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Daily Interpersonal Tensions and Well-Being among Older Adults: The Role of Emotion Regulation Strategies

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Abstract

Interpersonal tensions are more strongly associated with well-being than other types of stressors in late life. Yet, there is little understanding of how older adults' preferences for different emotion regulation strategies may buffer or exacerbate effects of daily interpersonal tensions on emotional well-being. The present study examined links between interpersonal tensions and daily emotional well-being, and whether those links were exacerbated or buffered by general emotion regulation strategy preferences. Participants were from the *Daily Experiences and Well-being Study* (DEWS), which included 293 older adults (aged 65+ years old) who completed baseline interviews followed by 5–6 days of ecological momentary assessments, and a leave behind questionnaire regarding emotion regulation strategies. Interpersonal tensions predicted poorer emotional well-being throughout the day, and even more so for oldest-old individuals (aged 80+) compared to young-old individuals. The effects of tensions on emotional well-being were attenuated among adults who generally preferred reappraisal and exacerbated among people who generally preferred avoidance. Reappraisal was particularly important for buffering the effects of tensions among individuals with poorer self-reported health. The findings regarding active coping were more nuanced and varied by age. The current study advances previous research on emotion regulation and social relations by examining older adults and revealing that links between interpersonal tensions, emotion regulation strategies, and emotional well-being vary on the basis of age and self-rated health. This study highlights the importance of considering how personal characteristics may shape later-life well-being in the context of coping with interpersonal tensions.

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Keywords

interpersonal tensions; emotional well-being; coping; daily; older adults

Interpersonal tensions are the most frequent daily stressors and they are more strongly associated with poor emotional well-being than any other type of daily stressor (Almeida, 2005; Bolger, DeLongis, Kessler, & Schilling, 1989). Older adults tend to be particularly sensitive to interpersonal tensions and often prefer to respond to them by using passive coping strategies (Birditt, Fingerman, & Almeida, 2005; Blanchard-Fields, Mienaltowski, & Seay, 2007; Oberhauser, Neubauer, & Kessler, 2017). Older adults, for example, are more likely than younger adults to report doing nothing, keeping quiet, or changing the subject when confronted with interpersonal conflict (Birditt & Fingerman, 2005). In addition, older adults often report preferring passive strategies to deal with problems, and they would recommend these strategies for others to regulate their emotions (e.g., Charles, Carstensen, & McFall, 2001).

Furthermore, the implications of interpersonal tensions on emotional well-being may vary depending on emotion regulation strategy preferences. Older adults who prefer to use the passive strategy of reappraisal (i.e., changing the meaning of a situation to reduce negative emotion) or active coping (i.e., behaviors focused on directly solving the problem), for example, may show better adaptation in the face of interpersonal tensions compared to older adults who use passive strategies that fall under the category of avoidant coping (i.e., suppressing emotion, distraction, doing nothing, or waiting for the situation to pass). Although we know that older people often report fewer tensions and that interpersonal tensions are detrimental to well-being, there is a lack of understanding regarding whether the emotion regulation strategies individuals prefer to use may buffer or exacerbate the link between tensions and well-being. The majority of the research on emotion regulation strategies has focused on children and younger adults (Gross, 2015). It is particularly important to understand the factors that exacerbate or buffer the effects of interpersonal tensions among older adults as they tend to be more negatively affected by tensions (e.g., Birditt, 2014) and prefer to use different emotion regulation strategies (e.g., Eldesouky & English, 2018) compared to younger adults.

The purpose of the present study is to examine how daily interpersonal tensions among older adults are linked to emotional well-being over the day, and whether those links are moderated by individual differences in preferences for using three common emotion regulation strategies: reappraisal, avoidant coping, and active coping. Older adults' general preferences for different emotion regulation strategies may moderate how interpersonal stressors encountered in everyday life are associated with emotional well-being. We further addressed whether the links between tensions, emotion regulation strategies and well-being varied by age and self-rated health, both factors which may confer increased sensitivity to tensions and emotion regulation strategies due to reduced physiological flexibility (Charles & Piazza, 2009).

Emotion Regulation Strategies in Late Life

Emotion regulation refers to the types of strategies people use to enhance, maintain, or reduce the experience and expression of emotion. There are several classifications of emotion regulation strategies in the literature (Blanchard-Fields, Chen, & Norris, 1997; Carver, 1997; Gross, 2001). One common dimension delineates “active” strategies and “passive” strategies. Active coping involves actively trying to solve the problem or finding solutions. Passive strategies involve reacting to the problem with covert actions (Blanchard-Fields et al., 1997; Carver, 1997; Gross, 2001). Passive strategies could easily be interpreted as the absence of any type of emotion regulation efforts, but such apparently passive approaches may involve different types of strategies. For example, older adults often use reappraisal (i.e., reframing the problem) when they experience tensions in their relationships (e.g., Luong & Charles, 2014). Reappraisal is defined as changing the meaning of a situation to reduce negative emotion or to upregulate positive affect. Likewise, passive strategies may incorporate avoidant strategies that involve suppressing emotion or using distraction. Avoidant coping refers to accepting the situation, engaging in distracting activities (e.g., watching television), or suppressing the expression of emotion (e.g., deciding not to feel angry or upset). Both passive approaches contrast with active strategies that explicitly and directly address the problem.

Although individuals may alter their emotion regulation strategies under different circumstances, they typically show consistent tendencies in the strategies they use (Birditt & Fingerhant, 2005; Carver, 1997), especially among older adults (Eldesouky & English, 2018). Moreover, preferences for emotion regulation strategies in late life may reflect developmental changes across adulthood. Lifespan developmental theories, including Socioemotional Selectivity Theory (SST), provide useful frameworks for understanding interpersonal tensions and their implications for well-being. According to SST, as people age they perceive time as more limited. As a result, they are motivated to achieve emotion-focused goals (Carstensen, Isaacowitz, & Charles, 1999), including more emotionally meaningful relationships.

The Strength and Vulnerability Integration (SAVI) model builds on Socioemotional Selectivity Theory by considering personal characteristics that may moderate how coping strategies are associated with well-being among older adults. We applied SAVI to understand links between interpersonal tensions and well-being in daily life. SAVI suggests that age-related improvements in relationships and well-being only occur among individuals who are able to successfully circumvent negative experiences, not all older adults (Charles, 2010). Thus, when older adults do experience interpersonal tensions, they typically report poorer well-being and fewer age-related improvements in well-being.

This study assessed whether the links between interpersonal tensions and well-being may be reduced or exacerbated based on individual preferences for three different types of emotion regulation strategies: active coping, avoidance, and reappraisal. Older adults vary in their general approaches to interpersonal tensions, usually preferring passive emotion regulation strategies over active and more confrontational strategies (Birditt et al., 2005; Luong & Charles, 2014). We also examined whether these relationships varied by age and self-rated

health. Individuals who are often more vulnerable (i.e., those who are older and have poorer self-rated health) may be more negatively affected by tensions and also benefit more from passive emotion regulation strategies than younger individuals or those with better self-rated health. Indeed the literature shows that oldest-old individuals do not show the same age-related improvements in well-being as young-old individuals (Charles et al., 2001; Davey, Halverson, Zonderman, & Costa, 2004).

Implications of Daily Interpersonal Tensions for Emotional Well-Being

Daily interpersonal tensions are social interactions that are irritating, hurtful, or annoying (Birditt, 2014). Daily interpersonal tensions are associated with poorer well-being among older adults (Almeida, 2005; Birditt, 2014; Charles, Piazza, Luong, & Almeida, 2009). In a study of middle-aged and older adults, Birditt (2014) examined interpersonal tensions in which individuals reported whether they felt irritated hurt or annoyed, and these tensions were associated with lower positive and greater negative affect, especially among the oldest-old. The present study extends this work by considering daily interpersonal tensions and their implications for same day and next day emotional well-being. We also tested whether those links are moderated by general preferences for emotion regulation strategies.

Implications of Trait Preferences for Emotion Regulation Strategies for Daily Emotional Well-Being

Studies of daily affect have revealed that individual differences in emotion regulation strategy preferences are linked with variations in daily well-being. Among younger adults, reappraisal is associated with increased positive affect and decreased negative affect (Brans, Koval, Verduyn, Lim, & Kuppens, 2013; Nezlek & Kuppens, 2008; Pavani, Le Vigouroux, Kop, Congard, & Dauvier, 2016). People who generally engage in active coping report better well-being throughout the day (Pavani et al., 2016). In contrast, preference for avoidant strategies (e.g., avoiding the situation) is associated with increased daily negative affect and reduced daily positive affect (Nezlek & Kuppens, 2008; Richardson, 2017). Building on this research, the present study considered whether older adults' overall preferences for the use of reappraisal, active coping, and avoidant coping were associated with their daily affect.

Individual preferences for emotion regulation strategies may also may buffer or enhance the effects of daily interpersonal tensions on daily emotional well-being. Previous studies have examined how reappraisal and avoidance influence emotional reactivity to laboratory stressors. Reappraisal typically leads to reduced reactivity, whereas avoidance (measured as emotional suppression) either does not reduce reactivity or increases it (Gross & Levenson, 1997; Shiota & Levenson, 2012). Researchers have also examined this issue in a daily context with college students. In a daily diary study of undergraduate students, Richardson (2017) found a cross-level interaction such that individuals who prefer to use avoidance (i.e., suppressed emotion) showed a stronger association between daily stress and reduced daily positive affect. Finally, Schraub, Turgut, Clavairoly, and Sonntag (2013) found that both reappraisal and avoidance (labeled suppression in that study) buffered the effects of emotional stress on well-being among undergraduate students. Thus, it appears that overall preferences for emotion regulation strategies may moderate the association between daily

stressful experiences and emotional well-being. Research has focused primarily on college students, however, and there is little information on how these emotion regulation strategies may buffer or exacerbate daily interpersonal tensions among older adults. Moreover, there is also little information regarding how these links vary by age and self-rated health, both which may have important implications for the effects of tensions and emotion regulation strategies on well-being.

Effects of Tensions and Emotion Regulation Strategies as a Function of Age and Self-Rated Health.

Previous research suggests that older adults are more likely to recommend passive strategies whereas younger adults recommend active strategies for coping with interpersonal tensions (Charles et al., 2001). Passive strategies tend to be more adaptive when situations are not likely to change and when the individual does not have the resources to expend the energy. Given the physiological vulnerabilities that often co-occur with advanced age, coupled with a reduced future time perspective, avoiding interpersonal tensions may be adaptive, particularly so for older people with worse self-reported health.

Often, older adults in poorer health do not show improvements in their well-being in response to stressors. For instance, older adults were just as reactive to stressors compared to younger individuals when they had multiple chronic conditions or when they were chronically disabled compared to younger individuals (Piazza, Charles & Almeida, 2007; Piazza, Charles, Luong, & Almeida, 2015). SAVI suggests that when older adults are not able to use strategies that allow them to distance themselves from these events, they will show poorer well-being. We predicted that, among older adults, relatively older individuals and individuals in poorer health would be more reactive to daily interpersonal tensions and show greater benefits from more passive strategies than relatively healthier individuals.

Present study

We examined associations between daily tensions and daily emotional well-being (on the same day and the next day), and whether those links varied by preferences for different emotion regulation strategies. The present study moves beyond previous research by focusing on daily interpersonal tensions, which are more frequent and more highly associated with well-being than non-interpersonal stressors (Almeida, 2005; Bolger et al., 1989). Further, this study examined daily well-being with multiple reports over the course of the day among a sample of older adults via ecological momentary assessments (EMA). EMA may reduce retrospective biases compared to methods that assess experiences after longer time intervals (e.g., the end of the day, in the past week). It is particularly important to examine this issue among older adults because they are highly invested in maintaining emotionally meaningful relationships that may have both positive and negative implications for well-being. We also examined whether these effects varied by age and self-rated health. Hypotheses were as follows:

H1: Interpersonal tensions would predict lower emotional well-being throughout the day on the same day and the next day.

H2: The link between interpersonal tensions and emotional well-being (on the same and the next day) would be reduced when individuals reported greater preferences for using reappraisal and active coping strategies and using less avoidant coping strategies.

H3: The link between tensions and well-being (on the same and the next day) and the moderating effects of emotion regulation strategies would be stronger among relatively older adults (i.e., oldest old compared to young-old) and those with poorer health.

Method

Participants

Participants were from the Daily Experiences and Well-being study (DEWS) which included 333 adults, aged 65 and older, from the greater Austin, Texas area. The sample was selected from a landline list with matched addresses representing approximately 80% of this population (in 2016 the majority of older adults still had landlines; Kennedy, McGeeney, & Keeter, 2016). Individuals who were 65 years and older and not working more than 20 hours a week were eligible to participate. The response rate was 66% for agreement to participate in terms of eligible households. Of the total sample ($N=333$), 321 participants agreed to complete daily ecological momentary assessment (EMA) surveys and 313 of those respondents completed at least one survey (range 1 to 32). Of the total sample, 324 also completed the leave behind questionnaire. The participants included in the analysis completed at least one end-of-day EMA (which included the assessment of tension) and had scores on the three emotion regulation measures in the leave behind questionnaire (total sample = 293). They were 55% female and ranged in age from 65 to 90 years ($M = 73.73$, $SD = 6.28$). A total of 83% were White and 16% were Black. In addition, 15% identified as Hispanic. Most of the participants reported having a high school degree or higher (94%) with 57% reporting a Bachelor's degree or higher, making the sample slightly more educated than the general population of the Austin metropolitan area where 45% of older adults have a college degree (US Census, 2016). Table 1 includes a description of the sample. The study received Institutional Review Board approval from the University of Texas at Austin.

Procedure

Participants completed a baseline face-to-face interview in their homes followed by 5–6 days (3–4 weekdays and 2 weekend days) of ecological momentary assessment (EMA) questionnaires on a study-provided Android device every three hours from waking until bedtime (approximately 6 times). Participants were also left with a survey that they completed and returned to the interviewer at the conclusion of the study, referred to as the leave behind questionnaire. Respondents received \$50 for completing the baseline survey and \$100 for completing the daily component of the study. Participants received an additional \$50 for completing the Leave Behind Questionnaire. Participants completed an average of 20.85 EMA ($SD = 5.05$) surveys. The data in this study were from the baseline interview, EMA surveys, and the leave behind questionnaire.

We examined whether particular individuals were more likely to complete EMA surveys by examining correlations between the number of EMA surveys completed, gender, age, education, self-rated health, race, Hispanic ethnicity, number of network members, living alone, married/cohabiting and whether it was on a weekend day. Individuals who were more educated ($r = .12, p < .01$), reported better self-rated health ($r = .13, p < .01$), were White ($r = .13, p < .01$), were not Hispanic ($r = -.07, p < .05$), and had more network members ($r = .15, p < .01$) completed more EMAs. There were no significant correlations between gender, age, living alone, marital status or weekend day and the number of EMAs completed.

Measures

Preferences for emotion regulation strategies.—The leave behind questionnaire included a measure of general emotion regulation strategy usage. Participants received the following instructions: “There are many ways to try to deal with problems. We want to know to how often you use the following strategies when you are feeling stressed. Don’t answer on the basis of whether it seems to work or not—just whether or not you do it.” Participants were then asked to rate the frequency with which they used a series of 10 coping strategies, which represented reappraisal, avoidant coping, and active coping. Participants rated each item on a scale including the following answer categories: 1 (*Never*), 2 (*Rarely*), 3 (*Sometimes*), 4 (*Often*), and 5 (*Almost Always*). The majority of the items were derived from Carver’s brief cope questionnaire (Carver, 1997). The original brief questionnaire includes 28 items and 14 scales. Each scale includes 2 items. Items were taken from the self-distraction scale, the active coping scale, and the positive reframing scale. Items were also taken from the Family Exchanges study (Fingerman, 2008) which included “I accepted there was nothing I could do about the problem,” and “I avoided talking about the problem.” We conducted a factor analysis with principal axis extraction and a varimax rotation and found that there were three factors. All items had primary loadings above .40 and loadings of .3 or lower on the other factors. Reappraisal included two items: “I try to see it in a more positive light” and “I look for something good in what is happening.” Avoidant coping included six items: “I do something to think about it less, such as watching TV, reading, sleeping, or shopping”; “I turn to projects or other activities to keep my mind off things”; “I try hard not to think about the situation”; “I avoid talking about the situation”; “I accept there is nothing I can do”; “I wait for it to pass.” Active coping included two items: “I concentrate my efforts on doing something about the situation I’m in” and “I take action to make the situation better.” We averaged the items in each subscale to create three mean scores: reappraisal ($\alpha = .81$), avoidant coping ($\alpha = .72$), and active coping ($\alpha = .78$).

Daily interpersonal tensions.—During the last EMA survey each day (also referred to as the end-of-day survey), participants were asked whether they had any social interactions that made them feel irritated, hurt, or annoyed that day. Each day was coded as experiencing tensions or not (1 = *yes*, 0 = *no*). This item has been used successfully in previous research (Birditt, 2014; Fingerman, Hay, & Birditt, 2004).

Daily Emotional well-being.—To assess daily mood, we created an average value over the day using the reports from the EMA surveys that participants received every three hours.

For each EMA survey, participants reported the extent to which they felt negative emotions (*nervous/worried, irritated, lonely, and sad*) and positive emotions (*content, loved, and calm*) during the last three hours. Emotional well-being was assessed multiple times per day to avoid known retrospective memory biases that could affect mood (Ebner, & Trull, 2009). The answer choices included 1 (*not at all*), 2 (*a little*), 3 (*somewhat*), 4 (*quite a bit*), and 5 (*a great deal*). The items were adapted from prior research (Shaver, Schwartz, Kirson, & O'Connor, 1987) and the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). Items were averaged to create negative and positive affect scores for each day ($\alpha = .71$ and $.73$, respectively).

Age and Self-Rated Health.—Participants reported their birthdate, and age was treated as a continuous variable in years. Participants rated their health from 1 (*excellent*) to 5 (*poor*) and this item was reverse coded so that higher numbers reflected better health. Self-rated health is a valid assessment of health that is associated with objective health outcomes including mortality (Idler & Benyamini, 1997).

Covariates.—Several covariates associated with emotion regulation, daily experiences, and emotional well-being were included in the models: gender, education, race, Hispanic ethnicity, self-rated health and social network size. Gender was coded as 1= *female* or -1= *male*. To assess education, participants were asked, “What is the highest grade of school or year of college you completed?” and were provided with 8 categories: 1 (*no formal education*), 2 (*1–8 years, elementary school*), 3 (*some high school*), 4 (*12 high school*), 5 (*13 to 15 years some college/vocational or technical school*), 6 (*16 college graduate*), 7 (*17+ post college; no additional degree*), or 8 (*17+ advanced degree*). Race included four categories (*American Indian or Alaska Native, Asian, Black or African American, or White*) and was coded as 1 (*White*) or -1 (*non White*). Participants were also asked whether they identified as Hispanic which was coded as 1 (*Hispanic*) or -1 (*not Hispanic*) which we included because social ties and emotional experiences vary by Hispanic ethnicity (Comeau, 2012; Soto, Levenson, & Ebling, 2005). Finally, we adjusted for the total number of social network members which was assessed with the convoy diagram in which participants were asked to list the individuals who were closest to them followed by those who were less close in three concentric circles (Antonucci, 1986).

Analysis strategy

First, descriptive statistics and correlations were calculated to describe the emotion regulation strategy preferences, frequencies of daily interpersonal tensions, and associations between all study variables. Next, we examined whether interpersonal tensions and emotion regulation strategies were associated with emotional well-being in multilevel models using SAS proc mixed. We estimated separate models to predict negative and positive affect. The models had two levels in which days (level 1) were nested in respondents (level 2). To examine interpersonal tensions we included tensions on the same day and the previous day as predictors. The emotion regulation strategies included reappraisal, avoidance, and active strategies. Covariates included age, gender, education, self-rated health, race, Hispanic ethnicity, social network size, proportion of days during which participants reported tensions, and emotional well-being on the previous day. Models were tested in two steps:

Step 1 included main effects of tensions and emotion regulation strategies; Step 2 included the cross-level interactions between the emotion regulation strategy preference and the same day and previous day interpersonal tensions. An example equation predicting negative affect in the two steps is included here

Step 1: $\text{negative affect}_{ji} = \text{same day tensions}_{ji} + \text{previous day tensions}_{ji} + \text{reappraisal}_i + \text{avoidance}_i + \text{active coping}_i + \text{covariates}$

Step 2: $\text{same day tensions}_{ji} * \text{reappraisal}_i + \text{previous day tensions}_{ji} * \text{reappraisal}_{ji} + \text{same day tensions}_{ji} * \text{avoidance}_i + \text{previous day tensions}_{ji} * \text{avoidance}_i + \text{same day tensions}_{ji} * \text{active coping}_i + \text{previous day tensions}_{ji} * \text{active coping}_i$

All person level continuous variables were grand mean centered and day level variables were centered on the participant mean (i.e., group mean centered). All categorical variables were effect coded. We explored the nature of significant interactions by testing the simple effects of the daily tensions on the outcome at 1 standard deviation (SD) above and below the median using the Preacher online utility (Preacher, Curran, & Bauer, 2006).

Finally, we estimated models to examine whether the findings varied by self-rated health and age. These models involved testing the interactions between tensions and self-rated health/age, interactions between coping strategies and self-rated health/age and finally three way interactions between tensions, coping and self-rated health/age. These models were estimated separately to first assess tensions and interactions between tensions and age/self-rated health, next to examine whether there were interactions between emotion regulation strategies and age/self-rated health, and finally to examine interactions between tensions, emotion regulation strategies and age/self-rated health. Due to the large number of interactions, we tested these models for each emotion regulation strategy preference separately.

Results

Descriptives

When examining overall emotion regulation strategy preferences, participants most frequently reported using active coping strategies ($M = 3.94$, $SD = 0.74$), followed by reappraisal ($M = 3.82$, $SD = 0.80$), and avoidance ($M = 2.87$, $SD = 0.62$). In daily life, participants collectively reported interpersonal tensions on an average of 9% of the days and participants reported an average of 0.37 tensions over the days ($SD = 0.72$; range from 0 to 4). All correlations between variables are presented in Table 2. Age was associated lower positive affect, greater use of avoidance, and less use of reappraisal and active coping. Self-rated health was associated with greater positive affect, lower negative affect, less avoidance and more active coping strategies.

To address whether individuals may have found the number of EMAs to be intrusive which may have lowered their emotional well-being, we tested whether negative and positive affect were correlated with the number of EMAs completed and found that there was no significant correlation between daily positive or negative affect and the number of surveys completed. We interpret this finding as an indication that the sampling method demands did not

influence their affective states. In addition, participants completed an average of 4.07 ($SD = 1.22$) surveys a day. These individuals were retired and/or only working part-time which may have reduced their perceived burden.

Main Effects of Interpersonal Tensions and Preferences for Emotion Regulation Strategies on Daily Emotional Well-Being

First, we estimated multilevel models to examine whether interpersonal tensions and emotion regulation strategy preferences were associated with daily emotional well-being (negative and positive affect). Tensions predicted significantly greater negative affect on the same day, consistent with our hypothesis, but not the next day (Table 3). Trait emotion regulation strategy preferences were not significantly related to daily negative affect.

Tensions also predicted significantly lower same day positive affect, as we predicted, but not next day positive affect. Greater trait preferences for active coping was related to significantly greater daily positive affect, but avoidance and reappraisal were unrelated to daily positive affect.

Do the Effects of Interpersonal Tensions on Daily Emotional Well-being Vary by Emotion Regulation Strategy Preferences?

We next tested whether the links between daily interpersonal tensions and emotional well-being varied by trait emotion regulation strategies. For reappraisal, two interactions between strategy preferences and tensions were statistically significant. Specifically, tensions interacted with reappraisal emotion regulation strategy preferences to predict negative affect (Table 3). Consistent with our hypothesis, simple effects tests revealed that people who reported less frequent use of reappraisal had greater increases in negative affect when they experienced same-day tensions ($b = 0.14$, $SE = 0.02$, $p < .001$; Figure 1) compared to people who used more frequent reappraisal ($b = 0.06$, $SE = 0.02$, $p < .001$). In line with our hypothesis, a significant interaction between reappraisal and same day tension revealed that the link between tensions and lower same day positive affect was stronger among people who used less reappraisal ($b = -0.12$, $SE = 0.03$, $p < .001$) than for those who used more reappraisal ($b = -0.03$, $SE = 0.03$, $p > .05$; Figure 2).

Interpersonal tensions interacted with avoidant emotion regulation strategy preferences to predict same day positive affect (Table 3), and simple effects tests revealed that using avoidant strategies more frequently was associated with lower positive affect on the same day tensions were reported ($b = -0.15$, $SE = 0.03$, $p < .001$; Figure 3). There was no significant association between tensions and positive affect among people who reported less frequent use of avoidant strategies ($b = 0.00$, $SE = 0.03$, $p > .05$).

Tensions interacted with active emotion regulation strategies to predict emotional well-being (Table 3). As predicted, simple effects tests revealed that individuals who reported using less active emotion regulation had increased negative affect on the day after they experienced tensions ($b = 0.05$, $SE = 0.02$, $p < .01$), whereas there was no link between tensions and next day negative affect for people who reported using greater active emotion regulation ($b = -0.01$, $SE = 0.02$, $p > .05$; Figure 4). Same day tension also interacted with active strategies to predict same day positive affect, but contrary to our hypothesis, the link between tensions

and lower same day positive affect was stronger among individuals who reported greater active coping ($b = -0.12$, $SE = 0.03$, $p < .001$) than for those who reported less active coping ($b = -0.03$, $SE = 0.03$, $p > .05$; Figure 5).

The Effects of Tensions and Emotion Regulation Strategies by Age

When examining whether the links between tensions and well-being varied by age as well as emotion regulation strategies, there were several significant interactions. A significant two-way interaction between same day tensions and age revealed that older individuals (i.e., oldest old) exhibited greater negative affect on tension days vs. non-tension days ($b = 0.13$, $SE = 0.02$, $p < .001$) than younger individuals (i.e., young old; $b = 0.06$, $SE = 0.02$, $p < .001$; Figure 6), consistent with previous literature. The simple slope analysis examined the findings for the relatively younger group, which included individuals aged 67.4 and younger, and the relatively older group which included those aged 80 and older. Thus, we refer to the groups as young-old and old-old individuals. There was also a significant interaction between tensions, active coping, and age predicting same day negative affect. The link between tensions and negative affect was lower among young-old people who used more frequent active coping compared to less frequent active coping (younger, lower active coping: $b = 0.08$, $SE = 0.03$, $p < .01$; young-old, higher active coping: $b = 0.04$, $SE = 0.02$, $p > .05$). Among oldest-old individuals in the sample, however, tensions were associated with greater negative affect for those reporting greater use of active coping (oldest-old, lower active coping: $b = 0.09$, $SE = 0.03$, $p < .01$; oldest-old, higher active coping: $b = 0.17$, $SE = 0.03$, $p < .001$; Figure 7). No other interactions between tensions, emotion regulation strategies and age were statistically significant.

The Effects of Tensions and Emotion Regulation Strategies by Self-Rated Health

There were several interactions between self-rated health, tensions, and emotion regulation strategies that were all consistent with our hypothesis that the moderating effects of emotion regulation strategies on the link between tensions and emotional well-being would be stronger for those with poorer health. The association between previous day tensions and positive affect varied by self-rated health, but the simple effects were not significant. A significant interaction between self-rated health and avoidant coping strategies predicting negative affect revealed that greater use of avoidance was associated with increased negative affect among people with poor self-rated health ($b = 0.11$, $SE = 0.04$, $p < .01$) whereas it was not associated among people with higher self-rated health ($b = -0.00$, $SE = 0.04$, $p > .05$; not presented in a figure in the interest of space).

There were also three-way interactions between same day and prior day tensions, reappraisal, and self-rated health. The link between same day tensions and negative affect was greater among people with poor self-rated health who used less reappraisal ($b = 0.19$, $SE = 0.03$, $p < .001$) and lower among people with poor self-rated health who used more reappraisal ($b = 0.04$, $SE = 0.02$, $p > .05$). Reappraisal did not appear to matter for people with higher self-rated health (low reappraisal: $b = 0.08$, $SE = 0.03$, $p < .01$; high reappraisal: $b = 0.08$, $SE = 0.02$, $p < .001$; Figure 8). There was also a three-way interaction between prior day tensions, reappraisal, and self-rated health. The link between previous day tensions and negative affect was greater among people with poor self-rated health who used less

reappraisal ($b = 0.08$, $SE = 0.03$, $p < .01$) and lower among people with poor self-rated health who used more reappraisal ($b = -0.05$, $SE = 0.02$, $p < .05$). Reappraisal did not appear to matter for people with better self-rated health (low reappraisal: $b = 0.03$, $SE = 0.03$, $p > .05$; high reappraisal $b = 0.04$, $SE = 0.02$, $p > .05$; Figure 9).

Post hoc analyses

Because the average negative affect and positive affect scores over the course of the day may mask important variations in emotional well-being throughout the day, we estimated models again predicting the intraindividual standard deviation of positive and negative affect over the day. Interpersonal tensions predicted greater fluctuation in negative ($b = 0.05$, $SE = 0.01$, $p < .001$) and positive affect ($b = 0.03$, $SE = 0.01$, $p < .05$) (i.e., greater intraindividual standard deviation). The models testing the interactions between emotion regulation strategy preferences and tensions predicting intraindividual standard deviation (iSD) revealed that tension did not interact with emotion regulation strategy preferences to predict fluctuations in emotional well-being (i.e., iSD).

In the EMAs, we assessed whether the tensions were with a close network member or not in terms of whether the tension was with one of the first 10 identified close network members from the social convoy measure (close partner) or someone else (less close partner). A total of 56% tensions were with a close network member and 44% were with someone less close. We examined whether the link between tensions and well-being varied by whether the tension was with a close network member or not and we found that negative affect was higher when people had tensions with network members compared to having no tension ($b = 0.19$, $SE = 0.03$, $p < .001$) and there was no significant difference in negative affect between tensions with close ties and less close ties. When looking at positive affect, individuals had lower positive affect when tension was with a close network member compared to having no tension ($b = 0.16$, $SE = 0.05$, $p < .01$) and there was no significant difference in positive affect.

Discussion

This study demonstrates that individuals' emotion regulation strategy preferences can buffer or exacerbate the effects of daily interpersonal tensions on emotional well-being among older adults. These findings are consistent with the emotion regulation literature which suggests that reappraisal is generally better for well-being than avoidance (Gross & Levenson, 1997; Shiota & Levenson, 2012). The current study advances previous research on emotion regulation and social relations by revealing that links between interpersonal tensions, emotion regulation strategies, and emotional well-being vary among older adults by age and self-rated health. Taken together, this study highlights the importance of considering how personal characteristics may shape later-life well-being in the context of coping with interpersonal tensions.

Daily Tensions and Emotional Well-Being

Interpersonal tensions predicted lower well-being on the same day (lower positive affect, greater negative affect). This finding is in line with previous literature showing that

interpersonal tensions predict poorer emotional well-being assessed at the end of the day (Birditt, 2014; Charles et al., 2009). These results are also consistent with the SAVI model, which suggests that older adults have worse well-being or do not show improvements in well-being when they are not able to avoid interpersonal problems (Charles, 2010). Consistent with previous research we found that increasingly older age was associated with greater sensitivity to tensions (e.g., Birditt, 2014). Among older adults, the oldest old reported greater negative affect when they had tensions compared to those who were relatively younger (i.e., young old adults). The links between tensions and emotional well-being varied by emotion regulation strategy preferences as well as age and self-rated health. We consider the findings for each emotion regulation strategy preference below including reappraisal, avoidance and active coping.

Preference for Reappraisal

There were no direct links between reappraisal and daily well-being. However, reappraisal moderated the link between tensions and emotional well-being and these links varied by self-rated health. Reappraisal appeared to be particularly important in the context of interpersonal tensions. In general, more frequent use of reappraisal weakened the association between interpersonal tensions and poor emotional well-being. Thus, attempting to reinterpret problems in a more positive light may enhance well-being among older adults dealing with interpersonal tensions. It may also be that older adults who prefer to use those strategies are less bothered when interpersonal tensions arise. These findings are consistent with the previous literature indicating the benefits of reappraisal for managing stress (Richardson, 2017; Schraub et al., 2013), but show that these strategies may be especially relevant for the well-being of older adults experiencing daily interpersonal tensions. It is also important to note, however, that the effects of reappraisal also varied by self-rated health

Consistent with SAVI, we found that older adults who were more vulnerable in terms of their physical health, appeared to benefit more from reappraisal. Tensions were associated with greater negative affect on the same and the next day particularly among individuals with poor self-rated health who did not use reappraisal. In contrast, among people with poor self-rated health who preferred to use more reappraisal, tensions were either not associated or associated with *lower* negative affect. This is in line with previous research which shows that in circumstances such as poor health, older adults often do not show improvements in their well-being. For instance, Piazza, Charles and Almeida (2007) found that older adults were just as reactive to stressors as younger adults when they had multiple chronic conditions. SAVI suggests that when older adults are not able to use passive strategies such as distancing in these circumstances, they will show poorer well-being. Our study contributes to the literature by showing that consistent with the SAVI model, vulnerable individuals who are able to circumvent conflict are better off than those who are not able to circumvent conflict. It may be particularly beneficial to use reappraisal to cope among individuals with poor self-rated health.

Preference for Avoidance

While there were no direct associations between avoidant strategies and daily emotional well-being, avoidance was important when considering the link between tensions and

emotional well-being. Indeed, avoidant coping strategy preferences (e.g., distraction and acceptance), appeared to exacerbate the link between interpersonal tensions and poorer emotional well-being. Thus it may be that using strategies such as distraction and acceptance may exacerbate the effects of tensions. It is also possible that people who prefer to use avoidance with interpersonal tensions are more bothered by these tensions when they occur. This finding is consistent with research demonstrating that avoidant strategies (e.g., emotional suppression) are associated with lower well-being (Butler, Egloff, Wilhelm, Smith, Erickson, & Gross, 2003), but shows that this may be particularly relevant in the context of daily interpersonal tensions. People who suppress negative feelings when they interact with others may also inhibit their expression of positive emotions in ways that have adverse social repercussions (Gross, 2001). In two laboratory studies during which participants discussed upsetting topics with an unacquainted partner using different emotion regulation strategies, use of suppression was linked to more negative emotions among regulators, disrupted communication and rapport, and increased blood pressure for both dyad members (Butler et al., 2003). Hence, avoidant strategies in response to interpersonal tensions may have reverberating social consequences that diminish daily positive affect among older adults. In accordance with Socioemotional Selectivity Theory, these effects may be especially consequential for well-being in later life when people are more motivated to maintain harmony in their relationships (Carstensen et al., 1999).

Further, avoidant coping predicted greater daily negative affect among individuals in poor health whereas there was no link between avoidant coping and well-being among individuals with better self-rated health. This finding also contributes to the SAVI model by suggesting that passive strategies are not universally beneficial among individuals who are more vulnerable. It is important to use reappraisal rather than avoidance.

Preference for Active Coping

Consistent with previous research (Pavani et al., 2016), individuals who reported greater use of active coping (i.e., problem focused coping) reported greater positive affect. However, the effects of active coping strategies on the tension-well-being link were more complex. Tensions were associated with lower same day positive affect among people who used more active coping whereas there was no link between tensions and positive affect among people who used less active coping. This may be because individuals who are more likely to cope actively are directly dealing with tensions as they occur and thus experience poor positive affect on the same day. Indeed, tensions were associated with greater negative affect on the next day among people who used *less* active coping whereas there was no link between tension and next day negative affect among people who used more active coping. This may indicate that because problems are not resolved among individuals who use less active coping that there are lingering effects of tensions. Further, the effects of active strategies on the link between tensions and same day negative affect varied by age. Oldest-old individuals who preferred to use more active coping reported even *greater* negative affect when experiencing tensions whereas relatively younger individuals (i.e., young old) who preferred active coping showed no link between tensions and affect.

These findings regarding active coping contribute to the literature by showing that active coping is not a universally beneficial strategy. Previous research suggests that older adults are more likely to recommend passive strategies whereas younger adults recommend active strategies for coping with interpersonal tensions (Charles, Carstensen, & Mcfall, 2001). Passive strategies tend to be more adaptive when situations are not likely to change and when the individual does not have the resources to expend the energy. Aging is associated with increasing vulnerability and reduced physiological flexibility and it may be more distressing to use active strategies when the preference is to use passive strategies which tend to be more successfully implemented by older adults (Charles & Piazza, 2009). Further, aging is linked with increased experience as well as reduced future time perspective which may make older individuals more adept at avoiding interpersonal tensions.

Overall, this study contributes to the literature by showing that older adults benefit when they use reappraisal but not when they use avoidance. Further, research on aging has often assumed that older adults are not engaging in strategies when they use passive coping (e.g., by doing nothing or waiting for the situation to pass) but this study shows that when older adults generally use more reappraisal strategies they are less detrimentally affected by interpersonal tensions. These findings reveal that using reappraisal may be a more effective emotion regulation strategy than other types of passive strategies including distraction and suppression. The current findings indicate that interventions to promote the use of reappraisal for managing daily tensions may yield broad benefits for well-being in later life.

Limitations and Future Directions

This study has limitations that should be addressed in future research. First, the outcomes were limited to emotional well-being (i.e., positive and negative affect). Future research should consider physical well-being because interpersonal tensions have important implications for physiological outcomes as well (Birditt, Nevitt, & Almeida, 2015; Sneed & Cohen, 2014). Further, there were relatively few tensions reported, and future research should consider including a greater number of days to more thoroughly examine within person links between tensions and well-being.

Moreover, the study focused on general emotion regulation preferences at the person level rather than examining emotion regulation strategies on a daily basis. Thus, it is unclear whether respondents actually employed their preferred strategies in response to the daily tensions reported in the study. Prior research, however, suggests that older adults have general tendencies in their responses to interpersonal stressors (Birditt & Fingerman, 2005; Birditt et al., 2005) and these general preferences predicted linkages between tensions and affect in our study. Nevertheless, future research should consider the daily use of emotion regulation strategies and well-being.

This study also only focused on a limited selection of emotion regulation strategies, and did not examine several important types of coping such as support seeking, venting, and rumination. Similarly, this study focused on daily interpersonal tensions, and older adults might use different emotion regulation strategies in response to other types of daily stress. It may be beneficial, for instance, to use certain types of coping strategies in interpersonal relationships and other coping strategies in non-interpersonal situations.

Finally, this study assessed individuals rather than dyads. A great deal of research suggests that the links between interpersonal tensions and well-being vary depending on how social partners also cope with tensions (Birditt, Brown, Orbuch, & McIlvane, 2010; Luong, Charles, & Fingerman, 2011). Future research on interpersonal tensions should consider including reports from both social partners involved to better understand these complex dyadic associations.

As a whole, this study contributes to the literature on interpersonal tensions and well-being in several key ways. Interpersonal tensions may have implications for daily well-being, but these links vary widely by individuals' emotion regulation strategy preferences. In general, interpersonal tensions appear to be more detrimental when individuals prefer to use avoidant coping and less detrimental when individuals prefer to use reappraisal and active coping. For the oldest adults, however, active coping does not appear to benefit their emotional well-being as it does for their relatively younger counterparts. The current findings provide important distinctions for targeting specific coping strategies for interventions that are modifiable and tailored to the health and age of the individual. Interventions for older adults in poorer health, for example, may help to maintain emotional well-being by targeting both reductions in avoidant strategies and increases in reappraisal strategies. Likewise, it might be beneficial to target more frequent use of active strategies among relatively younger individuals but less frequent use of these strategies among the oldest individuals. These findings may lead to greater nuances in the aging literature with regard to harmful and beneficial ways to cope with tensions in social relationships.

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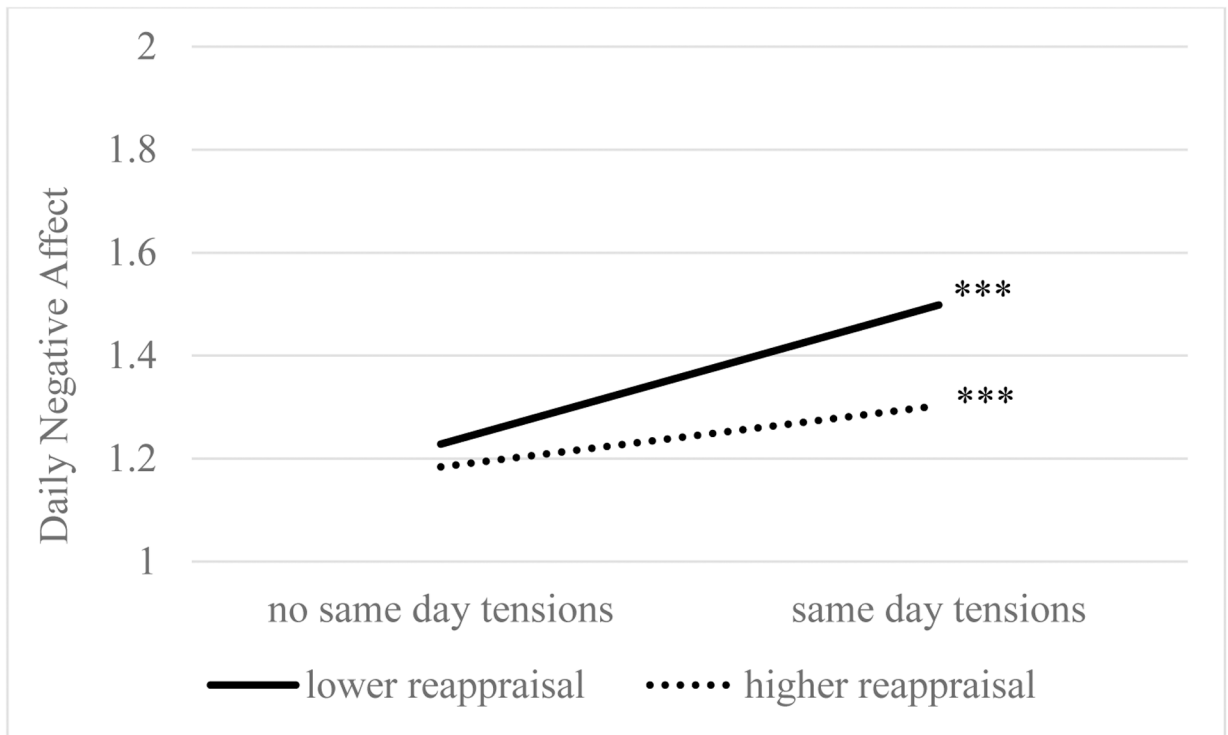


Figure 1. Associations between same day tensions and daily negative affect by **reappraisal** (1SD above and below the mean). Y axis indicates responses from 5–95% of the sample. *** $p < 001$.

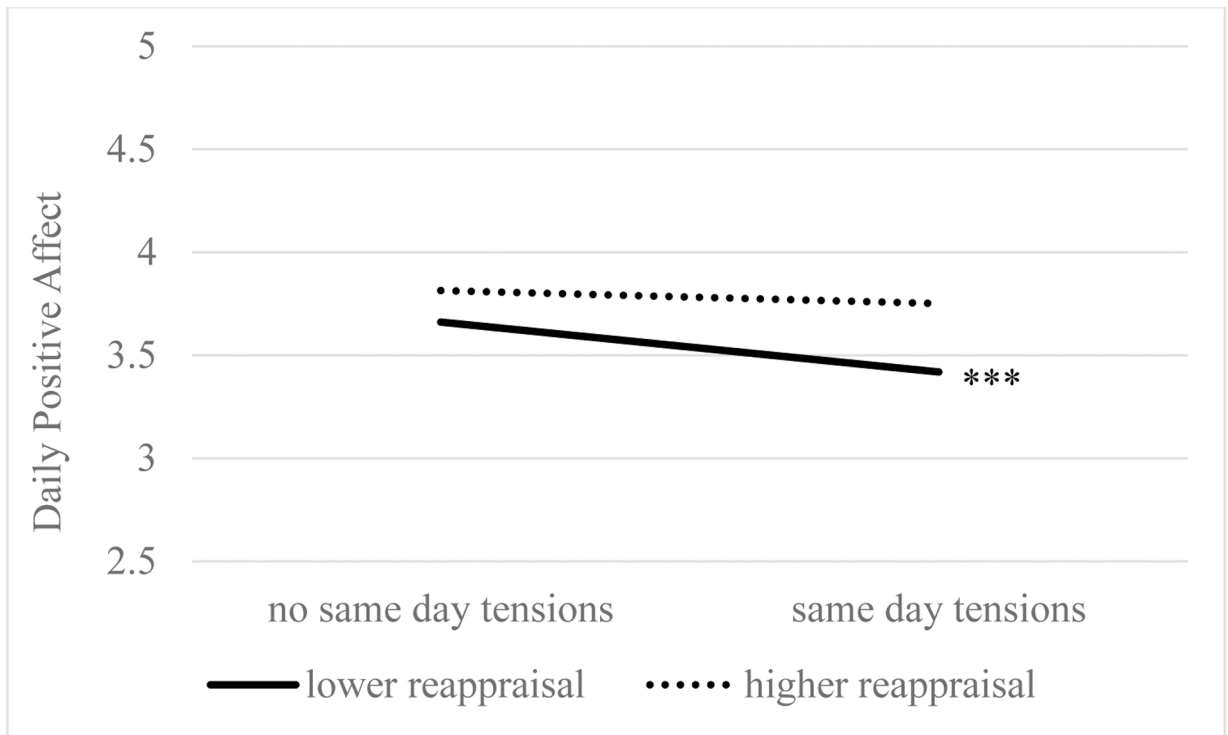


Figure 2. Associations between same day tensions and daily positive affect by **reappraisal** (1SD above and below the mean). Y axis indicates responses from 5–95% of the sample. *** $p < .001$.

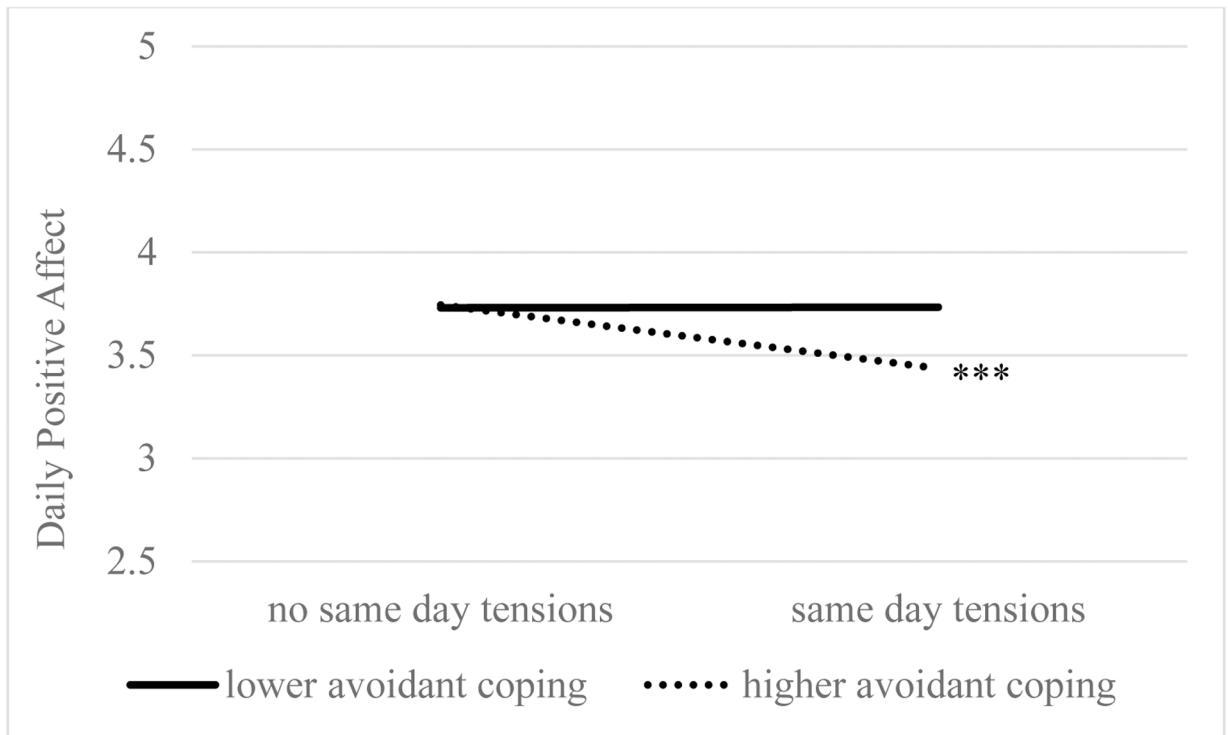


Figure 3.

Associations between same day tensions and daily positive affect by **avoidant coping** (1SD above and below the mean). Y axis indicates responses from 5–95% of the sample. *** $p < .001$.

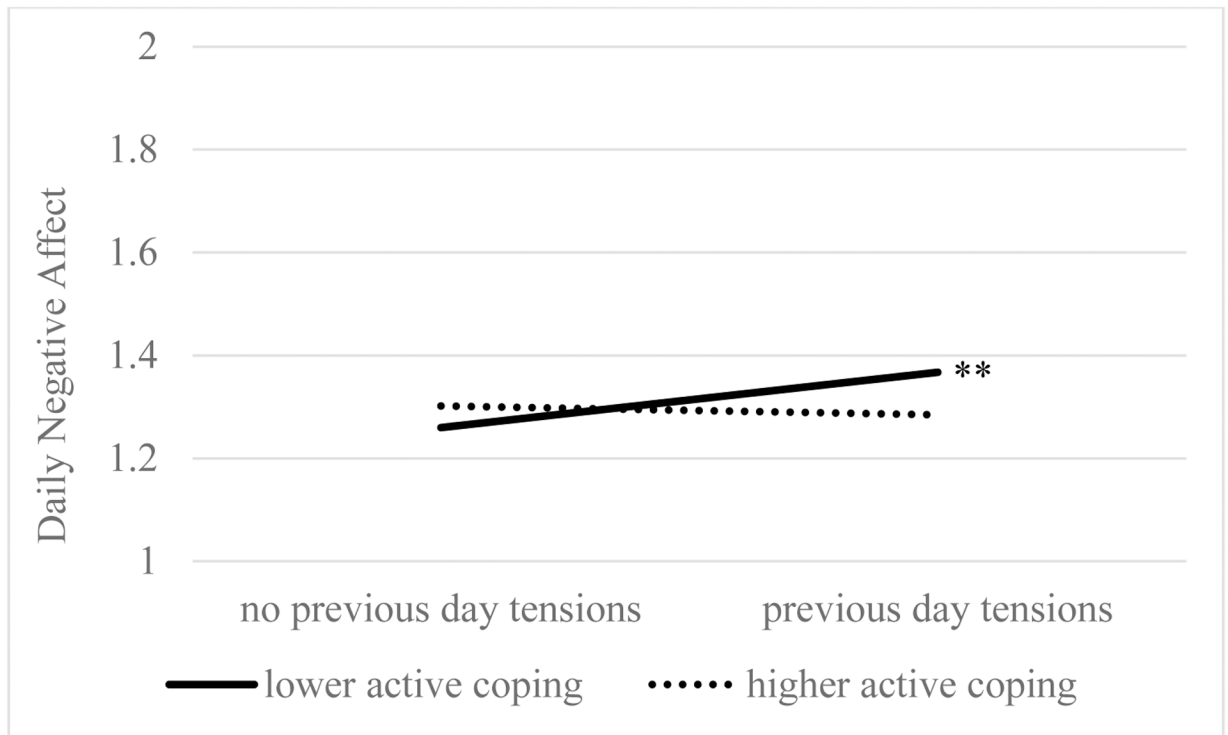


Figure 4. Associations between previous day tensions and daily negative affect by **active coping** (1SD above and below the mean). Y axis indicates responses from 5–95% of the sample. ** $p < .01$.

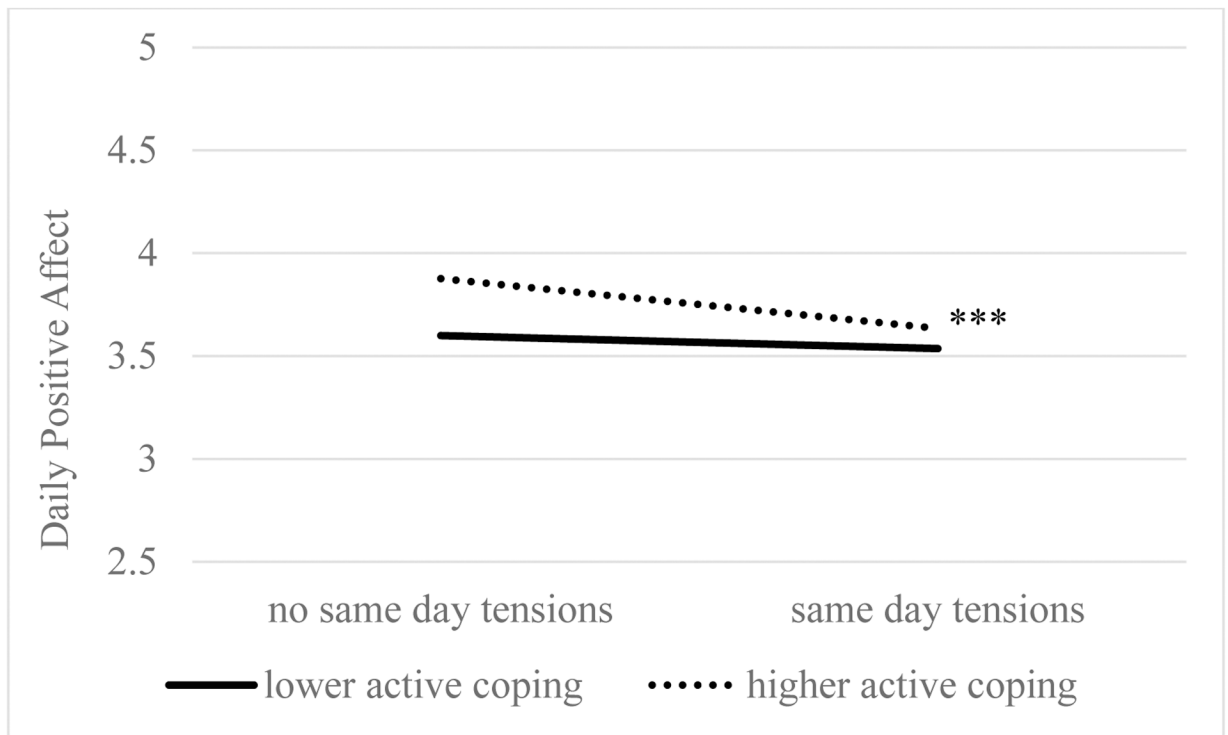


Figure 5. Associations between same day tensions and daily positive affect by **active coping** (1SD above and below the mean). Y axis indicates responses from 5–95% of the sample. *** $p < .001$.

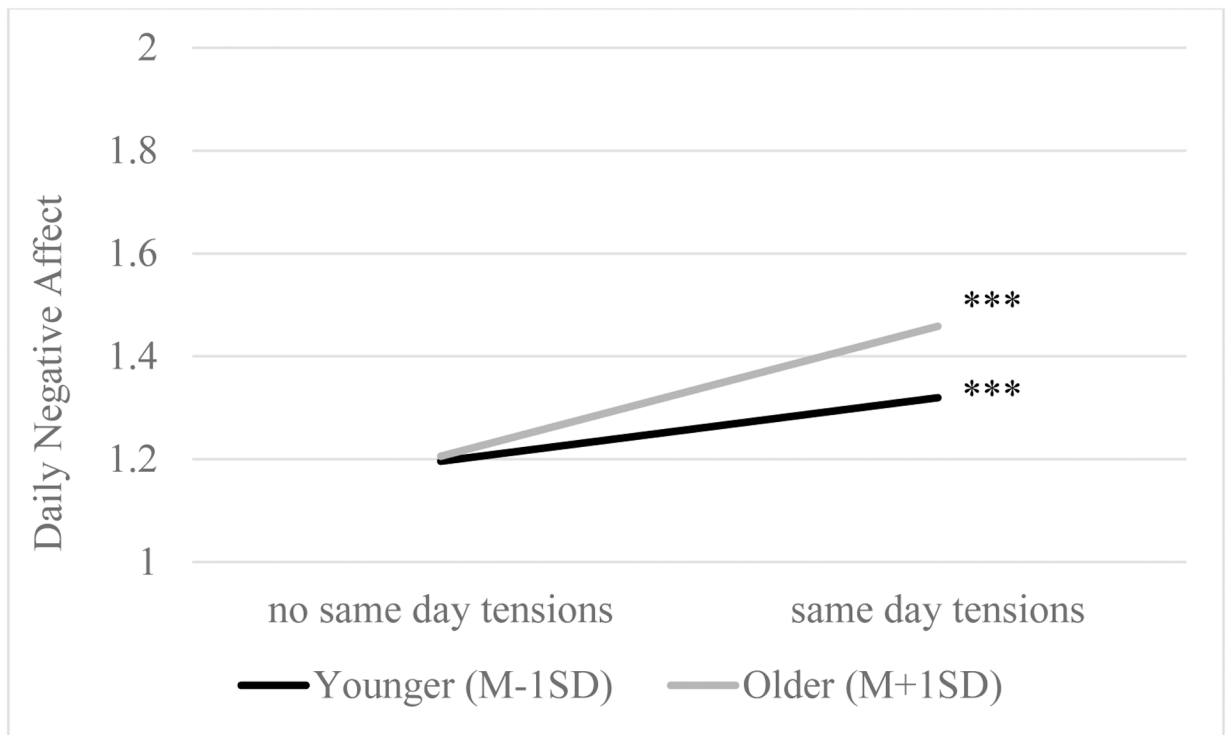


Figure 6. Associations between same day tensions and daily negative affect by **age** (1SD above and below the mean). Y axis indicates responses from 5–95% of the sample. *** $p < .001$.

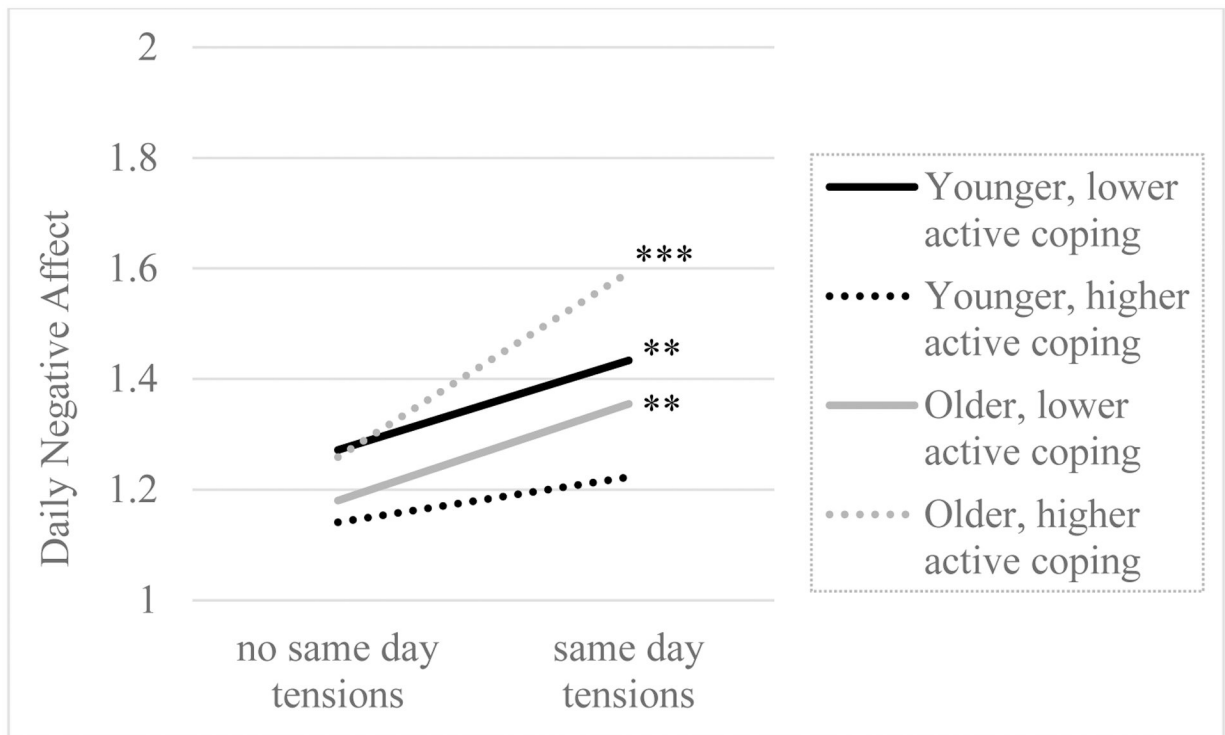


Figure 7. Associations between same day tensions and daily negative affect by **age and active coping** (1SD above and below the mean). Y axis indicates responses from 5–95% of the sample. ** $p < .01$, *** $p < .001$.

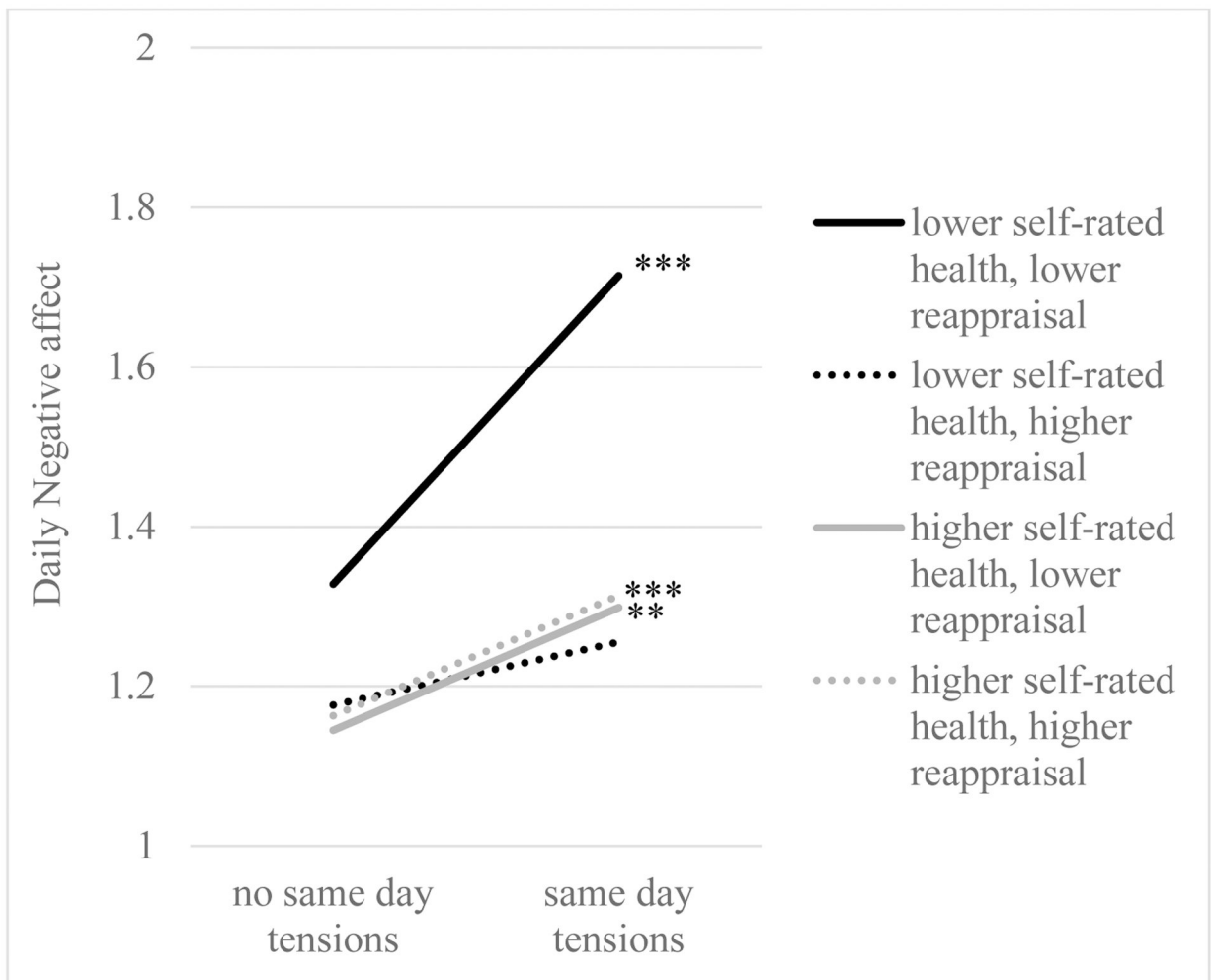


Figure 8. Associations between same day tensions and daily negative affect by **self-rated health and reappraisal** (1SD above and below the mean). Y axis indicates responses from 5–95% of the sample. *** $p < .001$, ** $p < .01$.

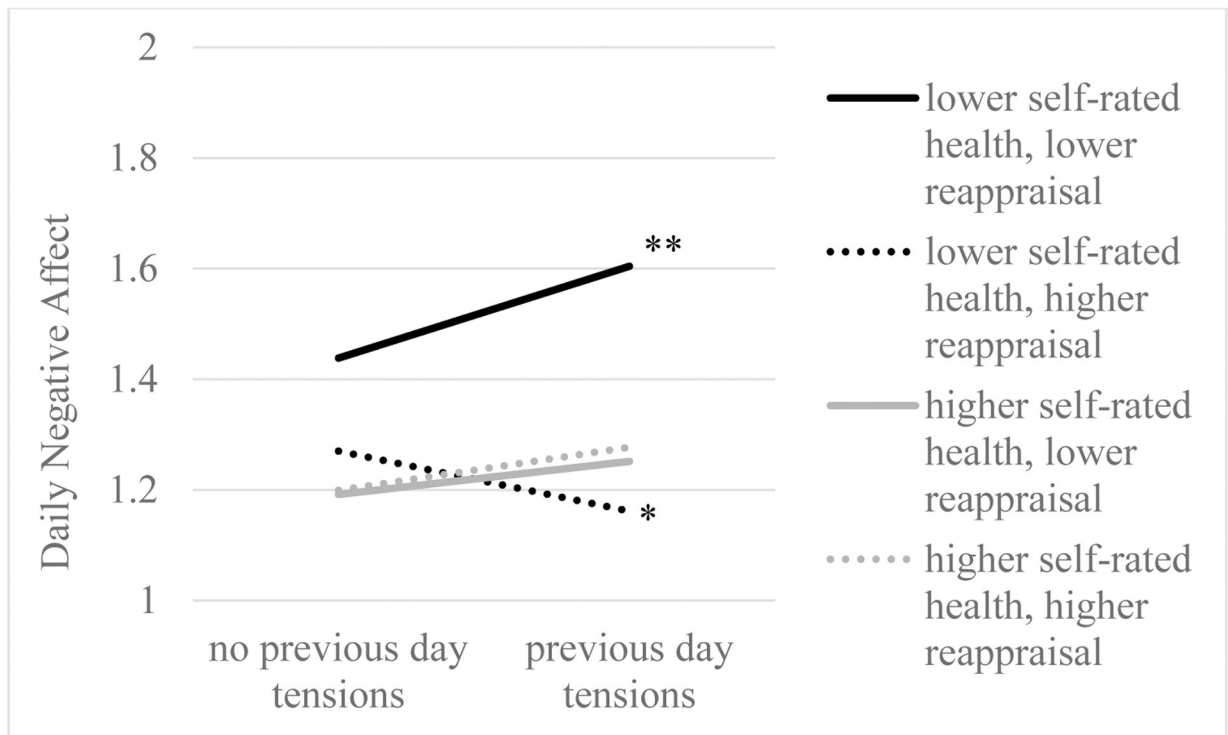


Figure 9.

Associations between previous day tensions and daily negative affect by **self-rated health and reappraisal** (1SD above and below the mean). Y axis indicates responses from 5–95% of the sample. * $p < .05$, ** $p < .01$.

Table 1

Daily Experience and Well-being Study Sample Descriptives (n = 293)

	% / M (SD)
% Female	54.9
% White	82.8
% Black	15.5
% Hispanic ethnicity	14.7
% Married/partnered	60.1
% Living alone	34.5
% Working part-time for pay	12.0
Age	73.7 (6.3)
Education ^a	5.9 (1.6)
Social network size ^b	15.4 (6.9)
Reappraisal coping	3.8 (0.7)
Avoidant coping	2.9 (0.6)
Active coping	3.9(0.7)

Note. The total N reflects the number of participants who completed at least 1 EMA survey and the emotion regulation questionnaire in the leave behind survey.

^a Education included 8 categories: 1 (*no formal education*), 2 (*1–8 elementary school*), 3 (*some high school*), 4 (*12 high school*), 5 (*13 to 15 some college/vocational or technical school*), 6 (*16 college graduate*), 7 (*17+ post college; no additional degree*), 8 (*17+ advanced degree*).

^b *Social network size* included the total number of network members reported.

Table 2

Correlations between all study variables

Measure	1	2	3	4	5	6	7	8	9	10	11	12
1. Daily Positive Affect												
2. Daily Negative Affect	-0.41**											
3. Same Day Tension	-0.12**	0.27**										
4. Reappraisal	0.18**	-0.09**	0.00									
5. Avoidance	-0.05	0.11**	0.00	0.02								
6. Active Strategies	0.22**	-0.07*	0.03	0.27**	-0.20**							
7. Gender-Female	0.05	0.03	0.05	0.15**	0.22**	-0.10**						
8. Age	-0.08**	-0.01	-0.03	-0.12**	0.13**	-0.14**	-0.03					
9. Education	0.05	-0.04	-0.01	-0.16**	-0.21**	0.09**	-0.18**	0.01				
10. Self-Related Health	0.17**	-0.21**	-0.04	-0.01	-0.18**	0.20**	-0.05	-0.04	0.27**			
11. Race- White	0.00	0.01	0.03	-0.12**	-0.04	0.02	0.06	0.11**	0.23**	0.25**		
12. Ethnicity-Hispanic	-0.08**	0.02	-0.03	0.08**	-0.04	-0.03	-0.02	-0.11**	-0.20**	-0.18**	0.10**	
13. Social Network Size	0.26**	-0.15**	-0.01	0.15**	0.01	0.07*	0.31**	-0.14**	0.16**	0.21**	0.15**	-0.01

Note:

* p<.05,

** p<.01

Table 3

Multilevel Models predicting Mean Daily Negative and Positive Affect as a Function of Previous Day and Same Day Daily Interpersonal Tensions and Trait Emotion Regulation Strategy Preferences

	Daily Negative Affect				Daily Positive Affect			
	Step 1: Main effects		Step 2: Interactions		Step 1: Main effects		Step 2: Interactions	
	<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	1.30	0.04**	1.30	0.04**	3.67	0.09**	3.66	0.09**
Female	0.01	0.02	0.01	0.02	0.00	0.05	0.00	0.05
Age	0.00	0.00	0.00	0.00	-0.01	0.01	-0.01	0.01
Education	0.01	0.01	0.01	0.01	-0.01	0.03	-0.01	0.03
Self-rated health	-0.05	0.02**	-0.05	0.02**	0.05	0.05	0.05	0.05
White	0.01	0.03	0.01	0.03	-0.01	0.06	-0.01	0.06
Hispanic	-0.01	0.03	-0.01	0.03	-0.15	0.07*	-0.14	0.07*
Social network size	0.00	0.00	0.00	0.00	0.02	0.01**	0.02	0.01**
Prop. of days with tensions	0.32	0.11**	0.26	0.11*	-0.47	0.25	-0.39	0.25
Previous day affect	-0.28	0.04**	-0.28	0.04**	-0.06	0.04	-0.06	0.04
Same day tension	0.09	0.01**	0.10	0.01**	-0.07	0.02**	-0.08	0.02**
Previous day tension	0.02	0.01	0.02	0.01	0.00	0.02	0.00	0.02
Reappraisal	-0.02	0.02	-0.07	0.03*	0.09	0.06	0.15	0.07*
Avoidance	0.04	0.03	0.05	0.04	0.00	0.07	-0.11	0.08
Active strategies	0.01	0.02	-0.01	0.03	0.17	0.06**	0.13	0.07
Same day tension × Reappraisal			-0.05	0.02**			0.06	0.03*
Previous day tension × Reappraisal			-0.02	0.02			0.03	0.03
Same day tension × Avoidance			0.02	0.02			-0.13	0.04**
Previous day tension × Avoidance			-0.01	0.02			-0.01	0.03
Same day tension × Active			0.01	0.02			-0.06	0.03*
Previous day tension × Active			-0.04	0.02*			0.00	0.03

N = 301 older adults.

* *p* < .05.

** *p* < .01.