complete. To ensure believability of the paradigm, they first completed a "getting to know you task." To do so, we used SurvConf, which allowed participants to interact with their Prolific partner in real time directly within Qualtrics (Brodsky et al., 2022). For 1 minute, participants introduced themselves using their initials and played an introductory game, which involved generating words that begin with the letter B. They then completed the CAP-B, which was a fatiguing task which involved re-typing extensive text while following a complicated rule (re-type the text without using the letter 'e' except if the e is followed by another vowel, or if another vowel occurs 2 letters before the e) (e.g., Carter et al., 2015). To ensure the task was indeed fatigue inducing, participants indicated the extent to which the task was difficult, made them tired, and involved a great deal of effort on 7-point scales.

At time 2 (four days later), participants who completed time 1 were invited to take part in a second survey. For the time 2 pretest, we posted for $N = 300$ slots, and ended up with complete

data from 303. At time 2, we implemented the resilience attribution manipulation. Participants in the relational resilience attribution condition viewed a refresher of the text they completed during the CAP-B, which was piped in from their previous session based on their Prolific ID. They saw what they completed themselves in blue, and what their partner completed in red in order to highlight the joint nature of the task. They were then informed that being able to collaborate and receiving help from another participant predicts better endurance in the task. In the internal resilience attribution condition, only the text that they had completed was piped in, and they were informed that their own effort and persistence predicts better endurance in the task. In the control condition, participants were informed that the specific topic that they wrote about did not influence performance in the task. Participants then indicated the extent to which their own efforts, help from others, or luck and chance impacted their ability to complete the task on 7-point scales.

Results. Participants rated the difficulty of the task at $M = 5.13$ ($SD = 1.17$), which was significantly higher than the scale midpoint, $t(302) = 16.92$, $p < .001$, $d = 1.17$.

Next, examining the manipulation checks, there was a significant effect of condition on participants' internal attributions, $F(2, 300) = 3.71$, $p = .026$, $\eta^2 = .024$, relational attributions, $F(2, 300) = 16.39$, $p < .001$, $\eta^2 = .099$, and no effect on situational attributions, $F(2, 300) = 0.07$, $p = .929$, $\eta^2 = .000$. Critically, in the relational attributions condition, participants demonstrated higher levels of relational resilience attributions in the relational condition ($M = 4.55$, $SD = 1.92$, 95% CI [4.17, 4.93]) than in the internal ($M = 2.99$, $SD = 1.94$, 95% CI [2.61, 3.36]), $p < .001$, or the control condition, ($M = 3.65$, $SD = 1.99$, 95% CI [3.27, 4.03], $p = .003$. Consistent with our idea that help-giving would be more salient in this paradigm, participants in the control condition rendered significantly higher levels of relational attributions than did those in the internal

condition, $p = .042$. Participants in the internal attribution condition also had higher internal attributions ($M = 6.31$, $SD = 0.77$, 95% CI [6.14, 6.49]) than did those in the control condition ($M = 5.97$, $SD = 0.98$, 95% CI [5.79, 6.15]), $p = .024$, and trended toward more than those in the relational condition ($M = 6.07$, $SD = 0.97$, 95% CI [5.89, 6.25]), $p = .141$.

Supplemental Study 14: Unemployment

A total of 186 MTurk participants completed a study testing our hypotheses in the context of unemployment. In this study, we recruited participants who were either currently unemployed or who had previously been unemployed based on a prescreening. People who were currently unemployed completed the dependent measures as in the other studies. People who had previously been unemployed were randomly assigned to either an internal or relational attributions condition in which they recalled which of five internal or relational factors facilitated their success in finding a job. These two experimental conditions were compared to a current experience condition in which participants were currently unemployed.

In examining the effect of unemployment group on compassion, we observed no significant effect, $F = 0.06$, $p = .941$. Participants in the currently unemployed ($M = 4.15$, $SD = 1.65$, 95% CI [3.74, 4.56]), relational resilience attribution ($M = 4.04$, $SD = 1.87$, 95% CI [3.53, 4.54]), and internal resilience attribution condition ($M = 4.07$, $SD = 1.95$, 95% CI [3.52, 4.61]) did not significantly differ in terms of how much compassion they felt toward the target. However, the results of this study are difficult to interpret for a number of reasons. For one, 18% of the participants rejected the experimental manipulations (e.g., stating that none of the relational factors applied to them). Second, some of the relational items (e.g., “other people provided helpful advice”) were rated as more internal in nature.