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Let It Go: Lingering Negative Affect in Response to Daily Stressors Is Associated With Physical Health Years Later

Kate A. Leger[1], Susan T. Charles[1], and David M. Almeida[2]
[1]Department of Psychology and Social Behavior, University of California, Irvine, and
[2]Department of Human Development and Human Studies, Pennsylvania State University

Abstract

The way we respond to life's daily stressors has strong implications for our physical health. Researchers have documented the detrimental effects of initial emotional reactivity to daily stressors on future physical health outcomes but have yet to examine the effects of emotions that linger after a stressor occurs. The current study investigated how negative affect that lingers the day after a minor stressor occurs is associated with health-related outcomes. Participants (N = 1,155) in a community-based, nationwide study answered questions about daily stressors and affect across 8 consecutive days and about their physical health almost 10 years later. Multilevel models indicated that people experience heightened levels of negative affect the day after a stressor occurs. Furthermore, higher levels of lingering negative affect are associated with greater numbers of chronic conditions and worse functional limitations 10 years later. Findings suggest that affective recovery from daily stressors has unique importance for long-term physical health.

Keywords

emotions, stressors, lingering negative affect, aging, health, open data

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When sharing the frustrations we feel after having an argument with a friend or learning of an unexpected work deadline, people often will tell us to "just let it go." Yet surprisingly few studies have tested the utility of this advice. A growing number of studies have examined the effects of everyday stressors on well-being, linking negative affect reactivity, defined as increases in negative affect on the day a stressor occurs, to outcomes including mental disorders, physical illness, and even mortality (Cacioppo, 1998; Charles, Piazza, Mogle, Sliwinski, & Almeida, 2013; Mroczek et al., 2015; Piazza, Charles, Sliwinski, Mogle, & Almeida, 2013). Researchers have also recognized that rumination, or the tendency to mentally rehearse past events, prolongs negative affect after a stressor and is related to worse health outcomes (Brosschot, Gerin, & Thayer, 2006). Yet studies have not examined the relationship between actual lingering negative affect, or the continued heightened negative affect on the day following a stressor, and long-term health and well-being. In the current study, we investigated the role of lingering negative affect that results from daily stressor events in changes in long-term physical health outcomes.

Affective Reactivity and Recovery

A growing literature has documented associations between same-day affective reactivity to daily stressful events and both current and future physical health. On days when individuals experience stressors, they report more physical health complaints and lower subjective well-being compared with stressor-free days (Charles & Almeida, 2006; Zohar, 1999). Heightened negative affective reactivity to these stressors is also associated with the development of future health-related problems, such as higher disease susceptibility (Cacioppo,

Corresponding Author:
Kate A. Leger, Department of Psychology and Social Behavior, University of California, Irvine, 4326 Social & Behavioral Sciences Gateway, Irvine, CA 92697-7085
E-mail: kleger@uci.edu

1998; Piazza et al., 2013), higher levels of subsequent depression (Cohen, Gunthert, Butler, O'Neill, & Tolpin, 2005), and greater risk of developing an affective disorder (Charles et al., 2013).

When it comes to affective responses to stressors, researchers have mainly focused on affective reactivity, not affective recovery from stressors. Yet they have long posited that failure to recover from these stressful experiences is also a risk factor for poorer health. Studies that have assessed recovery from stressors have mainly taken place in laboratory settings (Panaite, Salomon, Jin, & Rottenberg, 2015; Waugh, Panage, Mendes, & Gotlib, 2010). Laboratory studies that have looked at physiological recovery, defined as the return to baseline from a previous activation level, have demonstrated that prolonged physiological recovery from stressful events is linked to poorer physical health, including increased risk for cardiovascular disease and mortality (Panaite et al., 2015). Therefore, it is imperative to study both reactivity and recovery from a naturally occurring stressful event, as each of these constructs may uniquely influence physical health.

In studies that have examined stress-related effects that continue past initial reactivity, researchers have often focused on the role of appraisals such as rumination. The tendency to ruminate on past events is linked with worse physical health (Brosschot et al., 2006). A common assumption is that the link between rumination and physical health is in part due to the negative affect that lingers as a consequence of rumination (Brosschot et al., 2006). However, researchers who have examined the effects of rumination often have not directly examined the emotions themselves. They have yet to explore what happens when negative affect is prolonged the day following a minor stressor and whether or not this lingering negative affect has any association with physical health.

Current Study

In the current study, we extended experimental work on recovery from laboratory-based stressors by investigating whether lingering negative affect in everyday life (defined as negative affect related to a stressor that had occurred the day before) is associated with physical health outcomes nearly 10 years later. We hypothesized that next-day lingering negative affect would independently predict three self-reports of physical health: chronic conditions, activities of daily living (ADLs), and instrumental activities of daily living (IADLs). We chose to examine both chronic conditions and functional limitations given the encompassing nature of these constructs. The number of chronic conditions and functional limitations a person has is indicative of underlying features of physical health. Physicians and researchers use the presence of multiple chronic conditions to predict health needs, costs, hospitalization, and future increases in morbidity as well as mortality (Lehnert et al., 2011). Moreover, researchers have confirmed that self-reports of chronic conditions and levels of functional impairment both correlate strongly with a physician diagnosis of illness (Henderson et al., 2009).

The current study is novel in that it investigated the dynamic changes in people's affective responses to stressors as they engage in their everyday lives and routines. In addition, this study is the first to examine how lingering negative affect in response to daily stressors is related to future physical health across an almost 10-year period. By adjusting for both same-day affective reactivity and average number of stressors in addition to baseline levels of the same health-reported outcomes, we were able to isolate the unique effects of lingering negative affect on physical health independently of affective reactivity and amount of stressor exposure.

Method

Sample and design

Participants completed the second wave of the Midlife in the United States Survey (MIDUS II), a national sample of U.S. adults. A subset of the MIDUS II participants (n = 2,022) completed the second wave of the National Study of Daily Experiences (NSDE II), a daily diary study in which participants completed telephone interviews about their daily experiences over 8 consecutive days (Almeida, McGonagle, & King, 2009). Participants also completed the questionnaire from the third MIDUS wave (MIDUS III) approximately 10 years later. To assess lingering negative affect in response to a daily stressor, we included participants who experienced at least one stressor during the diary portion of the study in analyses (n = 1,637). Of these participants, 1,373 also had MIDUS III data. Of this sample, 1,155 participants had complete data on all variables of interest. On the basis of this sample size, there was adequate power (> .90) for detecting small effects (r = .10) of lingering affective change on physical-health-related outcomes. Participants were predominantly White (90%), ranged from 30 to 84 years old (M = 55) at the first wave of data collection, and were fairly well educated (74% of participants reported having at least some college education); 57% were female. Compared with participants who completed the MIDUS III survey, nonrespondents were older (mean age = 61 years); had higher levels of chronic conditions, ADLs, and IADLs; and had a higher average number of stressors assessed in MIDUS II. The

NSDE protocol was approved by the institutional review boards of the University of Wisconsin and Pennsylvania State University, and participants provided informed consent.

Measures assessed in NSDE II

Daily negative affect. Over each of 8 days, participants were asked how much of the time over the past 24 hr they felt nervous, worthless, hopeless, lonely, afraid, jittery, irritable, ashamed, upset, angry, frustrated, restless or fidgety, that everything was an effort, and so sad that nothing could cheer them up (Cronbach's alpha for each day ranged between .83 and .86). Participants rated their response on a 5-point scale ranging from 0 (*none of the time*) to 4 (*all of the time*). Scores were then averaged across the 13 items for each day (M = .19, SD = .33).

Daily stressors. Daily stressors were measured using the semistructured Daily Inventory of Stressful Events (Almeida, Wethington, & Kessler, 2002). This measure included 7 stem questions that asked whether certain stressors had occurred (1 = *yes*, 0 = *no*) in the past 24 hr. These included having an argument with someone; almost having an argument but avoiding it; a stressful event at work or school; a stressful event at home; experiencing race, gender, or age discrimination; having something bad happen to a close friend or relative; and having had anything else bad or stressful happen in the past 24 hr. The total number of stressors reported was summed to reflect the number of stressors experienced each day (M = .53, SD = .67).

Average number of stressors. The average number of stressors was assessed by summing and averaging the total number of stressors mentioned across the 8 days.

Measures assessed in MIDUS II and III

Chronic illness. Participants were asked whether they had each of 26 chronic physical conditions in the prior 12 months (Marmot, Ryff, Bumpass, Shipley, & Marks, 1997). Participants also reported whether they had ever experienced cancer or heart disease. Chronic conditions were placed into 16 categories to prevent multiple reports of conditions. Categories were autoimmune disorders (HIV, autoimmune diseases), cancer, cardiovascular conditions (heart disease, high blood pressure, stroke, hypertension), diabetes, digestive conditions (stomach trouble, constipation, ulcer, swallowing problems), foot trouble, hay fever, gall bladder trouble, lung conditions (asthma, tuberculosis, other lung problems), neurological conditions, pain-related conditions (backache, joint diseases, migraines), skin trouble, thyroid disease, mouth/gum trouble, sleep problems, and urinary/bladder problems (Piazza et al., 2013). Scores of the chronic conditions were summed to form a measure of total chronic conditions. Participants were then grouped according to the number of chronic conditions they reported (none, one, two, three, or four or more). People with four or more chronic conditions were pooled into a single group to prevent the skewed nature of the data (only 14% of participants had five or more chronic conditions) and in line with categories for chronic conditions proposed by previous research (Wolff, Starfield, & Anderson, 2002).

Functional limitation. MIDUS II and MIDUS III surveys asked about ADLs and IADLs to assess functional impairment (Katz, Ford, Moskowitz, Jackson, & Jaffe, 1963; Lawton & Brody, 1970). Items in the ADL category reflect an individual's ability to function at a basic level on his or her own and include bathing or dressing oneself, walking one block, and climbing one flight of stairs (MIDUS II: M = 1.31, SD = 0.62; MIDUS III: M = 1.42, SD = 0.72). Items in the IADL category reflect an individual's ability to engage in everyday activities, including lifting or carrying groceries; climbing several flights of stairs; bending, kneeling, or stooping; walking more than a mile; walking several blocks; engaging in vigorous activity; and engaging in moderate activity (MIDUS II: M = 1.77, SD = 0.86; MIDUS III: M = 1.97, SD = 0.93). Participants indicated the extent to which their health limited these activities on a 4-point scale ranging from 1 (*not at all*) to 4 (*a lot*), with items averaged together such that higher scores indicated greater functional impairment.

Statistical analyses

Lingering negative affect is the degree to which the stressor-related negative affect from the day before (or affect reactivity) is still present the day after a stressor occurs. Defined by the slope of the relationship between current-day negative affect and previous-day stressors, lingering negative affect was calculated using lagged associations estimated from multilevel models using SAS PROC MIXED. Multilevel models calculated levels of current-day negative affect as a function of average negative affect (intercept) and the effect of a previous-day stressor (slope). To ensure that the slope estimated the unique effects of a prior-day stressor on current-day negative affect, we included only days when individuals were not currently experiencing a stressor in this model. For example, if a person reported a stressor on Days 3, 4, and 7 of the 8-day period, those days would be removed from the analyses, and only Days 1, 2, 5, 6, and 8 would be included. Of the 11,090 interview days, 3,180 were removed from the analyses, resulting in

7,910 days when people were not currently experiencing a stressor. Removing these days guaranteed that any changes in negative affect were not due to any current-day stressor, thus making current-day reactivity nonexistent. It also ensured that the previous-day stressor was not ongoing and was not present as a stressor that day. In addition, this model included variance explained by the average number of stressors experienced. In doing so, we estimated the unique effects of a prior-day stressor on current negative affect, adjusting for average level of stressors and looking only at days when individuals were not currently experiencing a stressor. These analyses are shown in the following model:

$$\text{Level 1: } NA_{ij} = \beta_{0j} + \beta_{1j}(\text{stressor}_{ij-1}) + r_{ij}$$

$$\text{Level 2: } \beta_{0j} = \gamma_{00} + \gamma_{01}(\text{average\_stress}_{j}) + \mu_{0j}$$

In our Level 1 equation, NA_{ij} is the amount of negative affect on day *i* for person *j*. It is a function of daily negative affect for person *j* on a day when no stressors are encountered (μ_{0j}) and the expected change in negative affect for person *j* as a result of having encountered a stressor the day before (β_{1j}). The intercept and slope were allowed to vary (calculated by the RANDOM statement in SAS PROC MIXED). The Level 2 equation includes the between-person covariate of average number of stressors.

To calculate the individual slopes that represent lingering negative affect, we estimated the model above with lagged stressors as predictors of negative affect. Then, the fixed slope describing the average association between previous-day stressors and current negative affect was added to each slope residual to produce an individual slope for each person (Charles et al., 2013). These individual slopes represent the degree to which an individual's emotional reaction to a stressor is still present the day after a stressor occurs on days when the person experienced no stressors.

To determine whether these lingering negative affect slopes were associated with the development of future health conditions, we used a negative binomial regression model to predict the number of chronic conditions (count data) and ordinary least squares regression models to predict the level of ADLs and IADLs 10 years later from this slope. For each model, the lingering negative affect variable was used to predict the physical health variables while adjusting for age, sex, education, and the outcome physical health variable at baseline.

Results

Participants reported between zero and five stressors on each day of the interviews (M = 0.53, SD = 0.67 across the 8 days). Across all days, participants reported zero stressors on 61% of the days, one stressor on 29% of the days, and two or more stressors on 10% of all days (ranging from 8.07% reporting two stressors to 0.01% reporting six). Given the skewness, stressors were coded dichotomously as either having been experienced (1) or not (0). People who experienced more stressors had a higher education level (r = .118, p < .001) and were younger (r = −.123, p < .001). Women reported significantly more stressors than men, $t(14568)$ = 11.16, p < .001.

At MIDUS II baseline, 21% of the sample reported having no chronic conditions, 20% reported one chronic condition, 20% reported two chronic conditions, 14% reported three chronic conditions, and 25% reported four or more chronic conditions. At the MIDUS III follow-up 10 years later, 17% of the sample reported no chronic conditions, 15% reported one chronic conditions, 18% reported two chronic conditions, 12% reported three chronic conditions, and 38% reported four or more chronic conditions. For ADLs, 29% of the sample reported some amount of ADL limitation at baseline, and 36% did so at follow-up. For IADLS, 77% reported some amount of IADL limitation at baseline, and 80% reported some limitation at follow-up.

Participants reported experiencing some negative affect on 55% of the days they were interviewed (M = .19, SD = .33). The day after an individual experienced any stressor, people reported higher negative affect (M = .24, SD = .36) than when they did not experience a prior stressor (M = .10, SD = .22), $t(12297)$ = 46.69, p < .001. Multilevel model results testing the relationship between previous-day stressors and current-day negative affect are presented in Table 1. As discussed previously, these models included only days when an individual did not report a stressor on the current day. These models indicate that on days when a person did not currently experience a stressor, negative affect was higher the day after a stressor was experienced than when the individual did not experience a prior stressor (γ = .012, p < .01). This finding demonstrates that people experience lingering stressor-related negative affect the day after a stressor occurs.

To test whether lingering negative affect is related to increased numbers of future chronic conditions and level of functional limitation, we first computed descriptive statistics and zero-order correlations between lingering negative affect slopes and all three health outcomes (see Table 2). Significant negative correlations between lingering negative affect and all three health outcomes suggest that people who experience prolonged negative affect in the day following a stressor have more physical-health-related problems 10 years later.

Table 1. Results of the Multilevel Model Predicting Current-Day Negative Affect From Prior-Day Stressors

Effect type and variable	Estimate	*SE*	95% CI
Fixed			
Intercept	0.127***	0.005	[0.117, 0.138]
Previous-day stressor	0.012**	0.004	[0.006, 0.024]
Average stress	0.123***	0.012	[0.100, 0.147]
Random			
Intercept variance	0.016***	0.001	[0.013, 0.021]
Previous-day stressor variance	0.005***	0.001	[0.004, 0.009]

Note: CI = confidence interval.
**$p < .01$. ***$p < .001$.

To test our hypothesis that lingering negative affect was independently predictive of change in future physical-health-related outcomes, we ran separate regression models with lingering-negative-affect slopes (value of affect slope: $M = 0.012$, $SD = 0.032$) predicting chronic conditions, ADLs, or IADLs. All models adjusted for age, gender, education, and the outcome health variable at baseline. Average number of stressors was not included because it was already adjusted for in the multilevel model that calculated the lingering-negative-affect slopes. Results are displayed in Table 3. As hypothesized and as shown in the table, increased levels of lingering negative affect significantly predicted each physical health outcome 10 years later. This finding indicates that people who experienced higher levels of negative affect in response to a stressor the day after it occurs reported increases in physical health problems, including more chronic conditions and functional limitations later in life. Furthermore, these associations were significant even after taking into account average number of stressors and eliminating the possibility for same-day reactivity to stressors.

Discussion

It is not just how we react but also how we recover from stressful experiences that matters for our physical health. Experimental studies have examined the effects of affective reactivity and recovery from laboratory-based stressors, but the relationship between lingering negative emotions in daily life and long-term physical health has never been tested. The current study examined how lingering negative affect in response to daily stressors is associated with changes in physical health across a 10-year period. We found that, on average, people experience increases in negative affect on the days following a stressful experience. Furthermore, lingering negative affect in response to a stressor was associated with an increase in chronic conditions and functional limitations nearly 10 years later.

Lingering negative affect and health

Several potential mechanisms may explain the relationship between lingering emotions and physical health.

Table 2. Descriptive Statistics for and Correlations Among All Predictor Variables (MIDUS II) and Health-Related Outcome Variables (MIDUS III)

			Correlations								
Survey and variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
MIDUS II											
1. Lingering-negative-affect slopes	0.012	0.032	—								
2. Gender (57% female)			.010	—							
3. Age (years)	55.88	12.12	–.005	.003	—						
4. Education[a]			–.029	–.107***	–.133***	—					
5. Chronic conditions[b]			.127***	.179***	.159***	–.126***	—				
6. ADLs	1.31	0.62	.153***	.165***	.125***	–.19***	.442***	—			
7. IADLs	1.77	0.86	.131***	.186***	.244***	–.23***	.507***	.83***	—		
MIDUS III											
8. Chronic conditions[c]			.096***	.098***	.127***	–.072	.407***	.204***	.291***	—	
9. ADLs	1.42	0.72	.080***	.166***	.232***	–.255***	.382***	.578***	.571***	.291***	—
10. IADLs	1.97	0.93	.080***	.177***	.351***	–.258***	.432***	.539***	.657***	.381***	.841***

Note: MIDUS = Midlife in the United States Survey; ADLs = activities of daily living; IADLs = instrumental activities of daily living. [a]Seventy-four percent of the MIDUS II sample reported having at least some college education. [b]Twenty-one percent of the MIDUS II sample reported having no chronic conditions. [c]Seventeen percent of the MIDUS III sample reported having no chronic conditions.
***$p < .001$.

Table 3. Results of Negative Binomial and Ordinary Least Squares Regression Models Predicting Physical Health Outcomes 10 Years Later From Lingering Negative Affect

	Chronic conditions (χ^2 = 320.19***)		ADLs (R^2 = .382***)		IADLs (R^2 = .486***)	
Variable	*b*	95% CI	*b*	95% CI	*b*	95% CI
Lingering negative affect	0.887*	[0.052, 1.723]	1.542**	[0.513, 2.257]	1.561**	[0.887, 3.509]
Time 1 health indicator	0.161***	[0.140, 0.183]	0.665***	[0.605, 0.725]	0.651***	[0.600, 0.701]
Gender (reference = female)	0.017	[–0.068, 0.100]	0.103**	[0.037, 0.170]	0.114**	[0.035, 0.194]
Age	0.014***	[0.009, 0.017]	0.010***	[0.007, 0.013]	0.017***	[0.014, –0.021]
Education	–0.007	[–0.023, 0.010]	–0.037***	[–0.051, –0.024]	–0.033***	[–0.048, –0.021]

Note: Negative binomial regressions were run for chronic conditions, whereas ordinary least squares regressions were run for activities of daily living (ADLs) and instrumental activities of daily living (IADLs).
*p < .05. **p < .01. ***p < .001.

One such mechanism is physiological dysregulation. Emotional consequences to stressful experiences are posited to cause long-term dysregulation of physiological processes (McEwen, 2006). Similarly, lingering negative affect may influence future physical health by prolonging activation of the physiological stress response. For example, an argument with a spouse may trigger a short-term physiological stress response. However, continuing to dwell on that argument after its conclusion may either prolong or reactivate that same physiological response. Research has documented that the tendency to perseverate on stressful experiences has been linked with prolonged activation of the cardiovascular system (Brosschot et al., 2006; Glynn, Christenfeld, & Gerin, 2002) and the hypothalamic-pituitary-adrenal axis (Zoccola & Dickerson, 2012). Thus, simply thinking about a negative event may be as arousing as the event itself. It is possible, then, that lingering negative affect may have the same tendency to activate and prolong the physiological response.

Persistent activation of stress-related systems may, over time, leave an individual vulnerable to disease. A few studies have suggested a link between perseverative cognition and health outcomes. Prospective studies have found that rumination and worry are related to somatic complaints (Brosschot & van der Doef, 2006) and self-reported physical health problems (Thomsen et al., 2004). Importantly, these physiological changes may be driven by the emotional upset that results from dwelling on negative emotional experiences (Gruber, Harvey, & Johnson, 2009; Kross, Ayduk, & Mischel, 2005). Yet these studies did not directly assess the emotional responses that resulted from dwelling on these negative experiences. The results of this study are consistent with and add support for this hypothesis.

A second potential mechanism that may explain the association between lingering negative emotions and physical health is health behaviors. Negative moods have been linked to poorer health behaviors, including less physical activity, higher drug use, and diets high in fat and sugar (Fulkerson, Sherwood, Perry, Neumark-Sztainer, & Story, 2004). Increases in lingering negative affect may lead people to engage in poorer health behaviors, which may in turn influence physical health later in life. In addition, lingering negative thoughts and emotions have been shown to disrupt sleep (Thomsen, Mehlsen, Christensen, & Zachariae, 2003). Sleep is a restorative health behavior that influences physical health and well-being. Therefore, sleep disruptions caused by lingering negative thoughts and emotions may also contribute to poorer physical health.

Limitations and future directions

One limitation of the present study is the timing in which stressful events and daily negative affect were measured in NSDE II. Participants were asked about their emotions and any stressors experienced over the past 24 hr. Therefore, the calculations for affect reactivity and lingering affect were coarse, with participants being asked to recall their emotions over an entire day. Alternatively, although we assume that increases of negative affect on the day of a stressor represent stressor reactivity, the reverse association may also be true. People who experience higher levels of negative affect may be more likely to report stressors. In spite of this limitation, the significant effects of our measure of lingering negative emotions are especially noteworthy, showing that lingering negative affect an entire day later is itself predictive of future physical health outcomes.

Another limitation of the study is that the sample consisted of people who participated in both waves of data collection. Participants who completed both waves of the study were younger, had fewer chronic conditions and functional limitations, and experienced fewer stressors. It should be noted that attrition of people who were older and in poorer health means that the

longitudinal sample was selective relative to the overall baseline sample.

Finally, this study relied on self-reported measures as health-related outcomes. Because information on health-related measures, emotions, and stressors was all collected through self-report measures, it is possible that relationships between lingering negative affect and health-related outcomes are exaggerated because of response bias (Watson & Pennebaker, 1989). This concern is somewhat ameliorated, however, by previous research that has found that self-reports of chronic conditions and levels of functional impairment both correlate strongly with a physician diagnosis of illness (Henderson et al., 2009). Furthermore, the reliance on self-reports limits the causal interpretation of the data, and we cannot make any definitive statements about the causal nature of affect and health. As an alternative hypothesis, the embodied-predictive-interoception-coding model suggests that instead of negative affect impacting health, allostatic disruptions that are not yet manifested in chronic conditions might initially cause negative thinking and emotions that then serve to maintain negative affect as well as future health conditions (Barrett & Simmons, 2015). Future work should extend these findings by examining other measures of physical health past self-report, including measures of biomarkers and longevity.

As researchers continue to examine lingering negative affect as a mechanism through which daily stressors influence future physical health, it will be important to identify factors that serve as potential moderators in this relationship. Both demographic and psychosocial characteristics, including socioeconomic status, levels of social support, and racial differences, may serve to moderate the relationship between lingering negative affect and physical health. In addition, we examined the effects of lingering negative affect on a single index of overall health composed of a variety of chronic conditions. In the future, researchers should explore whether the effects of emotional lingering are similar on all types of health conditions or are specific to individual conditions.

Conclusions

Researchers are increasingly studying how minor stressors affect our physical well-being. In this study, we examined people's negative affective responses to stressors in their everyday lives. These findings illustrate that the negative emotions that people feel in response to everyday stressors can linger and that they have important implications for long-term physical health. Therefore, the continuing study of the dynamic process of emotional experience in response to stressful experiences and how these processes influence our health is vital for the enhancement of physical health and well-being.

Action Editor

Ian H. Gotlib served as action editor for this article.

Author Contributions

K. A. Leger developed the study idea. The data set was provided by D. M. Almeida and Pennsylvania State University. K. A. Leger analyzed and interpreted the data under the supervision of S. T. Charles. K. A. Leger drafted the manuscript, and S. T. Charles and D. M. Almeida provided critical revisions. All the authors approved the final manuscript for publication.

Declaration of Conflicting Interests

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

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Open Practices

All data have been made publicly available via the Inter-University Consortium for Political and Social Research (ICPSR) and can be accessed at https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/203. The complete Open Practices Disclosure for this article can be found at http://journals.sagepub.com/doi/suppl/10.1177/0956797618763097. This article has received the badge for Open Data. More information about the Open Practices badges can be found at http://www.psychologicalscience.org/publications/badges.

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