

# UC Irvine

## UC Irvine Previously Published Works

### Title

The mixed benefits of a stressor-free life.

### Permalink

<https://escholarship.org/uc/item/5c94k804>

### Journal

Emotion, 21(5)

### Authors

Charles, Susan  
Mogle, Jacqueline  
Chai, Hye  
[et al.](#)

### Publication Date

2021-08-01

### DOI

10.1037/emo0000958

Peer reviewed



# HHS Public Access

Author manuscript

*Emotion*. Author manuscript; available in PMC 2022 August 01.

Published in final edited form as:

*Emotion*. 2021 August ; 21(5): 962–971. doi:10.1037/emo0000958.

## The Mixed Benefits of a Stressor-Free Life

Susan T. Charles<sup>1,2</sup>, Jacqueline Mogle<sup>3</sup>, Hye Won Chai<sup>4</sup>, David M. Almeida<sup>4</sup>

<sup>1</sup>Department of Psychological Science, 4568 Social & Behavioral Sciences Gateway, University of California, Irvine, CA 92697-7085 USA

<sup>2</sup>Kurt Lewin Center for Theoretical Psychology; University of Zurich; Binzmühlestrasse 14/24, Zurich, Switzerland

<sup>3</sup>Edna Bennett Pierce Prevention Research Center, The Pennsylvania State University, 320D Biobehavioral Health Building, University Park, PA 16802 USA

<sup>4</sup>Department of Human Development and Family Studies, 403 Biobehavioral Health Building, University Park, PA 16802 USA

### Abstract

Research documents the pernicious effects of daily stressors on well-being, but often ignored in these studies are people reporting no stressors. The current study compared adults who reported no daily stressors to adults who reported at least one stressor across eight consecutive days on measures of well-being. Of the 2,804 respondents (25 – 75 years old;  $M = 53.46$ ) from the Midlife in the United State Survey (MIDUS) daily diary study, 10% reported experiencing no stressors across eight days. Those reporting no stressors were generally older, male, unmarried, and were less likely to work, provide or receive emotional support, or experience positive daily events. They reported greater daily affective well-being and fewer chronic health conditions, but had lower levels of cognitive functioning. Findings suggest that daily stressors may serve as a proxy to engagement in social activities, where a lower level of engagement is related to better physical and emotional well-being but lower levels of cognitive functioning.

### Keywords

stressors; well-being; social engagement; cognitive functioning

### The Mixed Benefits of a Stressor-free Life

Psychology is replete with studies illustrating the damaging effects of stress. People who report experiencing both acute (i.e., short-lived) and chronic (i.e., ongoing) stress are at greater risk for chronic illnesses, poorer cognitive functioning, and lower emotional well-being (e.g., Thoits, 2010). Concern over the effects of stress is reflected in the yearly Stress in America survey that recently reported that the overall stress levels of Americans have increased in 2020 after 13 years of relative stability (American Psychological Association,

2020). A logical conclusion from this vast literature is that avoiding the experience of stress is best for optimum health. Yet, few studies have examined the benefits of a life free of stressors, if such a possibility even exists. Moreover, theorists have discussed benefits gained by successfully responding to stressors (e.g., Ozbay et al., 2008; Rutter, 2012). Using a national sample, the current study compared adults who reported experiencing no stressors across the course of eight days to adults reporting at least one stressor on overall psychological, cognitive, and physical well-being.

### **Stressors: Avoid at all cost or necessary evils?**

Research on daily stressors has almost exclusively depended on self-reported data from daily diary or momentary sampling studies (e.g., Almeida, 2005; Bolger et al, 2003). Daily stressors are identified by the participants, and as such are dependent on a person both encountering a stressful event and perceiving the event as stressful. In daily diary studies like the one in the current study, researchers often use follow-up questions to ensure that these subjective reports are describing an objective event that meets the definition of a stressful event for the researchers (Almeida et al., 2002). As a result, researchers can downgrade a reported event as not being a stressor (i.e., if someone reports feeling sad on a day, but reports no eliciting event that made them sad); however, there is no way to reclassify an event that was a source of distress for the participant, but that was not reported by the participant for reasons of social desirability or forgetting, or to reclassify an event that most other people found stressful, but the participant did not. A person who reports no stressors, therefore, may not have had any events in their lives that another person would have found stressful; alternatively, they may have experienced an event that someone else would have found stressful, but they themselves did not perceive it as such. For this reason, daily stressor research is a study of the source of people's reported distress and how encounters of stress-eliciting experiences affect their well-being.

Researchers have found a number of factors related to the frequency of stressor reports. For example, studies examining adults find that higher socioeconomic status (as assessed by education level and income) is related to greater number of daily stressors (e.g., Almeida et al., 2011). Although researchers do not know the exact mechanism explaining the link between more frequent stressors and both higher income and education, some have postulated that higher socioeconomic status jobs may entail higher-risk decision-making and difficult management responsibilities that would produce a greater number of stressors. Another sociodemographic factor related to fewer stressors is older age, and again, researchers have conjectured that perhaps older age is related to freedom from job-related stressors as a result of retirement, or freedom from child-rearing stressors once children leave the home (e.g., Almeida et al., 2011). Beyond these sociodemographic factors, however, studies on daily stressors focus more on how stressor appraisals or other environmental factors (such as social support) exacerbate stress reactivity (e.g., Flett et al., 2016) or what people do to cope with daily stressors (e.g., Iwasaki & Schniedier, 2003), and not how other features of daily life are related to stressor exposure.

### Daily stressors and their association with well-being.

The current paper focuses on whether people report that a daily stressor has occurred regardless of its qualities. Stressors are defined here as external acute events that have relatively minor levels of intensity (Almeida 2007). Most research on daily stressors focuses less on stressor frequency and more on how people appraise and react to them. People report the stressors they experience as varying in terms of locus (external versus internal), duration, and intensity (Randall & Bodenmann, 2017). The effects of daily stressors are often measured by stressor frequency, appraisal, and reactivity. For example, stressor pile-ups (many stressors on one day) are linked to greater distress and binge drinking (Grzywacz & Almeida, 2008; Schilling & Diehl, 2014). Appraising stressors as more severe and greater emotional reactivity are likewise related to worse emotional and physical health (e.g., Charles et al., 2013; Piazza et al., 2013; Jeong et al., 2016).

Explanatory mechanisms linking stressors to poorer health range from physiological pathways whereby accumulated effects of stressors alter physiological functioning (Glaser & Kiecolt-Glaser, 2005), to stressors leading to poorer health habits such as sleepless nights, binge eating, and ignored exercise plans (e.g., Groesz et al., 2012; Stults-Kolehmainen & Sinha, R, 2014). Although stressor pile-ups and greater reactivity predict poorer outcomes, moderate amounts of manageable stressors may be beneficial (e.g., Neff & Broady, 2011). Theorists posit that exposure to mild stressors leads to increased confidence and knowledge to apply to future challenges. Stress inoculation theory uses a medical metaphor to explain how exposure to relatively innocuous events builds psychological resilience for responding to more serious events (e.g., Meichenbaum & Deffenbacher, 1988; Ozbay et al., 2008); other researchers compare this process to the tempering of metal, where moderate exposure to adversity leads to greater resilience through a “steeling” effect (Rutter, 2012).

For physical and cognitive well-being, stress research likewise presents a mixed view. Greater reactivity to daily stressors is related to poorer outcomes (e.g., Piazza et al., 2013; Stawski et al., 2019), but other studies find that exposure to mild stressors can lead to physiological toughness that benefits both cognitive and physical functioning (see Dienstbier, 1989; McEwen, 2008). Consistent with this premise, several studies have shown that people who have experienced a moderate amount of life adversity (e.g., death of a loved one; parental divorce) have higher levels of well-being and better physiological responses to stress compared to people with either low or very high levels of exposure (cf, Seery et al., 2013).

### Examining people who report no stressors.

Researchers have examined exposure to stressors varying in severity, but few researchers have attempted to characterize the lives of people who report no daily stressors. Perhaps one reason for this omission is that stressors such as the occasional argument with a family member or a problem at work are so minor that it is unclear whether it is possible to avoid experiencing at least one in the course of a week. Stressors can also include learning upsetting information about a person in one’s social network, such as a health problem or a career setback. Who, then, are these carefree adults and what is their level of activity and well-being? Stressors, by definition, increase levels of distress, so people without stressors

may be those who are particularly happy and well-adjusted. Conversely, the frequency of daily stressors is positively correlated with the frequency of daily positive events (Charles et al., 2010). People who report no stressors, then, may also report few positive experiences, and perhaps report lower levels of distress but also lower levels of happiness as well.

Many studies link stress with poorer health (e.g., Pearlin et al., 2005), but fewer studies discuss its relationship with cognitive functioning. Cognitive functioning is often defined by a person's ability to attend to information (attention and concentration) and remember information (both short and long-term memory), as well as their speed, efficiency, and ability to problem solve, and their ability to inhibit unimportant or unwanted information and behavior. These abilities are often measured using tasks assessing different types of memory (e.g., episodic memory, working memory, long and short-term memory), and problem-solving skills (referred to as executive functioning abilities). Studies also test the ability to inhibit previously-displayed, similar but now unimportant information to assess the integrity of frontal lobe inhibition. Decline in these skills is often assessed using longitudinal studies that track performance on these tasks over time.

A stressor-free life may indicate a lack of engagement with people and activities that allow for cognitive engagement and the continued use of cognitive functioning (Wilson et al., 2005). Studies have found that people who engage in cognitively stimulating activities both earlier and later in their life span have higher levels of cognitive functioning in old age (Wilson et al., 2005) and lower levels of cognitive decline among older adults (James et al., 2011). Greater engagement in socio-intellectual leisure activities in midlife (e.g., visits to the library, visits with family and friends) is also related to higher cognitive functioning (Gow et al., 2017). Social engagement provides complex interactions that are linked to better cognitive functioning in adulthood (e.g., Sharifian et al., 2020), but interacting with others is also the most commonly reported type of stressor experienced in adulthood and the one most associated with distress (e.g., Almeida, 2005).

### **The current study.**

The current study examines stressors and well-being in the lives of more than 2,500 American adults. Across eight consecutive days, people were asked whether they experienced a number of commonly occurring daily stressors. We compared people who reported having experienced no stressor on any of these days to those reporting at least one stressor. We examined whether these two groups differed in their daily activities (work, leisure, volunteer activities), their affective well-being (e.g., positive and negative affect), their self-reported physical health (self-rated health, daily physical health symptoms, number of chronic conditions), and their cognitive functioning in attempts to characterize the benefits or potential drawbacks of people who are reporting no stressors in their lives.

## **Methods**

### **Data and Sample**

The second wave of the Midlife in the United States (MIDUS II) study and MIDUS Refresher were used for this study. MIDUS II was a national survey of health and well-

being in adulthood collected across 2004 and 2006. MIDUS Refresher was added between 2011 and 2014 to replenish the original MIDUS cohort. This study selected respondents who took part in both the MIDUS main survey and its subproject, the National Study of Daily Experiences (NSDE). NSDE consisted of randomly selected participants from the main survey who were asked to complete short telephone interviews across 8 consecutive evenings regarding their daily experiences including daily stressors, time use, and affect. A more detailed description of NSDE is available elsewhere (Almeida et al., 2009).

Among the 2,804 respondents (2,022 from MIDUS II and 782 from MIDUS Refresher) who participated in both the MIDUS main survey and NSDE, this study excluded 93 individuals with missing data on at least one of the covariates. Our final sample was 2,711 respondents (2,004 from MIDUS II and 707 from MIDUS Refresher). Participants were predominantly White (84.43%), with 10.03% Black, 1.44% Native American, 0.59% Asian, and 3.50% other/unidentified racial group in the current sample. Among those reporting White, a subset of those ( $n = 43$ ) reported that they were of Hispanic descent. Analyses for the current study focused on between-group comparisons on aggregated variables. For our smallest possible comparison, we had the power to detect effect sizes of Cohen's  $f \geq .06$ . The number of days reported differed across NSDE variables, ranging from 18,110 to 20,016 days. 92.74% of our sample completed at least 6 out of 8 daily diary interviews. The average number of interview days completed was 7.39 ( $SD = 1.33$ ). Specifically, the mean of interview days completed was 7.01 ( $SD = 0.12$ ) for the no-stressor group and 7.43 ( $SD = 0.02$ ) for the stressor group. 43.53% of the study sample were men, and the average age was 54.10 ( $SD = 12.86$ ).

## Measurements

**Stressor Group.**—Experience of daily stressors was measured in NSDE using the Daily Inventory of Stressful Events (Almeida et al., 2002). Each day, respondents were asked whether they had experienced seven different types of stressors (e.g., have an argument or a disagreement, avoiding a disagreement, stressor from home, stressor from work or school, discrimination, network stressor, and other stressors) since yesterday (or since their last phone interview). The definition of a stressor was limited to an external event that occurred in daily life, and did not include feelings or physical symptoms the participant reported. For example, if the participant reported feeling sad based on a prior memory, or if they reported having a physical event such as a headache, these were not included in the stressor definition. Responses to each stressor were coded as 1 = *Yes* and 0 = *No*. The summed value of participants' responses to the seven items across all study days was recoded as a binary variable to create a person-level variable indicating exposure to stressors, with 0 indicating experiencing at least one stressor during the study days and 1 referring to having no stressors across the study days. From the study sample, 9.74% reported not experiencing any stressors during the study period ( $n = 264$ ).

**Daily Time Use.**—Measurements for daily time use came from NSDE. For each day, NSDE asked respondents to provide information about time spent in various activities in their daily life (Almeida & McDonald, 2005). For example, participants reported hours and minutes they spent sleeping during the past 24 hours. Variables from daily time use included

as outcomes of this study were: time spent sleeping, working, doing leisure activities, watching TV, engaging in physical activity, volunteering, giving emotional support, and receiving emotional support. Because responses were reported in hours and minutes, this study recoded the responses into minutes (e.g., 1 hour and 30 minutes was recoded as 90 minutes), and 0 indicated no engagement in a given activity during the study day.

**Daily Physical Symptoms.**—Information about daily physical symptoms was collected in NSDE using a shortened version of the Larsen and Kasimatis (1991) physical symptom checklist (Leger et al., 2015). During the daily diary interview, participants reported experiences of 28 physical symptoms including aches (e.g., headache, backache), respiratory symptoms (e.g., runny nose, sore throat), gastrointestinal symptoms (e.g., stomach problems, diarrhea), and other physical symptoms (e.g., poor appetite, dizziness, allergies). “Yes” was coded as 1 and “No” was coded as 0. Responses to each physical symptom were summed to calculate the total number of physical symptoms that occurred during a given day.

**Daily Positive and Negative Affect.**—To assess daily positive and negative affect, NSDE participants were asked how much of the time that day they felt the following positive (in good spirits, cheerful, extremely happy, calm and peaceful, satisfied, full of life, close to others, like you belong, enthusiastic, attentive, proud, active, confident) and negative (restless or fidgety, nervous, worthless, so sad nothing could cheer you up, everything was an effort, lonely, afraid, hopeless, jittery, irritable, ashamed, upset, angry, frustrated) emotional experiences (Almeida & Kessler, 1998; Mroczek & Kolarz, 1998; Watson et al., 1988). Responses to all items ranged from 0 = *None of the time* to 4 = *All of the time*. The averages of the positive and negative affect items were calculated for each day so that higher numbers would indicate higher levels of positive and negative affect. Between-person reliability of positive affect was  $\alpha = .96$  for the entire sample,  $\alpha = .97$  for the no-stressor group, and  $\alpha = .96$  for the stressor group. Reliability of negative affect was  $\alpha = .91$  for the entire sample,  $\alpha = .92$  for the no-stressor group, and  $\alpha = .90$  for the stressor group (Hox, 2010).

**Daily Positive Events.**—Each day of the daily diary study, participants were asked if they had experienced each of the five different types of events that most people would consider particularly positive since the day before (or since their last phone interview). These events were: positive interaction with someone (e.g., sharing a good laugh, having a good conversation), a positive experience at work/volunteer position, a positive experience at home, a positive experience happening to a close friend or relative, and any other positive event (for an in-depth description of the method and rationale for these daily events, see Sin & Almeida, 2018). For example, an item on positive events at home was asked with a question, “Since yesterday (when we last spoke for follow-up phone calls), did you have an experience at home that most people would consider particularly positive?”. Responses to each item were coded as 1 = *Yes* and 0 = *No*, even if they volunteered having more than one experience in a single category (e.g., they reported having two or more positive interactions with someone). The total number of these five types of positive events reported for a given day (ranging from 0 to 5) was used for analyses.



**Chronic Conditions.**—In the MIDUS main survey, participants were provided a list of 29 chronic conditions that included: lung diseases (e.g., asthma), bone or joint diseases (e.g., arthritis), skin diseases, digestive problems (e.g., gall bladder), autoimmune diseases, migraine headaches, neurological disorders, diabetes, and other persistent conditions requiring treatment (Leger et al., 2015). A sum of all chronic conditions endorsed was used.

**Self-rated Health.**—The self-rated health question was a single item asking individuals to rate their present health on a scale from 0 (worst possible health) to 10 (best possible health).

**Brief Test of Adults Cognition by Telephone (BTACT) Composite Score.**—Participants also completed the BTACT as part of a separate telephone interview prior to the daily diary study. The BTACT takes approximately 20 minutes and is administered by interviewers specifically trained in the administration of cognitive testing during a time when participants will not be interrupted. During the BTACT, participants completed tests that assess episodic memory (immediate and delayed word list recall for a list of 15 words), working memory (a backward digit span where participants are given a series of increasing longer numbers and asked to repeat them backwards), executive functioning (category fluency where they are asked to name as many animals as they can in one minute), inductive reasoning (number series where they hear a series of numbers and are asked to give the number that comes next), processing speed (count backward from 100 as quickly as possible), and task switching (stop-go switching). These tests are standardized and the composite score is an average of the standardized scores. For additional details, see Lachman and colleagues (2014).

**Covariates.**—Covariates included in this study were demographic factors that have been linked to stressors in the past: older age is related to fewer stressors, having a higher level of education is related to experiencing a greater number of stressors (e.g., Almeida et al., 2011), and women report stressors across more days in the week than men (Almeida et al., 2002). Employment, marital status, race, and membership in MIDUS II or the Refresher were also included as covariates. Education was coded as a categorical variable where 1 = *High school or less*, 2 = *Some college or Bachelor's degree*, and 3 = *Graduate school or professional degree*. Employment was determined by the response to the question, “Are you working now for pay?”. Those who responded “*Yes*” were coded as currently employed, and those who responded “*No*” were coded as not employed. Marital status was a binary variable coded as 1 = *Married* and 0 = *Not married* (e.g., separated, divorced, widowed, and never married). Race was also a binary variable indicating 1 = *White* and 0 = *Non-white*.

## Data Analysis

Analyses were performed using SAS 9.4. For person-level outcomes such as chronic conditions, self-rated health, and objective cognitive performance, multiple linear regression models were used for analyses. For day-level variables measured from NSDE (e.g., daily time use, physical symptoms, positive and negative affect, and positive events), linear multilevel models (Singer & Willet, 2003) were analyzed using SAS PROC MIXED. The stressor group was entered as a between-person (Level 2) predictor to examine the



associations between stressor group membership and daily experiences. Interactions between the stressor group and MIDUS cohort membership were tested in all models to examine whether the associations between stressor group membership and outcome variables differed between MIDUS II and the Refresher cohort. We included Cohen's *d* as an effect size indicator for descriptive and multiple linear regression analyses. We computed pseudo- $R^2$  for the multilevel analyses.

## Results

### Sample Descriptives

Table 1 presents descriptive statistics of the no-stressor and stressor groups and tests of group differences in the study variables. As for sociodemographic characteristics, the no-stressor group was significantly older ( $t = -7.96, p < .05$ , Cohen's  $d = -.52$ ), less educated ( $t = 6.18, p < .05$ , Cohen's  $d = .40$ ), more likely to be male ( $\chi^2(1) = 15.46, p < .05$ ), less likely to be married ( $\chi^2(1) = 9.42, p < .01$ ), and less likely to be working ( $\chi^2(1) = 34.62, p < .05$ ) than the stressor group.

### Being Stressor-Free and its Associations with Physical and Cognitive Measures

We first examined how being stressor-free was related to indicators of physical and cognitive health, adjusting for our selected covariates (Table 2). Individuals in the stressor-free group reported fewer chronic conditions ( $B = -0.58, SE = .18, p < .01$ , Cohen's  $d = .23$ ) but had poorer cognitive performance ( $B = -0.226, SE = .06, p < .01$ , Cohen's  $d = .26$ ), results depicted in Figure 1. The two groups did not differ in their self-rated health ( $B = -0.07, SE = .07, p = .27$ , Cohen's  $d = .08$ ). To place the effect of stressor-free group status on cognitive performance into perspective, we compared the coefficient that represents the estimated difference in cognitive performance between the two stressor groups ( $B = -0.226$ ), to the coefficient that represents the estimated effect of a one-unit change (i.e., one year) in age on overall cognitive performance ( $B = -0.0275$ ). The equation determining how many unit changes in age captures the difference between stressor groups ( $-0.0275x = -0.226$ ) revealed that the difference between the stressor-groups in cognitive performance is equivalent to an 8.21 year difference in cognitive functioning.

### Being Stressor-Free and its Associations with Daily Experiences

Tables 3 and 3b present results from the multilevel analysis that examined the relationship between stressor group membership and each of the day-level outcomes. For daily time use, individuals without stressors spent less time working ( $B = -27.07, SE = 10.06, p < .05$ ), volunteering ( $B = -4.40, SE = 2.08, p < .05$ ), giving emotional support ( $B = -10.30, SE = 2.60, p < .05$ ), and receiving emotional support ( $B = -6.88, SE = 2.02, p < .05$ ) than individuals with stressors, while spending more time watching TV ( $B = 20.41, SE = 5.55, p < .05$ ). In this model, coefficients indicate differences in the amount of time spent on a given activity in a given day between the stressor group and no-stressor group. For example, coefficients for time spent working and watching TV ( $B = -27.07; B = 20.41$ ) indicate that individuals without any stressor spent 27 minutes less working and 20 minutes more watching TV during a given day compared to individuals with stressors. In addition, being in the no-stressor group was associated with fewer numbers of physical symptoms ( $B = -0.81$ ,

SE = 0.12,  $p < .05$ ), fewer positive events ( $B = -0.30$ , SE = 0.04,  $p < .05$ ), a lower level of negative affect ( $B = -0.13$ , SE = 0.02,  $p < .05$ ), and a higher level of positive affect ( $B = 0.30$ , SE = 0.05,  $p < .05$ ).

### **Being Stressor-Free and its Associations with Overall Well-being – Additional Analyses**

People who reported no stressors in their lives during the study period also reported higher daily positive affect and lower daily negative affect, along with less giving to and receiving emotional support from others. We examined global reports of life satisfaction and of social support (combined questions about receiving social support from family and friends) that people had reported in the MIDUS main survey approximately six months prior to participating in the daily diary portion of the study. People had reported their life satisfaction (on a scale from 1 to 10 asking how satisfied they were with life), and they answered four questions, ranging from 1 = *A lot* to 4 = *Not at all*, about support from friends (how much do your friends really care about you, how much do your friends understand the way you feel about things, how much you could rely on your friends for help if you have a serious problem, and how much you could open up to friends if you need to talk about your worries) (Schuster et al., 1990). The same four questions were asked about family members. These eight items were reverse coded and then averaged together. We found that in regression analyses with all covariates entered, the two groups were not significantly different on the global measure of social support, though this difference was close to the  $p < .05$  level,  $B = .068$ , SE = .037,  $p = .06$ . An examination of the means indicated that the no-stressors group reported slightly higher social support ( $M = 3.15$ ) relative to the stressors group ( $M = 3.08$ ), but the difference was small. People with no stressors did, however, report higher levels of life satisfaction ( $M = 7.188$ ) than those who reported daily stressors ( $M = 6.84$ ),  $B = .350$ , SE = .084,  $p < .01$ .

## **Discussion**

Daily stressors are common, with over 90% of people in the current sample reporting at least one over the course of eight days. Yet, people exist who reported none of these relatively minor events over the course of the study period. The current study examined what life is like for these 10% compared to their more stressed peers. Stressor-free individuals were on average older, less educated, less likely to be married, and more likely to be male. They had less active daily lives, but they reported higher levels of daily well-being (i.e., higher positive affect and lower negative affect) and fewer chronic illnesses. One apparent downside of a stressor-free life was that people who reported no stressors also had lower levels of cognitive functioning.

### **Stressor-free: less activity and social connection.**

People reporting no stressors worked fewer hours, engaged in fewer volunteer activities, and both offered and received emotional support less often from others. They reported no stressors, but also fewer daily positive experiences compared to the stressor group. The only type of activity they reported with more frequency was watching television. We did not examine reasons why people do not report stressors, but we speculate that perhaps the stressor-free group are less engaged with the world than those who experience stressors.

We did not assess the size of their social network or ask about other daily activities, but findings are consistent with the possibility that stressor-free people have a narrower range of activities and social partners. For example, people who did not report stressors were less likely to be married, and marital partners are the more common reason for daily arguments, one of the stressor types assessed in this study (Charles et al., 2009). In addition, people who reported no stressors also reported both receiving and providing less emotional support to others, consistent with prior findings (Joo et al., 2020). Three of the stressors assessed included social interactions, so fewer social partners may explain differences in these stressors.

### **Stressor-free and well-being.**

Differences in activities also may provide insight into why people with no stressors also reported higher levels of affective and physical well-being. Social interactions are the most common sources of both daily stressors and uplifts (Almeida, 2005, Sin & Almeida, 2018). Some of our strongest emotions are experienced in social contexts. Yet, the potency of negative social experiences to cause distress is usually stronger than the power of positive social experiences to bolster well-being (see Baumeister et al., 2001; Charles et al., 2016). Unfortunately, the current study did not examine the total amount of time people spent with others or the size of their networks to test this possibility.

Stressor-free individuals also reported more time spent in leisure activities, and these activities are related to higher levels of emotional and physical well-being (Chen et al., 2020). Taken together, these findings are consistent with previous research on how daily work and leisure provide a broader context for understanding stress. Time spent at work often coincides with job demands and less time for leisure and restorative activities (Iwasaki & Schneider, 2003; Wempe & Rosvall, 2005). People who experienced stressors and those who did not reported similar levels of self-rated health, hours of sleep, and levels of physical activity. Yet, those with no stressors reported fewer chronic illnesses. Although not examined, exposure to fewer stressors may be contributing to their better health.

Only in the domain of cognitive functioning do we find a downside of having experienced no stressors. People who experienced stressors outperformed the stressor-free individuals on cognitive tasks. We interpret these findings as reflecting the importance of cognitive engagement for cognitive functioning in midlife and in older age, where people need to stay cognitively engaged and active to enhance their cognitive health (e.g., Gow et al., 2017; Kamin & Lang, 2020). When examining the coefficients in the models, our results suggest that the difference between reporting no stressors versus one or more has the equivalent relationship with cognitive functioning as a 8-year age effect (determined by examining the number of years it would take to approximate the differences between groups based on the age coefficient in the same model). Perhaps through their own efforts or through circumstance, people who experienced no stressors live in environments that offer fewer cognitive challenges compared to a more challenging but stress-filled life. People have raised concerns that social distancing, for example, deprives older adults of needed cognitive stimulation and may therefore hasten cognitive decline (e.g., Vernooij-Dassen et al., 2020). Our results are also consistent with other studies finding that less social

stimulation and being unmarried increases the risk of cognitive decline and dementia (e.g., Fratiglioni et al., 2001). For example, one study found that both living alone and being unmarried were related to cognitive decline over a five-year period among older men (van Gelder et al., 2006). These results underscore the importance of social relationships for cognitive functioning. Given the cross-sectional design of this study, however, an alternative possibility is that people who are experiencing cognitive decline or who have always had lower cognitive ability either engage in fewer activities and thus do not experience stressors as frequently, or they do not appraise or remember the stressors from their day. Future studies will have to empirically test this assumption.

Our findings suggest that a busy life offers challenges that keep people cognitively active, connected to others, and engaged in positive events, but these challenges may also be accompanied by stressors that pose a threat to affective and physical well-being. Together, these findings raise the question of whether we can create a life that maximizes all types of well-being: cognitive, social, psychological, and physical. A life of bliss may not provide sufficient challenges for cognitive functioning, and one that creates challenges and stressors may also lower the levels of affective well-being. Our results are correlational, but they do raise the possibility that in life, perhaps optimizing all types of well-being may be difficult or even impossible.

### **Limitations and future directions.**

We need to interpret the results of the study in the context of its limitations. For example, we refer to those reporting no stressors as stressor-free, although we recognize that we only examined an eight-day period in their lives. We presume that if we followed these people throughout the course of their lives, they would most likely report a daily stressor at some point. For this reason, we know they report far fewer stressors than the typical person, but we cannot say how frequent an actual stressor is for these people, or how they would respond to a daily stressor should one occur.

In addition, the self-report nature of the study raises concerns of report bias, and the shared variance problems when studying measures assessed at the same time (i.e., reports of both the stressor and affective well-being in the same interview). Perhaps people reporting no stressors were underreporting all events in their lives, including the number of chronic conditions and the frequency of certain activities. Our concerns are somewhat allayed in that people with fewer stressors did report higher levels of leisure pursuits and television watching – and they reported higher levels of positive affect. Yet, they may have underreported only the negative aspects of their lives, including stressors they experienced, chronic conditions, and negative affect. Studies that include objective indicators of health, well-being, and daily stressors, need to assay how report bias may be skewing the findings.

We also aggregated the effects of different types of stressors in our analyses; different types of stressors elicit different levels of reactivity based on their type and severity (Randall & Bodenmann, 2017). Finally, we examined whether people reported experiencing a stressor across eight days. It is possible that people who reported no stressors for the week may have reported stressors had we expanded the days assessed. It is difficult to imagine people who do not share both the joys and the stressors of their families and friends, and people

in the no-stressor group did report interacting with others. These people, therefore, are not necessarily stressor-free, but just those who experience far fewer stressors than other people. In addition, future studies can examine how the report of no stressors varies by reports of different types of stressors, as opposed to having experienced any type of stressor, as we did in the current study.

The current study is further limited by examining only one aspect of daily life that we tied to well-being – the occurrence of stressors. We need to understand the activities that give rise to stressors. For example, studies that ascertain social network size or total amount of time spent with others may enhance our knowledge of what may be tied to stressor exposure. In addition, further investigation can determine the context of life where people may score high on all levels of well-being. Perhaps there are subsets of people who experience stressors, but also have higher levels of affective and physical health that are similar to those who reported no stressors. In addition, severe levels of distress are related to poorer cognitive functioning. The current study examined relatively low, minor stressors experienced on a daily basis and not severe stressors. Another limitation that affects the generalizability of the current findings is the lack of diversity in the MIDUS sample. Only 15.57% of the current sample identified as non-White, and the small proportions in individual subgroups led us to create a single group for comparison purposes. Future research should examine whether individuals without stressors have similar experiences in more diverse samples that can better represent these groups.

### **Conclusion.**

The current study suggests that high levels of cognitive functioning and social support exchanges are linked to experiencing a stressor now and then in daily life. These stressors are known to increase reports of negative emotions, but perhaps these negative emotions are what motivate people to challenge their views and opinions, and to engage in problem-solving behaviors that promote healthy cognitive functioning. For now, findings indicate that, among a sample of adults, leading a stressor-free life offers mixed blessings – higher levels of emotional well-being and fewer chronic conditions, but also lower levels of cognitive functioning.

### **Acknowledgments**

This work was supported by National Institute of Aging at the National Institutes of Health by P01 AG020166, R01 AG019239 to D.M. Almeida. The data are publicly accessible at the Institute for Social Research at the University of Michigan: <https://www.icpsr.umich.edu/web/pages/> and information about publications using these data can be found on the Midlife in the United States website: <http://www.midus.wisc.edu/>.

### **References**

- Almeida DM (2005). Resilience and vulnerability to daily stressors assessed via diary methods. *Current Directions in Psychological Science*, 14, 64–68. doi:10.1111/j.0963-7214.2005.00336.x
- Almeida DM, & Kessler RC (1998). Everyday stressors and gender differences in daily distress. *Journal of Personality and Social Psychology*, 75, 670–680. doi: 10.1037//0022-3514.75.3.670 [PubMed: 9781406]

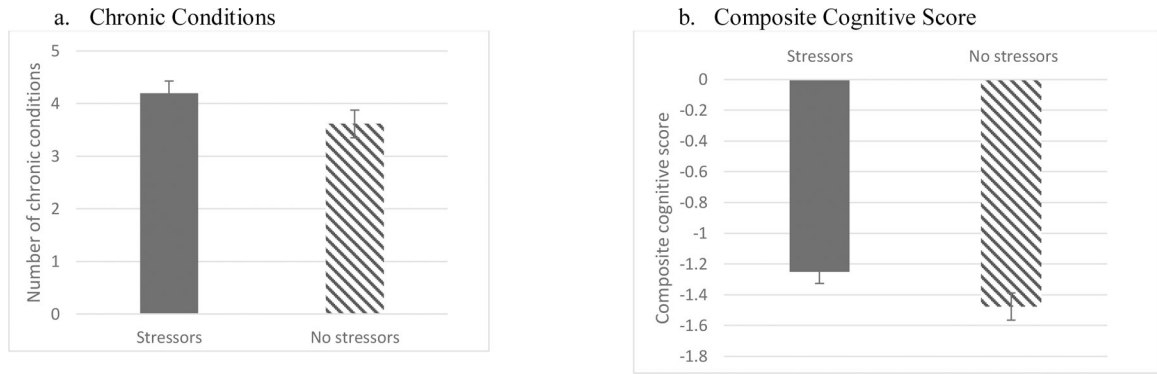
- Almeida DM & McDonald D (2005). The time Americans spend working for pay, caring for families, and contributing to communities. In Heymann J (Ed.) *Unfinished work: Balancing equality and democracy in an era of working families* (pp. 180–203). New York: The New Press.
- Almeida DM, McGonagle K, & King H (2009). Assessing daily stress processes in social surveys by combining stressor exposure and salivary cortisol. *Biodemography and Social Biology*, 55, 219–237. doi: 10.1080/19485560903382338 [PubMed: 20183906]
- Almeida DM, Wethington E, & Kessler RC (2002). The daily inventory of stressful events: An interview-based approach for measuring daily stressors. *Assessment*, 9, 41–55. doi: 10.1177/1073191102091006 [PubMed: 11911234]
- American Psychological Association. (2020). *Stress in America 2020: Stress in the Time of COVID-19*. Retrieved October, 10, 2020. <https://www.apa.org/news/press/releases/stress/2020/stress-in-america-covid.pdf>
- Baumeister RF, Bratslavsky E, Finkenauer C, & Vohs KD (2001). Bad is stronger than good. *Review of General Psychology*, 5, 323–370. doi: 10.1037//1089-2680.5.4.323
- Charles ST, Luong G, Almeida DM, Ryff C, Sturm M, & Love G (2010). Fewer ups and downs: Daily stressors mediate age differences in negative affect. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 65, 279–286. 10.1093/geronb/gbq002
- Charles ST, Piazza JR, Luong G, & Almeida DM (2009). Now you see it, now you don't: Age differences in affective reactivity to social tensions. *Psychology and Aging*, 24(3), 645–653. doi: 10.1037/a0016673 [PubMed: 19739920]
- Charles ST, Mogle J, Piazza JR, Karlamangla A, & Almeida DM (2020). Going the distance: The diurnal range of cortisol and its association with cognitive and physiological functioning. *Psychoneuroendocrinology*, 112, 104516. doi: 10.1016/j.psyneuen.2019.104516 [PubMed: 31805455]
- Charles ST, Piazza JR, Mogle J, Sliwinski MJ, & Almeida DM (2013). The wear and tear of daily stressors on mental health. *Psychological Science*, 24, 733–741. DOI: 10.1177/0956797612462222 [PubMed: 23531486]
- Charles ST, Mogle J, Urban EJ, & Almeida DM (2016). Daily events are important for age differences in mean and duration for negative affect but not positive affect. *Psychology and Aging*, 31, 661–671. doi: 10.1037/pag0000118 [PubMed: 27684103]
- Chen ST, Hyun J, Graefe AR, Mowen AJ, Almeida DM, & Sliwinski MJ (2020). The Influence of Leisure Engagement on Daily Emotional Well-Being. *Leisure Sciences*, 1–18. 10.1080/01490400.2020.1757537
- Dienstbier RA (1989). Arousal and physiological toughness: implications for mental and physical health. *Psychological Review*, 96, 84–100. doi:10.1037/0033-295X.96.1.84 [PubMed: 2538855]
- Flett GL, Nepon T, Hewitt PL, & Fitzgerald K (2016). Perfectionism, components of stress reactivity, and depressive symptoms. *Journal of Psychopathology and Behavioral Assessment*, 38(4), 645–654. DOI 10.1007/s10862-016-9554-x
- Fratiglioni L, Wang HX, Ericsson K, Maytan M, Winblad B (2000). Influence of social network on occurrence of dementia: A community-based longitudinal study. *Lancet*, 355, 1315–1319. [PubMed: 10776744]
- Glaser R, & Kiecolt-Glaser JK (2005). Stress-induced immune dysfunction: implications for health. *Nature Reviews Immunology*, 5, 243–251. 10.1038/nri1571
- Gow AJ, Pattie A, & Deary IJ (2017). Lifecourse activity participation from early, mid, and later adulthood as determinants of cognitive aging: The Lothian Birth Cohort 1921. *The Journals of Gerontology: Series B*, 72, 25–37. 10.1093/geronb/gbw124
- Groesz LM, McCoy S, Carl J, Saslow L, Stewart J, Adler N, ... & Epel E. (2012). What is eating you? Stress and the drive to eat. *Appetite*, 58, 717–721. doi: 10.1016/j.appet.2011.11.028 [PubMed: 22166677]
- Grzywacz JG, & Almeida DM (2008). Stress and binge drinking: A daily process examination of stressor pile-up and socioeconomic status in affect regulation. *International Journal of Stress Management*, 15, 364–380. [PubMed: 19578556]
- Hox JJ (2010). *Multilevel analysis: Techniques and applications* (2nd ed.). New York, NY: Routledge.



- James BD, Wilson RS, Barnes LL, & Bennett DA (2011). Late-life social activity and cognitive decline in old age. *Journal of the International Neuropsychological Society: JINS*, 17, 998–1005. doi: 10.1017/S1355617711000531 [PubMed: 22040898]
- Jeong YJ, Aldwin CM, Igarashi H, & Spiro A (2016). Do hassles and uplifts trajectories predict mortality? Longitudinal findings from the VA Normative Aging Study. *Journal of Behavioral Medicine*, 39, 408–419. doi:10.1007/s10865-015-9703-9 [PubMed: 26721518]
- Joo S, Chai HW, Jun HJ, & Almeida DM (2020). Daily stressors facilitate giving and receiving of emotional support in adulthood. *Stress and Health*. Advance online publication. .View advance on-line publication via doi:10.1002/smi.2927
- Kamin ST, & Lang FR (2020). Internet use and cognitive functioning in late adulthood: Longitudinal findings from the Survey of Health, Ageing and Retirement in Europe (SHARE). *The Journals of Gerontology: Series B*, 75, 534–539. 10.1093/geronb/gby123
- Karlamangla AS, Merkin SS, Almeida DM, Friedman EM, Mogle JA, & Seeman TE (2019). Early-life adversity and dysregulation of adult diurnal cortisol rhythm. *The Journals of Gerontology: Series B*, 74, 160–169. 10.1093/geronb/gby097
- Lachman ME, Agrigoroaei S, Tun PA, & Weaver SL (2014). Monitoring cognitive functioning: Psychometric properties of the Brief Test of Adult Cognition by Telephone. *Assessment*, 21, 404–417. doi: 10.1177/1073191113508807 [PubMed: 24322011]
- Larsen RJ, & Kasimatis M (1991). Day-to-day physical symptoms: Individual differences in the occurrence, duration, and emotional concomitants of minor daily illnesses. *Journal of Personality*, 59, 387–423. doi: 10.1111/j.1467-6494.1991.tb00254.x [PubMed: 1960638]
- Leger KA, Charles ST, Ayanian JZ, & Almeida DM (2015). The association of daily physical symptoms with future health. *Social Science & Medicine*, 143, 241–248. doi: 10.1016/j.socscimed.2015.08.050 [PubMed: 26364011]
- McEwen BS (2008). Central effects of stress hormones in health and disease: Understanding the protective and damaging effects of stress and stress mediators. *European Journal of Pharmacology*, 583, 174–185. doi: 10.1016/j.ejphar.2007.11.071 [PubMed: 18282566]
- Meichenbaum DH, & Deffenbacher JL (1988). Stress inoculation training. *The Counseling Psychologist*, 16, 69–90. doi:10.1177/0011000088161005
- Mroczek DK, & Kolarz CM (1998). The effect of age on positive and negative affect: a developmental perspective on happiness. *Journal of Personality and Social Psychology*, 75, 1333–1349. doi: 10.1037//0022-3514.75.5.1333 [PubMed: 9866191]
- Neff LA, & Broady EF (2011). Stress resilience in early marriage: Can practice make perfect? *Journal of Personality and Social Psychology*, 101, 1050. Doi: 10.1037/a00238 [PubMed: 21688919]
- Ozbay F, Fitterling H, Charney D, & Southwick S (2008). Social support and resilience to stress across the life span: a neurobiologic framework. *Current Psychiatry Reports*, 10, 304–310. [PubMed: 18627668]
- Pearlin LI, Schieman S, Fazio EM, & Meersman SC (2005). Stress, health, and the life course: Some conceptual perspectives. *Journal of health and Social Behavior*, 46, 205–219. [PubMed: 16028458]
- Piazza JR, Charles ST, Sliwinski MJ, Mogle J, & Almeida DM (2013). Affective reactivity to daily stressors and long-term risk of reporting a chronic physical health condition. *Annals of Behavioral Medicine*, 45, 110–120. doi: 10.1177/0956797612462222 [PubMed: 23080393]
- Piazza JR, Charles ST, Stawski RS, & Almeida DM (2013). Age and the association between negative affective states and diurnal cortisol. *Psychology and Aging*, 28, 47–56. doi: 10.1037/a0029983 [PubMed: 23088196]
- Randall AK, & Bodenmann G (2009). The role of stress on close relationships and marital satisfaction. *Clinical psychology review*, 29(2), 105–115. 10.1016/j.cpr.2008.10.004 [PubMed: 19167139]
- Rueggeberg R, Wrosch C, & Miller GE (2012). The different roles of perceived stress in the association between older adults' physical activity and physical health. *Health Psychology*, 31, 164–171. doi:10.1037/a0025242 [PubMed: 21875206]
- Rutter M (2012). Resilience as a dynamic concept. *Development and Psychopathology*, 24, 335–344 doi:10.1017/S0954579412000028 [PubMed: 22559117]



- Schilling OK, & Diehl M (2014). Reactivity to stressor pile-up in adulthood: Effects on daily negative and positive affect. *Psychology and Aging*, 29, 72–83. doi: 10.1037/a0035500 [PubMed: 24660797]
- Seery MD, Leo RJ, Lupien SP, Kondrak CL, & Almonte JL (2013). An upside to adversity? Moderate cumulative lifetime adversity is associated with resilient responses in the face of controlled stressors. *Psychological Science*, 24, 1181–1189. doi: 10.1177/0956797612469210 [PubMed: 23673992]
- Sharifian N, Kraal AZ, Zaheed AB, Sol K, & Zahodne LB (2020). Longitudinal Associations Between Contact Frequency with Friends and with Family, Activity Engagement, and Cognitive Functioning. *Journal of the International Neuropsychological Society*, 1, 1–10. doi: 10.1017/S1355617720000259
- Sin NL, & Almeida DM (2018). Daily positive experiences and health: Biobehavioral pathways and resilience to daily stress. In Ryff CD & Krueger RF (Eds.), *Oxford handbook of integrative health science*, (pp. 154–172). New York: Oxford University Press. doi:10.1093/oxfordhb/9780190676384. New York: Oxford University Press.
- Singer J & Willett J (2003). *Applied longitudinal data analysis: Modeling change and event occurrence*. New York, NY: Oxford University Press.
- Stawski RS, Cerino ES, Witzel DD, & MacDonald SW (2019). Daily stress processes as contributors to and targets for promoting cognitive health in later life. *Psychosomatic Medicine*, 81, 81–89. doi: 10.1097/PSY.0000000000000643 [PubMed: 30299400]
- Stults-Kolehmainen MA, & Sinha R (2014). The effects of stress on physical activity and exercise. *Sports Medicine*, 44, 81–121. doi:10.1007/s40279-013-0090-5 [PubMed: 24030837]
- Thoits PA (2010). Stress and health: Major findings and policy implications. *Journal of Health and Social Behavior*, 51, S41–S53. DOI: 10.1177/0022146510383499 [PubMed: 20943582]
- Tice DM, & Baumeister RF (1997). Longitudinal study of procrastination, performance, stress, and health: The costs and benefits of dawdling. *Psychological Science*, 8, 454–458.
- van Gelder BM, Tjihuis M, Kalmijn S, Giampaoli S, Nissinen A, & Kromhout D (2006). Marital status and living situation during a 5-year period are associated with a subsequent 10-year cognitive decline in older men: the FINE Study. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 61(4), P213–P219. 10.1093/geronb/61.4.P213
- Vernooij-Dassen M, Verhey F, & Lapid M (2020). The risks of social distancing for older adults: a call to balance. *International Psychogeriatrics*, 1–3. doi:10.1017/S1041610220001350
- Watson D, Clark LA, & Tellegen A (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, 54, 1063–1070. doi: 10.1037//0022-3514.54.6.1063 [PubMed: 3397865]
- Wemme KM, Rosvall M. Work related and non-work related stress in relation to low leisure time physical activity in a Swedish population. *Journal of Epidemiological Community Health*. 2005 5;59(5):377–9. doi: 10.1136/jech.2004.031526.
- Wilson RS, Barnes LL, Krueger KR, Hoganson G, Bienias JL, & Bennett DA (2005). Early and late life cognitive activity and cognitive systems in old age. *Journal of the International Neuropsychological Society: JINS*, 11, 400–407. DOI: 10.1017/S1355617705050459 [PubMed: 16209420]



**Fig1.** Adjusted group means from the regression analyses, with error bars representing 95% confidence intervals for people reporting at least one stressor and those reporting no stressors on measures of (a) chronic conditions, and (b) cognitive functioning.

**Table 1.**Descriptive Characteristics and Tests of Group Differences of Stressor and No Stressor Groups<sup>a</sup>

Variable <sup>b</sup>	Range	Stressor	No Stressor	Tests of Differences
		Mean (SD)	Mean (SD)	<i>t</i> <sup>d</sup>
Age	25 – 83	53.46 (12.72)	60.02 (12.66)	-7.96***
Education <sup>c</sup>	1 – 3	1.96 (0.69)	1.68 (0.70)	6.18***
Number of household members	1 – 15	2.69 (0.03)	2.21 (0.07)	5.20***
Daily time spent (min.)				
Sleeping	0 – 720	426.77 (60.63)	429.77 (66.47)	-0.76
Working	0 – 900	218.28 (187.50)	138.07 (181.60)	6.59***
Leisure activities	0 – 1065	179.26 (109.91)	206.42 (132.98)	-3.72**
Watching TV	0 – 1222.5	111.89 (84.54)	153.26 (112.92)	-7.28***
Physical activity	0 – 735	41.27 (59.90)	47.15 (71.90)	-1.48
Volunteering	0 – 364.29	12.98 (31.74)	8.02 (21.95)	2.48**
Giving emotional support	0 – 1057.5	21.84 (39.72)	14.43 (57.49)	2.74**
Receiving emotional support	0 – 831.43	10.62 (31.32)	4.44 (21.31)	3.13**
Physical symptoms	0 – 16.4	1.93 (1.95)	1.29 (1.46)	5.19***
Positive affect	0.04 – 4	2.64 (0.71)	2.99 (0.75)	-7.63***
Negative affect	0 – 2.54	0.22 (0.28)	0.09 (0.17)	7.99***
Positive events	0 – 5	1.21 (0.70)	0.88 (0.65)	7.15***
Chronic conditions	0 – 23	2.52 (2.58)	2.26 (2.41)	1.46 <sup>e</sup>
Self-rated health	1 – 5	2.37 (1.00)	2.47 (1.06)	-1.51
BTACT composite score	-2.66 – 3.06	0.13 (0.97)	-0.44 (.96)	8.36***
		Percentage (%)	Percentage (%)	$\chi^2$ <sup>f</sup>
Male		42.30 %	54.92 %	15.46***
White		85.08 %	78.41 %	8.08**
Working		55.37 %	36.36 %	34.62***
Married		69.11 %	59.85 %	9.42**
MIDUS II		73.52 %	77.65 %	2.11

Note. SD = standard deviation; BTACT = Brief Test of Adults Cognition by Telephone; min. = minutes.

<sup>a</sup>Sample size differed depending on the outcome variable used. Total sample size ranged from N = 2,346 ~ 2,711 (n<sub>no-stressor</sub> = 222 ~ 264; n<sub>stressor</sub> = 2,124 ~ 2,447).

<sup>b</sup>For daily diary variables from NSDE, person-level average across the study days was used to calculate the sample statistics.

<sup>c</sup>1 = High school or less; 2 = Some college or Bachelor's degree; and 3 = Graduate school or professional degree.

<sup>d</sup>Independent sample t-test of group differences.

<sup>e</sup>Because chronic conditions was a count variable, Wilcoxon Z test was used.

$\chi^2$  Chi-square test of group differences.

\*\*\*  
 $p < .001$ ,

\*\*  
 $p < .01$ .

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

**Table 2**

Results from regressions comparing individuals with and without any stressors

	Self-rated health	Number of chronic conditions	Composite cognitive score
	<i>b</i> ( <i>SE</i> )	<i>b</i> ( <i>SE</i> )	<i>b</i> ( <i>SE</i> )
Intercept	3.491 (0.087) *****	3.905 (0.229) ***	-1.362 (0.078) ***
Stressor Group (ref = No stressors)	-0.074 (0.067)	-0.582 (0.176) **	-0.226 (0.06) **
Age	0.003 (0.002)	0.013 (0.004) **	-0.028 (0.002) ***
Sex (ref = Females)	0.042 (0.039)	-0.526 (0.102) ***	0.009 (0.035)
Education	-0.300 (0.028) ***	-0.271 (0.073) **	0.414 (0.025) ***
Employment Status (ref = Working)	-0.215 (0.043) ***	-0.828 (0.113) ***	0.079 (0.039) *
Marital Status (ref = Married)	-0.230 (0.043) ***	-0.704 (0.112) ***	0.095 (0.038) *
Race (ref = White)	-0.309 (0.064) ***	-0.236 (0.169)	0.484 (0.058) ***

Note.

\*\*\*  
 $p < .0001$ ,\*\*  
 $p < .01$ ,\*  
 $p < .05$

**Table 3a**

Results from multilevel analyses comparing individuals with and without any stressors

	Time spent sleeping	Time spent working	Time spent for leisure activities	Time spent watching TV	Time spent doing physical activities	Time spent volunteering
	<i>b</i> (SE)	<i>b</i> (SE)	<i>b</i> (SE)	<i>b</i> (SE)	<i>b</i> (SE)	<i>b</i> (SE)
Intercept	389.59 (7.45)***	273.52 (18.49)***	155.04 (13.74)***	145.40 (10.46)***	48.71 (7.53)***	0.06 (3.91)
Stress Group (ref = No stressors)	4.40 (3.96)	-27.07 (10.06)**	6.23 (7.30)	20.41 (5.55)**	1.04 (4.00)	-4.40 (2.08)*
Age	0.20 (0.10)*	-4.25 (0.25)***	0.87 (0.18)***	0.78 (0.14)***	-0.03 (0.10)	0.11 (0.05)*
Sex (ref = Females)	-6.60 (2.33)**	67.37 (5.79)*****	26.13 (4.30)***	12.65 (3.28)**	17.03 (2.36)***	-4.30 (1.22)**
Education	5.22 (1.67)**	16.37 (4.15)*****	-3.93 (3.07)	-19.17 (2.34)***	-9.19 (1.68)***	3.48 (0.87)***
Employment Status (ref = Working)	-4.30 (2.55)	147.73 (6.29)*****	-29.21 (4.71)***	-23.40 (3.59)***	-1.31 (2.58)	-5.17 (1.34)**
Marital Status (ref = Married)	9.26 (2.53)**	-2.60 (6.28)	-23.15 (4.67)***	-24.34 (3.56)***	-1.75 (2.56)	2.38 (1.32)
Race (ref = White)	18.15 (3.24)***	38.80 (8.13)***	8.39 (5.98)	-15.46 (4.55)**	7.86 (3.28)*	3.90 (1.70)*

Note.

\*\*\*  
 $p < .0001$ ,\*\*  
 $p < .01$ ,\*  
 $p < .05$

**Table 3b**

Results from multilevel analyses comparing individuals with and without any stressors (cont'd)

	Time spent giving emotional support	Time spent receiving emotional support	Number of physical symptoms	Positive affect	Negative affect	Positive events
	<i>b</i> ( <i>SE</i> )	<i>b</i> ( <i>SE</i> )	<i>b</i> ( <i>SE</i> )	<i>b</i> ( <i>SE</i> )	<i>b</i> ( <i>SE</i> )	<i>b</i> ( <i>SE</i> )
Intercept	26.40 (4.89) ***	5.34 (3.80)	3.55 (0.23) ***	1.85 (0.09) ***	0.54 (0.03) ***	0.60 (0.08) ***
Stress Group (ref = No stressors)	-10.30 (2.60) ***	-6.88 (2.02) **	-0.81 (0.12) ***	0.30 (0.05) ***	-0.13 (0.02) ***	-0.30 (0.04) ***
Age	0.01 (0.07)	0.09 (0.05)	-0.003 (0.003)	0.01 (0.001) ***	-0.004 (0.0004) ***	0.003 (0.001) **
Sex (ref = Females)	-7.21 (1.53) ***	-1.96 (1.19)	-0.47 (0.07) ***	-0.03 (0.03)	-0.02 (0.01)	-0.13 (0.03) ***
Education	2.48 (1.09) *	1.49 (0.85)	-0.22 (0.05) ***	-0.03 (0.02)	-0.01 (0.01)	0.23 (0.02) *****
Employment Status (ref = Working)	-6.52 (1.68) **	-3.01 (1.30) *	-0.61 (0.08) ***	0.08 (0.03) *	-0.06 (0.01) ***	-0.06 (0.03) *
Marital Status (ref = Married)	-0.57 (1.66)	0.59 (1.29)	-0.40 (0.08) ***	0.14 (0.03) ***	-0.06 (0.01) ***	0.04 (0.03)
Race (ref = White)	-4.07 (2.13)	-0.78 (1.66)	-0.27 (0.10) **	-0.02 (0.04)	-0.03 (0.01) *	0.03 (0.04)

Note.

\*\*\*  
 $p < .0001$ ,\*\*  
 $p < .01$ ,\*  
 $p < .05$