

# Preserving What Matters: Longitudinal Changes in Control Over Interpersonal Stress and Noninterpersonal Stress in Daily Life

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## Abstract

**Objectives:** Theoretical perspectives on aging suggest that when people experience declines in later life, they often selectively focus on maintaining aspects of their lives that are most meaningful and important to them. The social domain is one of these selected areas. The current study examines people's reports of control over their daily stressors over 10 years, predicting that the declines in control that are often observed in later life will not be observed for stressors involving interpersonal conflict and tensions with social partners.

**Methods:** Adults ranging from 35 to 86 years old at baseline ( $N = 1,940$ ), from the National Study of Daily Experiences, reported control over interpersonal and noninterpersonal daily stressors across 8 consecutive days at 2 time points, about 10 years apart.

**Results:** Findings from multilevel models indicate that for noninterpersonal stressors, perceived control decreased over time. In contrast, perceived control over interpersonal conflicts and tensions remained robust over time. No cross-sectional baseline age differences were found for levels of interpersonal and noninterpersonal stressor control.

**Discussion:** Results are consistent with socioemotional selectivity and underscore the importance of interpersonal relationships in later adulthood. Understanding how people select and preserve certain aspects of control in their daily life can help guide efforts toward maximizing gains and minimizing losses in domains that matter most to people as they grow older.

**Keywords:** Beliefs, Developmental methods, Intraindividual variability, Longitudinal change, Stress

Aging is often associated with decline: senses dull, physical strength and agility decrease, processing speed slows, feelings of purpose in life and autonomy decline. As losses and constraints accumulate and opportunities and capacities decrease, people's ability to independently exert control over their environment also declines (Heckhausen et al., 2010; Lachman et al., 2009). Despite these declines, interpersonal relationships and social experiences remain relatively intact at later ages. Older adults report high levels of satisfaction with their social network and less distress in response to social conflicts than younger adults (see review by Luong et al., 2013; Rook & Charles, 2017; Witzel & Stawski, 2021).

Theorists define development as a lifelong process of balancing losses and gains (Baltes & Baltes, 1990). Increased losses may explain why older age is related to lower perceived control. Longitudinal studies show that overall sense of control

is high in younger adulthood, remains stable throughout midlife, and declines in later adulthood (Cerino et al., 2023; Lachman et al., 2009). In one study examining daily stressor control (i.e., average perceived control over reported daily stressful situations), cross-sectional analyses revealed no age differences; however, daily stressor control declined over time (Cerino et al., 2023). This prior work with the National Study of Daily Experiences (NSDE) juxtaposed developmental trajectories of global control (i.e., general and overall perceived control) with the more time-varying state-like daily stressor control and was informed by general theories and empirical work on global control (Cerino et al., 2023). In the current study, we use more applied theories and empirical work on social relationships and aging to inform specific hypotheses about control over types of daily stressors across 10 years. We predict that older age at baseline and growing older will be

related to less control over daily noninterpersonal stressors, but not interpersonal stressors.

## Older Adults Select and Optimize Social Experiences

Despite age-related declines in many domains, many people maintain high levels of function and well-being through selection, optimization, and compensation (SOC; Baltes & Baltes, 1990). The SOC model posits that adaptive development occurs across the lifespan through three developmental regulation processes: selection (i.e., selecting goals or outcomes that can be self-initiated as desirable and/or as a result of gains or losses of functioning), optimization (i.e., determining desired outcomes and ways to achieve desired outcomes), and compensation (i.e., response to the loss of goal-related abilities). According to SOC, people cannot maintain the same level of functioning as they grow older and must select activities that are most important to them. They direct their resources toward optimizing their performance in these areas and turn to the help of other people or to equipment to compensate for any personal declines.

According to socioemotional selectivity theory (SST), the social domain is one of these highly valued, selected activities that older adults tend to preserve and optimize (Baltes & Carstensen, 1996). According to SST, older age is related to greater allocation of cognitive resources toward socioemotional goals to sustain emotionally meaningful and positive social experiences (Carstensen, 2021). As a result, older age is often related to higher rates of satisfaction with friends and family, higher levels of positive experiences with family members, and higher levels of perceived social support (Luong et al., 2013).

## Social Selection and Control Over Daily Stressors

Selecting and optimizing social experiences offers several benefits to emotional well-being. Social relationships directly enhance well-being and buffer the effects of negative stressors (Cohen & Wills, 1985; House et al., 1988). Yet, interpersonal relationships are not always positive; interpersonal tensions are the most reported daily stressor and elicit the greatest emotional reactivity (Almeida et al., 2011).

The maintenance of daily stressor control, as opposed to age-related declines in overall sense of control (Cerino et al., 2023), may be due to daily stressors being mostly interpersonal in nature. Older adults often avoid or disengage from distressing situations (Carstensen, 2021; Luong & Charles, 2014). When asked about hypothetical social problems, older adults often exhibit greater expertise than younger adults despite declines in fluid abilities and lower performance on other types of cognitive tests (Grossmann et al., 2010; Leclerc & Hess, 2007). In addition, older age is related to greater efforts to avoid or disengage from negative situations, and to greater reported success at resolving social conflict (Sorkin & Rook, 2006; Witzel & Stawski, 2021). Few studies, however, have examined people's perceptions of their interpersonal conflicts (cf., Sorkin & Rook, 2006), and none have examined age differences and longitudinal changes in perceptions of control for interpersonal versus noninterpersonal stressors. While age-related gains in social experiences (e.g., Carstensen, 2021; Luong & Charles, 2014) may lead to preserved control

over interpersonal stressors, age-related losses in noninterpersonal stressors, in contrast, may correspond to declines in general perceived control (Heckhausen et al., 2010; Lachman et al., 2009).

## Age Differences in the Context of Social Interactions

Allocating cognitive resources toward socioemotional goals in older adulthood (e.g., Carstensen, 2021) is believed to result in a social expertise often observed among older adults (Hess & Hinson, 2006). Yet other factors may also contribute to more benign, more controllable social stressors with age. For example, SST also manifests at the relationship level, such that when people perceive a shorter time left in a relationship (e.g., their partner is moving), they treat their partners more benignly (Fingerman et al., 2008). In addition, people regardless of their own age report that they are less likely to confront older adults, argue with them, or point out their errors for both positive (e.g., out of respect), and negative reasons (e.g., attributing the indiscretion on age-related loss) compared to younger adults (Miller et al., 2009).

## The Current Study

Understanding how people allocate their psychosocial resources informs efforts toward maximizing gains and minimizing losses in the domains that matter most to people as they grow older. In the current study, we examined people's perceived control over different types of stressors (i.e., interpersonal stressors, noninterpersonal stressors) encountered in their daily lives. Based on theory and empirical findings that older adults select and optimize socioemotional goals, we predicted no age differences in levels of perceived control when encountering interpersonal stressors but predicted that older age would be associated with lower levels of perceived control when encountering noninterpersonal stressors. Over time, we predicted that stressor control would not decline for interpersonal stressors but would decline for noninterpersonal stressors. We examined these questions using the second and third waves of the NSDE, the largest daily diary study to date that examines daily experiences among people across the adult lifespan.

## Method

### Participants and Procedure

We used data from the NSDE, a daily diary subproject using a random subset of participants from the larger Midlife in the United States Survey project. At the first wave of data collection, 1,483 participants completed end-of-day telephone interviews for eight consecutive days that assessed exposure to daily stressors (for detailed description of data collection, see Almeida, 2005; Almeida et al., 2009, 2023). An additional 1,048 participants were added to the second NSDE wave. Data collection consisted of three waves of daily assessments repeated approximately every 10 years (NSDE 1: ~1996; NSDE 2: ~2008; NSDE 3: ~2017). Reported perceived control over daily stressors were collected at the second and third waves, resulting in longitudinal daily diary data on stressor control across 10 years. The analytic sample included 1,940 adults (7,703 assessments) who participated in Wave 2 and/or Wave 3 of the NSDE (1,019 participants

from Wave 2 also contributed Wave 3 data) and reported at least one daily stressor and thus have data regarding daily stressor control.

### Transparency and Openness

Data are publicly available at the following website: (<https://www.icpsr.umich.edu/web/ICPSR/series/203>). All analyses were completed using SAS 9.4 (SAS Institute, 2013). Study materials and study analysis code are available for appropriate use upon e-mailed request to the corresponding author. This study was not preregistered. This study was approved by the Institutional Review Board of the institution responsible for data collection, and all respondents consented to their participation.

### Measures

#### Daily interpersonal and noninterpersonal stressor control

Participants responded to a series of stem questions asking whether certain types of daily stressors had occurred in the past 24 hr (arguments, avoided arguments, work overloads, home overloads, discrimination, network stressors, other) as part of the Daily Inventory of Stressful Events (DISE; Almeida et al., 2002). Additional information on the DISE protocol with examples of different types of stressors is provided in [Supplementary Material](#). When a stressor was reported (40% and 39% of all available days in Wave 2 and Wave 3, respectively), participants were asked, “How much control did you have over the situation?” and responded using a 4-point Likert-type scale (0 = *none at all*, 1 = *a little*, 2 = *some*, 3 = *a lot*). Higher values indicated greater perceived control.

Daily interpersonal stressor control was calculated as the average amount of control over the reported arguments and avoided arguments for each of the 8 days. These two items were deemed as interpersonal stressors given the explicit mention of interpersonal tensions for arguments (“Did you have an argument or disagreement with anyone?”) and avoided arguments (“Did anything happen that you could have argued about but you decided to let pass in order to avoid a disagreement?”). Daily noninterpersonal stressor control was obtained by taking the average amount of control over the reported work overloads and home overloads for each of the 8 days. These two items were deemed as noninterpersonal stressors due to these questions being asked after the two interpersonal stressors (arguments and avoided arguments) and the interviewers specifying that the work overloads (“Did anything happen at work or school (other than anything you’ve already mentioned) that most people would consider stressful?”) and home overloads (“Did anything happen at home (other than anything you’ve already mentioned) that most people would consider stressful?”) are distinct from what was already reported in the questions on arguments and avoided arguments. Further distinction between interpersonal stressors versus noninterpersonal stressors is demonstrated by a follow-up branching question on who the stressor was with when participants reported arguments and avoided arguments. Response options to this question included “Coworker/fellow student,” “Boss/teacher,” “Employee/supervisee,” and “Client/customer/patient,” in addition to the options of family, friends, and strangers, so that arguments with people at work or home would be captured in questions on arguments and avoided arguments. Wave-level values of daily interpersonal and noninterpersonal stressor control were obtained by

taking the average amount of control across the entire wave for interpersonal and noninterpersonal stressors, respectively.

We did not include network stressors (“Did anything happen to a close friend or relative (other than anything you’ve already mentioned) that turned out to be stressful for you?”) in the present study because the stressors that participants reported control over were not directly experienced by the participants themselves. Further, we did not include discrimination (“Many people experience discrimination on the basis of such things as race, sex, or age. Did anything like this happen to you?”) and “other” (“Did anything else happen to you that most people would consider stressful other than what you’ve already mentioned?”) stressors in the present study due to the inability to align their experience to interpersonal versus noninterpersonal domains.

#### Covariates

Perceived control tends to peak in midlife and decline in older adulthood (e.g., Lachman et al., 2009). Higher education has been linked to higher levels of control beliefs (Mirowsky & Ross, 2007). Women tend to report lower levels of control beliefs than men on average, although these gender differences may be attenuated among adults with a college education (Lachman et al., 2011; Lachman & Weaver, 1998a). Further, past work on race differences in control beliefs suggests that Black/African American individuals may have lower levels of control beliefs than White individuals (Shaw & Krause, 2001) due in part to structural discrimination (Bruce & Thornton, 2004). Therefore, baseline age, education, gender, and race were included as covariates in primary analyses. Age at baseline was centered at the sample mean at Wave 2 (i.e., 58.61 years) in all models. Education was coded as 0 (*high school or less*) or 1 (*some college or more*). Gender was coded as 0 (*men*) or 1 (*women*). Race was coded as 0 (*White*) or 1 (*racialized as not White*). Low cell sizes of individual racial identities of Black/African American, Native American or Alaska Native, Asian or Pacific Islander, and other (provided in [Table 1](#)) led to an analytic decision to collapse categories into a racialized not White group in a dichotomous variable. We recognize, however, that the lives of minoritized or historically marginalized adults cannot be equated and do not reflect the same lived experiences across or within racial identities (discussed in the Limitation and Future Directions section in the Discussion).

To adjust for differential exposure to daily stressors, we included the sum of reported stressors for each day as a covariate (the number of daily interpersonal stressors were included as a covariate in interpersonal stressor control analyses, and the number of daily noninterpersonal stressors as a covariate in noninterpersonal stressor control analyses). Global control was also included as a covariate due to past work showing small positive correlations between global control and daily stressor control (Cerino et al., 2023). Global control was assessed using 12 Midlife Developmental Inventory items (Lachman & Weaver, 1998a; Pearlin & Schooler, 1978), where participants indicated how much they agreed or disagreed with statements on a 6-point Likert-type scale (1 = *strongly disagree* to 7 = *strongly agree*). Questions included four items about mastery (e.g., “I can do just about anything I really set my mind to”) and eight items about perceived constraints (reverse-coded; e.g., “There is little I can do to change the important things in my life”). A baseline global control composite was created by taking the

**Table 1.** Descriptive Statistics for Study Variables Across Waves of Assessment

| Variable  | Wave 2 |       |        | Wave 3 |       |        |
|---|--------|-------|--------|--------|-------|--------|
|   | Mean   | SD    | Range  | Mean   | SD    | Range  |
| Daily interpersonal stressor control              | 1.80   | 0.98  | 0, 3   | 1.78   | 1.08  | 0, 3   |
| Daily noninterpersonal stressor control           | 1.38   | 1.07  | 0, 3   | 1.25   | 1.17  | 0, 3   |
| Covariates  |        |       |        |        |       |        |
| Age   | 58.61  | 12.19 | 35, 86 | 67.54  | 10.22 | 47, 95 |
| Women <sup>a</sup>                                | 0.57   | 0.49  | 0, 1   | 0.57   | 0.50  | 0, 1   |
| College <sup>b</sup>                              | 0.69   | 0.46  | 0, 1   | 0.78   | 0.42  | 0, 1   |
| Race <sup>c</sup>                                 | 0.16   | 0.36  | 0, 1   | 0.11   | 0.31  | 0, 1   |
| Black/African American                            | 0.12   | —     | —      | 0.04   | —     | —      |
| Native American or Alaska Native                  | 0.01   | —     | —      | 0.01   | —     | —      |
| Asian or Pacific Islander                         | 0.01   | —     | —      | 0.01   | —     | —      |
| Other   | 0.02   | —     | —      | 0.05   | —     | —      |
| Global control                                    | 5.54   | 1.01  | 1, 7   | 5.49   | 1.00  | 1, 7   |
| Number of interpersonal stressors <sup>d</sup>    | 1.09   | 0.28  | 1, 2   | 1.12   | 0.32  | 1, 2   |
| Number of noninterpersonal stressors <sup>e</sup> | 1.06   | 0.23  | 1, 2   | 1.05   | 0.21  | 1, 2   |

Notes: SD = standard deviation.

<sup>a</sup>Proportion of women participants.

<sup>b</sup>Proportion of participants with at least some college.

<sup>c</sup>Proportion of non-White participants. We collapsed Black/African American, Native American or Alaska Native, Asian or Pacific Islander, and other into a non-White dichotomous variable due to low cell sizes of individual racial categories.

<sup>d</sup>Average number of interpersonal stressors when at least one interpersonal stressor has been reported.

<sup>e</sup>Average number of noninterpersonal stressors when at least one interpersonal stressor has been reported. Values for time-varying variables (i.e., daily interpersonal stressor control, daily noninterpersonal stressor control, number of interpersonal stressors, and number of noninterpersonal stressors) are based on person-means across the days of assessment. Values for time-invariant variables (i.e., age, women, college, race, and global control) are based on single values for each participant in Wave 2 and Wave 3.

average of both mastery items and constraints items at Wave 2. Higher scores indicated higher global control. In the present study, the global control scale demonstrated adequate internal consistency ( $\alpha = 0.87$ ) and small positive correlations with interpersonal and noninterpersonal daily stressor control. Higher global control was associated with higher daily interpersonal stressor control at Wave 2 ( $r = 0.21, p < .001$ ) and Wave 3 ( $r = 0.12, p < .01$ ) and higher daily noninterpersonal stressor control at Wave 2 ( $r = 0.15, p < .01$ ) and Wave 3 ( $r = 0.09, p < .05$ ). These correlations indicate that global control and daily stressor control are related but distinct constructs.

### Analytic Strategy

We used multilevel modeling (MLM; PROC MIXED; SAS Institute, 2013) to examine longitudinal aging-related changes and cross-sectional age differences in perceived control over interpersonal and noninterpersonal stressors. Maximum likelihood estimation was used due to missing data and attrition across days and waves of assessment. MLMs had three levels of analysis where daily occasions of stressor control (Level 1) were nested within measurement waves (Level 2) and measurement waves were nested within people (Level 3). Intraclass correlation coefficients from unconditional mixed linear models were used to determine within- and between-person variation in primary study variables. Separate models estimated changes in perceived control over interpersonal stressors and noninterpersonal stressors.

Changes in perceived control over interpersonal and noninterpersonal stressors were assessed with three-level MLMs described below.

$$\begin{aligned}
 \text{Level 1 (day):} & \quad \text{StressorControl}_{ijk} = \pi_{0ij} + \delta_{1ij}(\text{Day}) \\
 & \quad + \delta_{2ij}(\text{NumberofStressors}) + i_{ik} \\
 \text{Level 2 (wave):} & \quad \pi_{0ij} = \beta_{00i} + \beta_{01i}(\text{Wave}_{ij}) + r_{0ij} \\
 \text{Level 3 (person):} & \quad \beta_{00i} = \gamma_{000} + \gamma_{001}(\text{Gender}_i) + \gamma_{002}(\text{College}_i) \\
 & \quad + \gamma_{003}(\text{Race}_i) + \gamma_{004}(\text{BaselineAge}_i) + \\
 & \quad \gamma_{005}(\text{GlobalControl}_i) + u_{00i} \\
 & \quad \beta_{01i} = \gamma_{010} + \gamma_{011}(\text{BaselineAge}_i) + u_{01i}
 \end{aligned}$$

The within-wave stressor control estimate ( $\pi_{0ij}$ ) was regressed on  $\text{Wave}_{ij}$  (coded 0, 1 for NSDE 2 and NSDE 3, respectively) to provide an estimate of macro-longitudinal change in stressor control across the two waves of assessment,  $\beta_{01i}$  (between-wave, Level 2). The number of stressors reported each day ( $\text{NumberofStressors}$ ) was included as a within-person (Level 1) covariate.  $\text{Gender}_i$ ,  $\text{College}_i$ ,  $\text{Race}_i$ , age at baseline ( $\text{BaselineAge}_i$ ), and global control at baseline ( $\text{GlobalControl}_i$ ) were included as between-person (Level 3) covariates. Baseline age ( $\text{BaselineAge}_i$ ) was also included as a between-person moderator of change in stressor control (i.e.,  $\gamma_{011}$ ). We centered day at 0 (for Day 1 at each wave of assessment), number of stressors at 1, wave at 0 (for NSDE 2), age at baseline at the sample mean at Wave 2 (i.e., 58.61 years), and global control at baseline at the sample mean at Wave 2 (i.e., 5.54).

As an index of effect size for longitudinal changes in daily stressor control, we calculated estimates of percentage change across 10-year periods compared to baseline levels (e.g., Adam et al., 2006).

### Results

Table 1 provides descriptive statistics for primary study variables. Bivariate correlations for study variables within and across waves of assessment are provided in Supplementary

Tables 1 and 2, respectively. Additional descriptive statistics for exposure and perceived control over daily stressors are provided in Supplementary Table 3. Unconditional MLMs showed significant between-person variation across individuals and within-person variation across waves and days in measures of daily interpersonal stressor control and daily noninterpersonal stressor control (Figure 1).

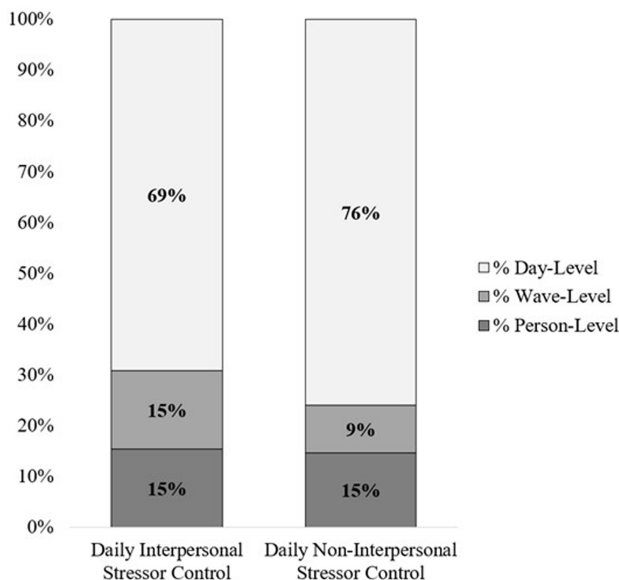
### Daily Interpersonal Stressor Control

#### Aging-related change and cross-sectional age differences

Trajectories of daily interpersonal stressor control reveal that, on average, individuals remained stable in their daily interpersonal stressor control across the 10-year period ( $b = -0.01, SE = 0.04, p = .72, 95\% \text{ CI} [-0.10, 0.07]$ ; Table 2, Model 1). At Wave 3 (10 years later), daily interpersonal stressor control did not significantly change (i.e., 0%–1% decline compared to baseline levels). Cross-sectionally, baseline age was not significantly associated with interpersonal stressor control ( $b = 0.001, SE = 0.002, p = .944, 95\% \text{ CI} [-0.004, 0.004]$ ; Table 2, Model 1).

#### Baseline age moderation of longitudinal change

Baseline age ( $b = -0.002, SE = 0.004, p = .56, 95\% \text{ CI} [-0.010, 0.005]$ ; Table 2, Model 2) did not moderate the trajectory of daily interpersonal stressor control across the 10-year period. In an exploratory test for possible nonlinear age moderation of longitudinal change, quadratic baseline age ( $b = -0.001, SE = 0.001, p = .228, 95\% \text{ CI} [-0.001, 0.001]$ ) was not significant. Figure 2 illustrates the nature of the longitudinal trajectory showing stability for daily interpersonal stressor control across the 10-year period for each age group.



**Figure 1.** Variance decompositions for perceived control over daily interpersonal and noninterpersonal stressors. Values depicted reflect proportion of variation across persons, waves, and days.

### Daily NonInterpersonal Stressor Control

#### Aging-related change and cross-sectional age differences

On average, individuals declined in their daily noninterpersonal stressor control across the 10-year period ( $b = -0.13, SE = 0.05, p = .01, 95\% \text{ CI} [-0.22, -0.03]$ ; Table 2, Model 3). At Wave 3, 10 years later, daily noninterpersonal stressor control declined by 7% compared to baseline levels. Cross-sectionally, baseline age was not significantly associated with noninterpersonal stressor control, indicating levels of noninterpersonal stressor control were statistically comparable across different age groups at baseline ( $b = -0.001, SE = 0.002, p = .881, 95\% \text{ CI} [-0.005, 0.004]$ ; Table 2, Model 3).

#### Baseline age moderation of longitudinal change

Baseline age ( $b = -0.01, SE = 0.01, p = .07, 95\% \text{ CI} [-0.018, 0.001]$ ; Table 2, Model 4) did not moderate the trajectory of daily noninterpersonal stressor control across the 10-year period, and an exploratory test of nonlinear age moderation of longitudinal change using quadratic baseline age was likewise not significant ( $b = -0.001, SE = 0.001, p = .579, 95\% \text{ CI} [-0.001, 0.001]$ ). Figure 3 illustrates the longitudinal declines in daily noninterpersonal stressor control across the 10-year period for each age group.

#### Sensitivity Analyses

We conducted sensitivity analyses that (1) restricted analyses to participants who contributed to both waves of assessment ( $N = 1,019$  participants; see Supplementary Table 4) and (2) adjusted for the total number of reported daily stressors across all types of stressors (i.e., arguments, avoided arguments, work, home, network, discrimination, other; see Supplementary Table 5). The pattern, magnitude, and significance of results remained unchanged in both sets of sensitivity analyses (i.e., stability of interpersonal stressor control and significant declines in noninterpersonal stressor control across the 10-year period). Therefore, the findings appeared not to be a by-product of selective attrition and were robust to the influence of differential exposure to different types of daily stressors.

### Discussion

Aging is associated with declines across multiple life domains, yet the social domain remains generally well-preserved. The current study examined whether control over interpersonal stressors would be spared the age-associated declines that we expected for control over noninterpersonal stressors. Cross-sectional analyses revealed that age was unrelated to control over interpersonal stressors, consistent with our hypothesis; yet in contrast to our predictions, age was similarly unrelated to control over noninterpersonal stressors. When examining patterns over time, both trajectories of stressor control were consistent with our hypothesis: interpersonal stressor control remained stable across time for all age groups, whereas noninterpersonal stressor control declined.

#### Cross-Sectional Age Differences in Daily Stressor Control

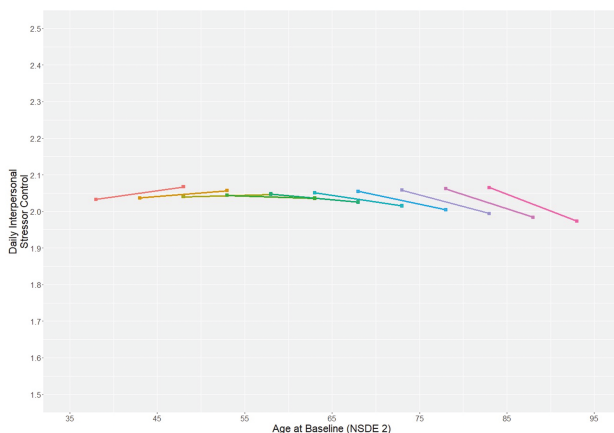
Research often finds that global control increases throughout younger adulthood, remains stable in midlife, and then decreases in later adulthood (Cerino et al., 2023; Lachman

**Table 2.** Multilevel Models Assessing Changes in Daily Interpersonal Stressor Control and Noninterpersonal Stressor Control Across 10 Years

| Variable                     | Daily stressor control         |                 |                                  |                 |                                   |                 |                                  |                  |
|------------------------------|--------------------------------|-----------------|----------------------------------|-----------------|-----------------------------------|-----------------|----------------------------------|------------------|
|                              | Interpersonal stressor control |                 |                                  |                 | Noninterpersonal stressor control |                 |                                  |                  |
|                              | Model 1: main effects          |                 | Model 2: baseline age moderation |                 | Model 1: main effects             |                 | Model 2: baseline age moderation |                  |
|                              | Estimate (SE)                  | 95% CI          | Estimate (SE)                    | 95% CI          | Estimate (SE)                     | 95% CI          | Estimate (SE)                    | 95% CI           |
| <b>Fixed effects</b>         |                                |                 |                                  |                 |                                   |                 |                                  |                  |
| Intercept                    | 2.05 (0.08)***                 | [1.89, 2.21]    | 2.05 (0.08)***                   | [1.89, 2.21]    | 1.68 (0.12)***                    | [1.44, 1.91]    | 1.69 (0.12)***                   | [1.45, 1.92]     |
| Day                          | -0.03 (0.01)***                | [-0.04, -0.02]  | -0.03 (0.01)***                  | [-0.04, -0.02]  | -0.02 (0.01)*                     | [-0.04, -0.001] | -0.02 (0.01)*                    | [-0.036, -0.001] |
| Number of stressors          | -0.06 (0.05)                   | [-0.16, 0.05]   | -0.06 (0.05)                     | [-0.16, 0.05]   | -0.11 (0.09)                      | [-0.28, 0.07]   | -0.11 (0.09)                     | [-0.28, 0.07]    |
| Wave                         | -0.01 (0.04)                   | [-0.10, 0.07]   | -0.02 (0.04)                     | [-0.11, 0.06]   | -0.13 (0.05)*                     | [-0.22, -0.03]  | -0.16 (0.05)                     | [-0.26, -0.06]   |
| Women                        | -0.16 (0.04)***                | [-0.24, -0.07]  | -0.16 (0.04)***                  | [-0.24, -0.07]  | -0.23 (0.05)***                   | [-0.34, -0.13]  | -0.23 (0.05)***                  | [-0.34, -0.13]   |
| College                      | -0.04 (0.05)                   | [-0.14, 0.06]   | -0.04 (0.05)                     | [-0.14, 0.06]   | -0.01 (0.07)                      | [-0.13, 0.12]   | -0.01 (0.07)                     | [-0.14, 0.12]    |
| Race                         | 0.09 (0.06)                    | [-0.03, 0.21]   | 0.09 (0.06)                      | [-0.03, 0.21]   | 0.10 (0.08)                       | [-0.07, 0.26]   | 0.09 (0.08)                      | [-0.07, 0.26]    |
| Global control               | 0.17 (0.02)***                 | [0.13, 0.21]    | 0.17 (0.02)***                   | [0.13, 0.21]    | 0.13 (0.03)***                    | [0.08, 0.18]    | 0.13 (0.03)***                   | [0.08, 0.18]     |
| Age at baseline              | 0.001 (0.002)                  | [-0.004, 0.004] | 0.001 (0.002)                    | [-0.004, 0.005] | -0.001 (0.002)                    | [-0.005, 0.004] | 0.002 (0.003)                    | [-0.003, 0.007]  |
| Wave × Age at baseline       |                                |                 | -0.002 (0.004)                   | [-0.010, 0.005] |                                   |                 | -0.01 (0.01) <sup>†</sup>        | [-0.018, 0.001]  |
| <b>Level-3 random effect</b> |                                |                 |                                  |                 |                                   |                 |                                  |                  |
| Intercept                    | 0.16 (0.03)***                 | [0.11, 0.25]    | 0.16 (0.03)***                   | [0.11, 0.25]    | 0.19 (0.05)***                    | [0.12, 0.32]    | 0.18 (0.05)***                   | [0.12, 0.32]     |
| <b>Level-2 random effect</b> |                                |                 |                                  |                 |                                   |                 |                                  |                  |
| Intercept                    | 0.18 (0.03)***                 | [0.13, 0.27]    | 0.18 (0.03)***                   | [0.13, 0.27]    | 0.13 (0.05)**                     | [0.07, 0.33]    | 0.13 (0.05)**                    | [0.07, 0.32]     |
| <b>Level-1 residual</b>      |                                |                 |                                  |                 |                                   |                 |                                  |                  |
| Intercept                    | 0.86 (0.02)***                 | [0.82, 0.91]    | 0.86 (0.02)***                   | [0.82, 0.91]    | 1.08 (0.04)***                    | [1.01, 1.15]    | 1.08 (0.04)***                   | [1.00, 1.15]     |

Notes:  $N = 1,940$  participants, 4,199 observations for interpersonal stressor control, 3,020 observations for noninterpersonal stressor control. CI = confidence interval; SE = standard error. Women (0 = men, 1 = women). Day = linear trend across days. Number of stressors = total number of stressors reported each day. Wave = linear trend across waves. College (0 = high school or less, 1 = some college or more). Race (0 = White, 1 = non-White). Age at baseline = linear effect of age at baseline. Estimates of fixed effects are reported as unstandardized regression coefficients. Estimates of random effects are reported as variances.

<sup>†</sup> $p < .10$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

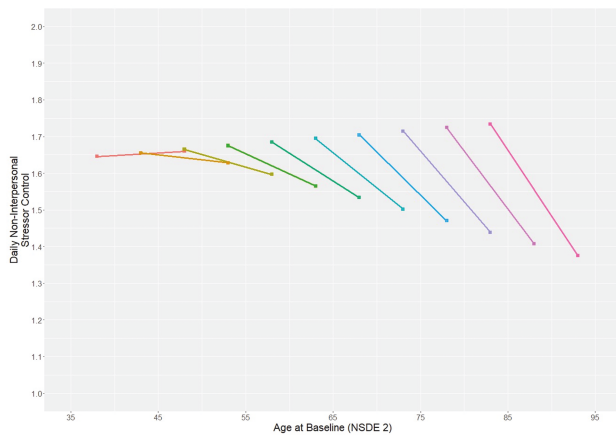


**Figure 2.** Trajectories of daily interpersonal stressor control. Longitudinal trajectory of daily interpersonal stressor control across the adult lifespan. Individuals remained stable in their daily interpersonal stressor control across the 10-year period.

et al., 2009). Across specific life domains, findings are more nuanced, with older age often related to greater control in some domains of life compared to others (for review, see Drewelies et al., 2019). For example, Lachman and Weaver (1998b) found that older adults reported less control over

their sex life and relationships with their children, but greater control over work and finances. Daily stressor control, averaged across all types of stressors, shows no cross-sectional association with age (Cerino et al., 2023). The current analyses extend these findings, predicting cross-sectional age differences in control over noninterpersonal stressors but not over interpersonal stressors. Contrary to our hypothesis, cross-sectional baseline age was unrelated to stressor control regardless of its interpersonal nature.

Daily stressor control may be similar across ages through domain-specific SOC (Baltes & Carstensen, 1996). For example, retirement may result in less income available for the unexpected home repair. Yet, downsizing to a smaller home after retirement may make home repairs less costly and more aligned with a smaller income. In addition, some types of stressors in the work and home domain may be objectively less stressful in later life. For example, if work stressors risk termination, work stressors for those who are approaching retirement may not carry the same threat as they might for those who are earlier in their career. Further, while older adults may be more adept at selecting and optimizing their interpersonal relationships, they may not feel in control when interpersonal stressors do occur. Another possibility is that when evaluating overall levels of perceived control, people may be influenced by loss in areas of their lives such as declines in health domains (e.g., physical strength, processing



**Figure 3.** Trajectories of daily noninterpersonal stressor control. Longitudinal aging-related changes in daily noninterpersonal stressor control across the adult lifespan. On average, individuals declined in their daily noninterpersonal stressor control across the 10-year period.

speed) or exposure to ageism in society. Because loss is more common in later life, even one loss may affect their general reports, even if this domain bears little relevance to their daily functioning. In contrast, stressor control asks people specifically about control over a specific daily stressor, and baseline age is unrelated to declines in this domain.

### Longitudinal Changes in Daily Stressor Control Over Time

Although cross-sectional findings reveal no age differences, longitudinal changes vary by stressor domain. Findings indicate that, on average, control over noninterpersonal stressors declined by about 7% compared to baseline levels across 10 years. Yet, control over interpersonal stressors remained high and stable over time. Although we did not test mechanisms to explain this difference, one possibility is that people prioritize their resources to maintain control in the social domain. These results are consistent with SOC (Baltes & Carstensen, 1996) and SST (Carstensen, 2021). According to their predictions, older adults prioritize the preservation of social relationships. For example, memory performance often declines with age, yet older adults show enhanced memory when judging social information pertaining to morality (e.g., behaviors that imply caring or honesty) compared to younger adults (Narvaez et al., 2011).

Other reasons why older adults do not show a decline in control over interpersonal stressors may involve the actions of their social partners and the circumstances around interpersonal stressors. For example, adults of all ages report they are less likely to argue with an older adult compared to a younger adult, even in situations where that person has made a social transgression (Fingerman et al., 2008; Miller et al., 2009). Reasons for avoiding conflict with older adults include realizing that time left with their older companion is growing shorter (a relational time perspective), or that they were acculturated to respect older adults, or because they attribute transgressions of older adults to age-related decline. Regardless of whether these reasons stem from ageism or from cultural beliefs, the end result is that people are often less combative to older adults.

Historical effects provide yet another explanation for these longitudinal findings, where broader social, economic, or

political change may be affecting sense of control over noninterpersonal stressors more than interpersonal stressors. Perhaps greater financial uncertainty, for example, affects work and home stressors more than interpersonal stressors. This possible explanation could explain a decline in control over these types of stressors from baseline (a time prior to the recession) to the 2017 follow-up period (when people may still have felt the effects of the prior economic downturn). However, if this is a time effect, its ramifications would likely affect the lives of older adults more than younger adults, and only in the domain of work and home stressors.

### Limitations and Future Directions

The contributions of this study must be understood alongside its limitations. First, the sample's lack of diversity in racial and ethnic composition, as well as individuals in the lowest socioeconomic stratum, is a limitation for generalizability of the present findings. In addition, the study only included two points of measurement, so we could not explore nonlinear longitudinal effects. With the population increasingly becoming diverse in socioeconomic, racial, and ethnic composition, it is crucial for future work to include a more diverse sample with additional time measurements to better elucidate patterns of change across time, and evaluate how changes in interpersonal and noninterpersonal stressor control may be conditioned by different sociodemographic and health factors.

The present study focused on differential trajectories of change in daily stressor control, but not their implications for health and well-being across the lifespan. Control beliefs are known correlates of health and well-being outcomes such as physical health (Infurna et al., 2011), cognitive health (Cerino et al., 2018; Robinson & Lachman, 2020), and depressive symptoms (Lachman & Weaver, 1998a). Future research should examine whether the stability in interpersonal stressor control and declines in noninterpersonal stressor control reported in the present study are associated with changes in health and well-being outcomes as well. Relatedly, we did not study any underlying mechanisms behind the phenomenon. Age represents a biological, psychosocial, and sociocultural construct, and we do not offer causal support for the findings. Although the rationale for the study stemmed from SOC and SST, we had no test of causal factors in stressor control and encourage future research to formally evaluate mechanisms of the patterns present in the current study. For example, recent longitudinal work has identified positive affect (Demirer et al., 2022) and social support (Demirer et al., 2021) as mechanisms underlying relationships between physical (e.g., multimorbidity) and mental (e.g., depressive symptoms) health. Future work should consider the ways in which these potential mechanisms may influence trajectories of daily stressor control as well.

The order of interview questions (i.e., questions on arguments and avoided arguments preceded questions on work and home overloads) and capacity for participants to indicate whether arguments and avoided arguments included people at work and home helped to distinguish interpersonal stressors from noninterpersonal stressors. However, we cannot definitively specify whether additional stressors reported in the work and home overload domains were also interpersonal on the days when participants reported additional stressors at work or home (after reporting an argument or an avoided argument). This is because details on

who was involved were not asked for questions on work and home overloads. Future work examining perceived control over different types of stressors would benefit from collecting information on who was involved for each type of stressor.

The distinct trajectories of daily stressor control in the present study were based on two types of stressors directly involved in people's lives (interpersonal vs noninterpersonal stressors). Future work should evaluate trajectories of perceived control over other types of daily experiences, such as network stressors that are not directly related to people's lives but still lead to feelings of stress. Understanding how these types of experiences may or may not benefit from perceived control will be important to fully characterize control over aspects of everyday life.

Stressor control is one type of appraisal that participants report on while completing the DISE protocol. Other stressor appraisals assessed in the DISE protocol include perceived severity of reported stressors (e.g., Stawski et al., 2010), whether the stressors have been resolved (e.g., Witzel & Stawski, 2021), as well as the perceived risk the stressors pose to resources in daily life (e.g., financial, health and safety, time schedule, socioemotional). Future work should evaluate the ways in which these stressor appraisals may be related and the synergistic roles they may play in understanding daily stress processes across adult development and aging.

## Conclusion

People value having control in their lives, but the balance between gains and losses often tips to losses in later life (Heckhausen et al., 2010). In later life, people must prioritize where to focus their energy and other resources, and theory and empirical evidence indicate that the social domain is one area that is highly valued across the lifespan. Our findings indicate that adults decline over time in their perceived control for noninterpersonal stressors. Yet, this decline is not observed for interpersonal stressors, suggesting that socioemotional experiences remain well-preserved as people grow older in their later years.

## Supplementary Material

Supplementary data are available at *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences* online.

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## Conflict of Interest

None.

## Data Availability

Data are publicly available at the following website: (<https://www.icpsr.umich.edu/web/ICPSR/series/203>). Study materials and study analysis code are available for appropriate

use upon e-mailed request to the corresponding author. This study was not preregistered.

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