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Empathy and Coping: Older Adults' Interpersonal Tensions and Mood throughout the Day

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Abstract

Introduction: Scholars have proposed empathy as a key feature of strong social ties, but less is known about the role empathy plays when tensions arise in these ties.

Objective: We examined whether older adults' empathy was associated with (a) coping strategies for interpersonal tensions, and (b) mood when tensions occurred throughout the day. We also explored whether coping strategies explained the potential buffering effect of empathy on older adults' momentary mood.

Methods: Older adults ($n = 302$) from the *Daily Experiences and Well-being Study* completed a baseline survey on empathy and coping strategies. They also completed ecological momentary assessments every 3 hours each day for 5 to 6 days which included questions about interpersonal tensions and mood. This study considered tensions with close partners (e.g., family, friends) and with non-close partners (e.g., acquaintances, service providers).

Results: In the face of interpersonal tensions, more empathic older adults reported using more constructive and less destructive coping strategies than less empathic older adults regardless of their closeness to social partners. Being more empathic also buffered older adults' mood when tensions occurred with close partners, but this buffering effect was not mediated by older adults' general preference for coping strategies.

Conclusion: This study advances our understanding of empathy and interpersonal tensions in later life with a focus on daily experiences.

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Keywords

Introduction

Scholars have long viewed empathy, the ability to share and understand others' emotions, as a central feature of successful social lives [1]. Research links greater empathy to more frequent support exchanges and more positive relationships [2, 3]. Yet, less is known about the role empathy plays when tensions arise. Interpersonal tensions (i.e., irritations and stressful encounters in social relationships) are common stressors and may compromise individuals' social relationships and well-being [4, 5]. The current study focused on empathy and interpersonal tensions in later life. Although older adults experience fewer tensions than younger adults [6, 7], they report poorer well-being when these tensions cannot be avoided [8, 9].

The scant literature on empathy and interpersonal tensions suggest that empathy seems to influence the consequences, but not the occurrence, of tensions [10, 11]. For example, our recent research [11] examined older adults' empathy and their encounters (including tensions) with close family and friends who have major life problems (e.g., health concerns, relationship problems, financial issues). We found that empathy was not associated with the likelihood of having tensions with these social partners throughout the day, but being more empathic buffered older adults' mood when tensions occurred. It remains unclear whether the way older adults cope with tensions may underlie this effect of empathy, and when empathy is most effective at buffering tensions (older adults may also have tensions with acquaintances they do not know well; i.e., non-close partners). These gaps in the literature limit our understanding of individual differences in social experiences and well-being in later life.

Individuals vary in the coping strategies they use in the face of interpersonal tensions, and this variation may be explained by empathy. Some individuals avoid confronting tensions (i.e., avoidant coping), some address tensions by actively discussing the problem and attempting to solve it (i.e., constructive coping) whereas others respond by fighting or arguing with social partners (i.e., destructive coping) [5]. Given the essential role empathy plays in relationship maintenance and satisfaction [12], the current study asked whether empathy was associated with using more adaptive coping strategies (e.g., constructive coping rather than destructive coping). We also drew on research that links coping strategies to daily well-being outcomes of interpersonal tensions [4, 8] and explored whether the use of more adaptive coping strategies protected more empathic older adults' mood when tensions occurred. This study made unique contributions by assessing the impact of coping strategies on immediate well-being outcomes of tensions using ecological momentary assessments [13], and examining older adults' tensions with a more diverse social network (including both close and non-close social partners).

Empathy and Coping with Interpersonal Tensions

Empathy refers to emotionally sharing and cognitively understanding others' thoughts and feelings, an ability that varies across individuals and shapes their behaviors [1, 14]. As in prior research, this study viewed empathy as a completely other-oriented construct (focused on others' emotions) [10, 15]. Thus, although personal distress (e.g., internalizing others' distress) often co-occurs with or is sometimes measured as a form of empathy [16], it is beyond the scope of this study.

Older adults' empathy may be associated with their coping strategies for interpersonal tensions. Davis [12] has recently integrated theories and research on empathy in the past decades, and proposed an organizational model to understand a series of empathy-related processes. This model links greater overall empathy to pro-relationship motivations and behaviors (e.g., cooperation, support, accommodation in response to others' misbehaviors), which in turn contribute to day-to-day relationship maintenance [18]. These pursuits for successful social lives may motivate more empathic older adults to use constructive coping strategies (e.g., discussing and addressing issues) but not avoidant or destructive coping strategies (e.g., silent treatment or withdrawal, arguing) that are often threatening to relationships [5]. To date, little research has tested the association between empathy and tension coping strategies. Yet, several studies in early life have revealed that more empathic adolescents and young adults tend to address conflicts by solving problems, forgiving misbehaviors, and engaging in fewer aggressive acts [17, 19, 20]. This study seeks to add to this growing literature with a focus on later life. Likewise, we expected more empathic older adults to report using more constructive coping strategies and less avoidant or destructive coping strategies.

Empathy, Coping Strategies, Interpersonal Tensions and Mood

Depending on the differential ways more empathic vs. less empathic older adults cope with interpersonal tensions, empathy may also play a role when these tensions arise. Theories and research on empathy (including the new organizational model above) primarily discuss relationship (e.g., relationship maintenance, satisfaction) but not well-being outcomes. Yet, those empathy-related prosocial behaviors proposed in the model may have implications for well-being. Our own research provided preliminary evidence that empathy buffers the effects of tensions with certain close social partners on mood (i.e., emotional reactivity to tensions) [11]. The current study built on this work and examined the role that older adults' tension coping strategies play in the documented buffering effect of empathy.

Indeed, although interpersonal tensions are associated with poorer daily well-being [21], this link varies depending on how individuals respond to these tensions [4, 8]. For example, Birditt and colleagues [4] found that a general preference for using constructive strategies (such as reappraisal – reframing the problem) attenuated the link between daily interpersonal tensions and negative mood. By contrast, destructive strategies are often harmful for relationships [5] and likely worsen the well-being consequences of interpersonal tensions. The effects of avoidance are less clear. Some earlier studies have viewed avoidance of conflict as a beneficial coping strategy in late life [6, 7], but more recent daily studies link avoidant coping strategies to reduced well-being. The link between daily interpersonal

tensions and mood seemed to be exacerbated in older adults who tended to use avoidance to regulate emotions [4]. Moreover, avoidance seems to have a lingering effect, such that participants who avoided interpersonal tensions the prior day reported poorer emotional and physical well-being the next day [21].

The Current Study

In this study, we examined older adults' empathy and interpersonal tensions with a focus on the way older adults choose to cope with these tensions. This study uniquely asked how older adults' coping strategies are associated with immediate well-being consequences of interpersonal tensions by tracking these tensions and mood throughout the day, rather than relying on reports of tensions collected at the end of each day as in prior research (including our own work; [4]). Moreover, this study looked at the role of a key facet of connections to other people, empathy, in these associations. We tested whether older adults' empathy and general preference for coping strategies moderated the association between interpersonal tensions and momentary mood in the immediate period after those tensions. We then examined whether coping strategies served as a mediator for the moderating effect of empathy.

Although interpersonal tensions often occur in close ties (e.g., romantic ties, parent-child ties, friendships), older adults also may have stressful encounters with people they do not know well, which were rarely tested. Here, we assessed tensions with close partners and with non-close partners when testing the following hypotheses (see Fig. 1 for the conceptual model):

> Ho1: We expected more empathic older adults to use constructive coping strategies more often and avoidant or destructive coping strategies less often than less empathic older adults.

> Ho2a: We expected older adults' interpersonal tensions to be associated with worse mood throughout the day, and this association to be moderated by their empathy and coping strategies. High levels of empathy and more adaptive coping strategies may buffer older adults' mood.

> Ho2b: We explored whether the moderating effect of empathy would be explained (i.e., mediated) by older adults' coping strategies for tensions. That is, more empathic older adults might be able to maintain their mood because they were more likely to use constructive coping strategies and less likely to use avoidant or destructive coping strategies.

We adjusted for other factors that might be associated with older adults' empathy, coping strategies, interpersonal tensions and mood, including participants': age, gender, education, health, marital status, minority status, agreeableness, and neuroticism. As people age, they are more likely to use avoidant coping, have fewer interpersonal tensions and report better emotional well-being [6, 7, 22]. Women and better-educated adults are often more empathic [10, 15]. Healthier adults are better at regulating emotions in interpersonal tensions and report better emotional well-being [9]. Married individuals tend to have more tensions with their close partners, especially spouses [21]. Racial or ethnic minorities are often exposed to

more interpersonal tensions and show greater reactivity to these tensions [23]. We also considered agreeableness and neuroticism, both of which are associated with empathy and emotional well-being [24].

Materials and Methods

Sample and Procedures

Participants were from the *Daily Experiences and Well-being Study* (DEWS) conducted in 2016–2017. DEWS recruited 333 participants aged 65 and older in Austin, Texas via random digital dialing using city area codes [4]. Participants were community-dwelling and not employed for pay more than 20 hours per week. The sample was diverse in that 33% of participants identified as racial or ethnic minorities (e.g., African American, Hispanic). Participants were better educated (55% had a college degree or higher) than the older population in Austin (45%) [25].

Of the 333 participants who completed an initial face-to-face interview, 313 (94%) took part in a 5- to 6-day intensive daily data collection (2 weekend days and 3 or 4 weekdays) and 324 filled out a paper and pencil survey (i.e., self-administered questionnaire). During the initial interview, participants reported their demographic characteristics and rated their empathy. Participants also named their social partners by closeness using the convoy model – a hierarchical mapping technique commonly used to assess social networks [26]. Names (full first name and last name initial) of participants' 10 closest partners were then transferred to customized ecological momentary assessments [27] as part of the intensive daily data collection. Participants were prompted to complete these assessments programmed on Android devices provided by the study every 3 hours throughout each day from waking to bedtime. They indicated tensions with close partners and non-close partners (i.e., people not listed as the top 10 closest social partners) and rated their mood for each 3-hour interval. Participants self-completed a questionnaire which were collected at the end of the study. This questionnaire measured participants' strategies for coping with interpersonal tensions.

The final analytic sample included 302 participants who completed the initial interview, at least one ecological momentary assessment ($M = 20.01$ assessments, $SD = 6.03$, $range = [1, 32]$ across the study week) and the self-completed questionnaire. These participants were younger, healthier, and less likely to be racial/ethnic minority than the 31 participants who did not complete all aspects of the study; they did not differ in any other variables such as empathy or coping strategies. Participants received $50 for the interview, another $100 for the daily data collection and another $50 for the self-completed questionnaire ($200 in total). Table 1 presents sample descriptive characteristics.

Initial Interview and Self-Completed Questionnaire Measures

Empathy—In the initial interview, participants rated their empathy using five items modified from two subscales of the Interpersonal Reactivity Index (empathic concern and perspective taking) [28]. This index is a widely used measure of individual differences in empathy. Participants rated how much each of the five statements described them from 1

(*not at all*) to 5 (*a great deal*). Example items included: "I often have tender, concerned feelings for people less fortunate than me" and "I sometimes try to understand other people better by imagining how things look from their perspectives". We averaged participants' ratings across the five items ($a = .73$) [2, 11].

Close partners—Participants listed their social partners using the convoy measure [26]. The convoy measure includes three concentric circles capturing individuals' social networks by the level of importance and closeness. Social partners are (a) people participants feel so close to that it is hard to imagine life without them, (b) people to whom participants may not feel quite that close to, but who are still very important to them, and (c) people participants have not already mentioned but who are close enough and important enough in their lives that these people should also be included in the diagram. Participants predominantly named family (69%) and friends (23%) as their social partners. On average, each participant reported 15 social partners ($M = 15.02$, range 0–30) and we treated the top 10 (counted from the innermost circle outwards) as close partners in this study. Participants indicated their tensions with these close partners throughout the day using ecological momentary assessments. Participants also reported on tensions with people not listed as the 10 closest social partners (i.e., non-close partners in this study). Please see details in the Ecological Momentary Assessments Measures below.

Background covariates—Participants also provided demographic information during the initial interview, including their age in years, gender as 1 (*male*) or 0 (*female*), physical health as 1 (*poor*), 2 (*fair*), 3 (*good*), 4 (*very good*) and 5 (*excellent*; [1]), education as 1 (*no formal education*), 2 (*elementary school*), 3 (*some high school*), 4 (*high school*), 5 (*some college/vocation or trade school*), 6 (*college graduate*), 7 (*post college but no additional degree*) and 8 (*advanced degree*), and marital status dichotomized as 1 (*married/ cohabitating*) and 0 (*not married or cohabitating*). Participants self-identified their ethnic and racial groups and we recoded minority status as 1 (*ethnic/racial minorities*) and 0 (*non-Hispanic Whites*). Minority participants in this sample were predominantly African American (49%) and Hispanic (51%).

We measured the personality trait agreeableness in the self-completed questionnaire and neuroticism in the initial interview, using the validated personality measures from the Midlife in the United States (MIDUS). Participants rated how well each of the five agreeableness items (helpful, warm, softhearted, sympathetic, caring) [29] described them from 1 (*not at all*) to 4 (*a lot*). They also rated the four neuroticism items (moody, a person who worries, nervous, calm) [30] from 1 (*not at all*) to 5 (*a great deal*). We calculated two mean scores to measure agreeableness ($a = .77$) and neuroticism ($a = .70$).

Coping Strategies—In the self-completed questionnaire, participants indicated their behavioral reactions when encountering interpersonal tensions. Participants rated how often they used each of the six strategies when they felt irritated, hurt, or annoyed with people they felt close to and cared about (i.e., close partners), on a scale from 1 (*never*), 2 (*rarely*), 3 (*sometimes*), 4 (*often*), to 5 (*almost always*). The six strategies measured 3 categories: avoidant, constructive, and destructive [5]. Avoidant strategies included: "I accept that there is nothing I can do" and "I avoid talking about it with them." Constructive strategies

included "I calmly discuss it with them" and "I try to find a solution." Destructive strategies included "I argue or fight with them" and "I yell or raise my voice at them." Participants rated the same tension coping questions for situations when they felt irritated, hurt, or annoyed with non-close partners (i.e., people they do not feel close to or do not know well). We present the Spearman-Brown coefficient because it is the recommended reliability indicator for two-item scales [16]: close partners: $\rho_{avoidant} = .50$, $\rho_{constructive} = .70$, $\rho_{destructive} = .81$; non-close partners: $\rho_{avoidant} = .59$, $\rho_{constructive} = .75$, $\rho_{destructive} = .76$.

Ecological Momentary Assessments Measures

Interpersonal Tensions—Every 3 hours, participants indicated whether they had any encounter with any close partner and with any non-close partner (i.e., people not listed as the 10 closest social partners), as 1 (*yes*) or 0 (*no*). Non-close partners are primarily family members, friends, acquaintance and service providers, with the other approximately 15% being strangers or others. These encounters could occur in person, via phone or text. If an encounter occurred, participants then reported: (a) whether they discussed anything stressful with 1 (*yes*) or 0 (*no*), and (b) how pleasant this encounter was with 1 (*unpleasant*), 2 (*a little unpleasant*), 3 (*neutral*), 4 (*a little pleasant*) and 5 (*pleasant*). We created a variable to indicate the occurrence of interpersonal tensions based on these variables. We coded the variable as 1 if participants had an encounter that involved discussing anything stressful and/or that was considered at least a little unpleasant. The variable was coded as 0 if participants had an encounter that was not unpleasant (i.e., neutral or at least a little pleasant) or if they did not have any encounters at all. Among the encounters where participants discussed something stressful, only 2% were viewed as neutral or pleasant (i.e., not unpleasant). We measured whether participants had any interpersonal tension (a) with any close partner and (b) with any non-close partner in the past 3 hours, both coded as 1 (*yes*) or 0 (*no*).

Mood—We measured positive and negative mood every 3 hours. Participants rated the extent to which they experienced three positive emotions (content, loved, calm) and five negative emotions (nervous/worried, irritated, bored, lonely, sad) [31], from 1 (*not at all*) to 5 (*a great deal*). We calculated mean scores for positive and negative mood for each 3-hour assessment. Given that mood was measured multiple times per day across multiple days, we calculated three-level alpha coefficients for positive mood (assessment level: $\alpha = .44$; day level: $\alpha = .77$; participant level: $\alpha = .83$) and negative mood (assessment level: $\alpha = .50$; day level: $\alpha = .74$; participant level: $\alpha = .88$). These alpha coefficients indicate that the mood measures exhibit some variability at a given momentary assessment, but they are largely reliable within a given day of a given participant.

Analytic Strategy

We estimated bivariate correlations between empathy, coping strategies, interpersonal tensions, mood, and covariates, including participant age, gender, education, health, marital status, minority status, agreeableness, and neuroticism. See Supplementary Table 1. We also compared participants' preferences for avoidant, constructive, and destructive coping strategies using repeated measures ANOVA. Supplementary Table 2 presents results from

the Bonferroni post-hoc pairwise comparisons (briefly summarized below in the Results section).

We first tested our hypothesis that more empathic older adults would use more constructive coping strategies and less avoidant or destructive coping strategies compared to less empathic older adults (marked as Ho1 in Fig. 1). Each participant reported their coping strategies for close partners and non-close partners separately. Thus, we used SAS PROC MIXED to estimate two-level models where the type of social partner (*level 1*) was nested within the participant (*level 2*). The predictor was empathy, and the outcomes were avoidant, constructive, and destructive coping strategies (three continuous outcomes in separate models). We also explored interaction effects by treating the type of social partner 1 (*close partners*) and 0 (*non-close partners*) as the moderator. We entered a cross-level interaction term empathy (centered on the sample mean) × type of social partner into the models. We estimated simple slopes analyses for significant interaction effects.

We then tested our hypothesis that empathy and coping strategies moderated the link between interpersonal tensions and mood every 3 hours throughout the day (marked as Ho2a in Fig. 1). We estimated three-level models using SAS PROC MIXED to account for the nested structure of data. The 3-hour assessment (*level 1*) was nested within the day (*level 2*), nested within the participant (*level 3*). Predictors were whether participants had any interpersonal tension with (a) any close partner, and (b) any non-close partner, coded as 1 (*yes*) or 0 (*no*). Outcomes were 3-hour positive and negative mood examined in separate models. The moderators were empathy and coping strategies (both centered on the sample mean).

Specifically, we first entered interaction terms involving empathy into the models: empathy × interpersonal tensions with close partner, and empathy × interpersonal tensions with non-close partner. We then added interaction terms involving coping strategies: coping strategies for close partners × interpersonal tensions with close partner, and coping strategies for non-close partners × interpersonal tensions with non-close partner. Three categories of coping strategies were examined in separate models. We explored significant interactions with simple slopes analysis.

Lastly, we explicitly tested whether the moderating effect of empathy on the association between tensions and momentary mood was mediated by coping strategies (marked in a dash line as Ho2b in Fig. 1). Given our nested data, it is not appropriate to follow the classic procedure of a single-level mediated moderation test [32]. Instead, we calculated a slope for each participant to reflect associations between tensions and mood across assessments (i.e., this participant's emotional reactivity to tensions). We then estimated mediation tests using the bootstrapping technique in the PROCESS Macro (bootstrapped sample $n = 2000$) [33]. We treated empathy as the predictor, coping strategies as the mediators and reactivity slope as the outcome.

Results

Supplementary Table 2 shows older adults' coping strategies for tensions with close and non-close partners. For tensions with close partners, older adults were most likely to report using constructive coping ($M = 3.55$), followed by avoidant coping ($M = 2.73$), and then by destructive coping ($M = 2.01$). For tensions with non-close partners, older adults were most likely to report using avoidant ($M = 3.33$) and constructive coping strategies ($M = 2.90$), followed by destructive coping ($M = 1.59$).

Older adults had at least one interpersonal tension with anyone in 20% of the 3-hour assessments ($n = 1,226$). They had a tension with any close partner in 14% of the assessments ($n = 879$) and a tension with any non-close partner in 9% of the assessments ($n = 545$). On average, older adults had almost four tensions with close partners ($M = 3.75$) and three tensions with non-close partners ($M = 2.76$) during the study week. Empathy was not associated with the number of tensions (with close partners, $r = .04$, $p = .49$; with non-close partners, $r = -.01$, $p = 93$).

Empathy and Coping with Interpersonal Tensions

We expected more empathic older adults to report using constructive coping strategies more often and using avoidant or destructive coping strategies less often. To garner a sense of the effect size, we estimated both a Pseudo R^2 and a Cohen's f^2. A Pseudo R^2 reflects the effect size of a set of variables (considering the whole model), whereas a Cohen's f^2 indicates the local effect size specific to the predictor of interest. Partially as expected, empathy was positively linked to constructive coping ($B = 0.27$, $p < .001$, Pseudo $R^2 = 0.06$, Cohen's $f^2 = 0.03$) and negatively linked to destructive coping strategies ($B = -0.18$, $p = .002$, Pseudo $R^2 = 0.11$, Cohen's $f^2 = 0.01$). The link between empathy and avoidant coping strategies was not significant ($B = -0.06$, $p = .34$). See Table 2.

We also compared coping strategies for tensions with a close partner versus tensions with a non-close partner. Yet, we did not find significant interaction effects. Also see Table 2.

Empathy, Interpersonal Tensions and Mood throughout the Day

We first tested whether older adults' empathy moderated the link between their interpersonal tensions and mood throughout the day, using three-level models. We observed one significant interaction effect of empathy and interpersonal tensions with close partners on older adults' positive mood ($B = 0.07$, $p = .008$, Pseudo $R^2 = 0.12$, Cohen's $f^2 = 0.001$; see Table 3). Simple slopes analysis revealed that these tensions predicted reduced positive mood but the link was weaker among more empathic older adults ($B = -0.06$, $p = .007$) than in less empathic older adults ($B = -0.15$, $p < .001$, shown in Fig. 2). Interestingly, the interaction of empathy and interpersonal tensions with non-close partners was not significant ($B = 0.03$, $p = .37$). Interpersonal tensions were associated with increased negative mood regardless of participants' empathy or whether tensions occurred with close partners or non-close partners.

We also examined whether older adults' general preference for coping strategies moderated the link between interpersonal tensions and mood throughout the day. We found no

interacting effect of coping strategies, and that adding these interactions did not influence the significant buffering effect of empathy.

Lastly, we explicitly explored whether older adults' tension coping strategies mediated the moderating effect of empathy on associations between interpersonal tensions and momentary mood. We did not observe significant indirect effects.

Given the low reliabilty score of the two-item avoidant coping measure (close partners: $\rho_{avoidant} = .50$; non-close partners: $\rho_{avoidant} = .59$), we re-estimated models for each item. Findings remained the same, such that empathy was not associated with avoidant coping items and neither item moderated the link between tensions and mood.

Non-significant findings are not shown here but available upon request.

Discussion/Conclusion

Findings add to the burgeoning literature linking older adults' empathy to strong social ties, which has primarily assessed how empathy improves positive aspects of social ties [2, 3, 10]. The present study extends that work with a focus on the occurrence of interpersonal tensions in close and non-close social ties. Overall, we found that in face of tensions with social partners, more empathic older adults preferred using constructive coping strategies and did not rely on destructive coping strategies compared to less empathic older adults regardless of closeness to social partners. Being more empathic also seems to protect older adults' positive mood during interpersonal tensions throughout the day, which is especially true when tensions occurred with close partners.

Empathy and Coping with Interpersonal Tensions

As hypothesized, we found that more empathic older adults reported using constructive coping strategies more often and destructive coping strategies less often. We also expected to observe differences in coping with tensions across partners especially among less empathic older adults. Interestingly, however, less empathic older adults did not appear to differentiate strategies when they were coping with tensions with close partners compared to tensions with non-close partners. Despite older adults' general preference to maintain close ties, less empathic older adults may be less able to focus on problem solving without behaving aggressively.

Findings are in line with prior research suggesting that more empathic individuals tend to focus on problem solving in the face of conflict or stress [18, 9, 20]. Additionally, theories of empathy posit that more empathic individuals often behave more appropriately than their less empathic counterparts in social contexts [1]. This may hold true even when interpersonal tensions arise. Further, more empathic individuals are more motivated to contribute to other people's welfare [12]. This motivation may prevent more empathic individuals from yelling at or fighting with other people, which presumably hurts not only social relationships but also these people's well-being [5]. Future studies could use qualitative reports to further understand older adults' preference of coping strategies.

Empathy was not associated with the use of avoidant coping strategies. Rusbult and colleagues [34] argued that avoidance can be constructive (e.g., accepting blames or tensions) or destructive (e.g., avoiding discussing problems). However, the two ways of avoiding tensions are grouped together in this study, which may explain the low reliability score of our avoidant coping measure. It is possible that more empathic older adults use constructive avoidance, whereas less empathic older adults rely on destructive avoidance. The post hoc test did not find support for this possibility using our single avoidant coping items, but future research may further examine the difference between constructive avoidance and destructive avoidance. It may be the case that whether more empathic older adults choose to avoid interpersonal tensions depends on the nature of these tensions. For example, more empathic older adults are less likely to avoid interpersonal tensions when avoidance might place a threat on social relationships [5]. Yet, if tensions are not threatening to social relationships, more empathic older adults may just let it go to satisfy their social partners and retain the relationships. Indeed, older adults may be discussing with their social partners something stressful but external to their relationships, such as a work problem that is upsetting or a healthcare issue. Future studies may examine older adults' interpersonal tensions, such as by recording and coding the content of these tensions objectively or asking participants to report on details of their tensions.

Empathy, Interpersonal Tensions and Mood Throughout the day

We expected older adults' empathy to moderate the link between interpersonal tensions and momentary mood via an impact on their general preference for coping strategies. The hypothesis was partially confirmed for positive mood, such that older adults reported less positive mood when they had tensions with close partners but the link was weaker in more empathic older adults. Findings suggest that empathy is especially crucial in maintaining positive mood rather than attenuating negative mood. More empathic older adults may inevitably feel negative emotions during interpersonal tensions, but they may be able to maintan their general positive outlook.

Yet, the buffering effect of empathy does not seem to occur via older adults' general preference for coping strategies. Also, we failed to observe the link between tensions and mood throughout the day to vary by these coping strategies. This finding is interesting because our recent research from the same project found that coping strategies moderated the link between tensions measured at the end of the day and mood averaged over the day [4]. It is possible that the benefits of coping strategies may not take effect immediately following exposure to a stressor, but rather be more salient in longer-interval recalls (e.g., daily, monthly, or even yearly reports)[35]. It is also important to consider that individual tensions can be less salient than clusters or groups of tensions. For example, one stressful encounter may not change a person's mood, but multiple stressful encounters across the day may have a cumulative impact when measured at the end of the day. Moreover, older adults' general reports of coping strategy use do not necessarily reflect their choice of coping strategies at the moment, which may also depend on the specific situation or the other partner involved. Indeed, a small but growing body of research has examined coping flexibility – individuals' ability to switch coping strategies as they see fit with the situation – and linked this ability to effective coping [36]. This information is lacking in the data we

drew on but future research may capture the way older adults cope with tensions as they occur in situ.

Thus, the question remains why being more empathic appears to protect older adults' positive mood during interpersonal tensions. It may still depend on the specific way, rather than how likely (which was measured in this study), more empathic older adults offer help or engage in better communication to resolve the tensions [2, 13]. They may also appraise interpersonal tensions differentially. Indeed, more empathic individuals tend to forgive others' inappropriate behaviors in social encounters and are more sensitive to others' kindness [17].

Interestingly, the buffering effect of empathy only applied to older adults' tensions with close partners, which may reflect older adults' priority over close ties regardless of empathy [22]. More empathic older adults may have tried as hard to deal with tensions with non-close partners as during tensions with close partners. Yet, being able to address the latter and retain close ties may benefit them to a greater extent.

Limitations and Implications

Several limitations to this study warrant consideration. Interpersonal tensions involve at least two members of a relationship but here we only relied on participants' self-reports of their own coping strategies and behaviors. Self-reports could be biased due to a pursuit of social desirability. More empathic individuals also tend to view their social experiences in a more positive manner than less empathic individuals [10]. Additionally, participants could have reported on their coping strategies any time they wanted during the study when they were indicating occurrence/non-occurrence of interpersonal tensions multiple times per day for almost a week. The intensive daily reports may increase participants' self-reflections on their coping strategies. Yet, it is unclear how such potential reflections influence participants' actual coping behaviors. Moreover, the way older adults cope with interpersonal tensions and the well-being consequences may depend on how the other person/people behave in these tensions. Given the homophily principle (people are attracted by similar others) [37], more empathic older adults may suffer less from interpersonal tensions also because they have social partners who are less likely to argue or fight with them [38]. Future studies may utilize a dyadic approach to consider these possibilities. Lastly, although this study drew on one of the most diverse older adult samples who have provided intensive ambulatory assessments, we acknowledge our participant recruitment in one city (especially one that has well-educated older adults) may limit the generalizability of our findings.

The current study is important both theoretically and practically. This study adds to the literature regarding the role of empathy in successful social lives. Although our analyses exhibit small effect sizes, findings still suggest that empathy has the potential to protect older adults' well-being during negative social experiences. This study also carries practical implications for interventions and relationship therapies. Scholars have predominantly incorporated empathy training to interventions with health professionals who work with clinical patients [39]. To date, however, little attention has been paid to empathy training that may benefit older adults' social experiences with people they encounter in their everyday

lives. Further, social relationships involve both positive and negative times. Prior research has focused on facilitating the positive aspects of social experiences to strengthen social ties. Yet, we emphasize the importance of also considering negative experiences, which often have a more salient effect on well-being than positive experiences [40].

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Funding Sources

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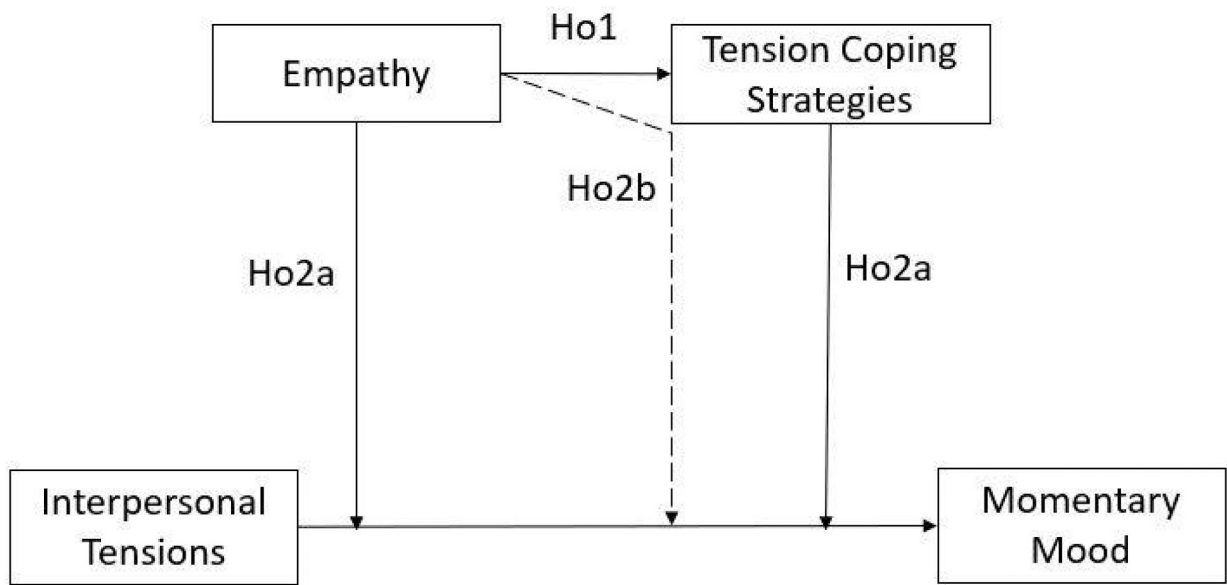
Fig. 1.
Conceptual Model. Hypothesis 1 examined the association between older adults' empathy and tension coping strategies. Hypothesis 2a examined the moderating role of empathy and tension coping strategies on the association between interpersonal tensions and momentary mood throughout the day. Interpersonal tensions include tensions with close partners and tensions with non-close partners. Momentary mood included positive mood and negative mood. Hypothesis 2b tested a possible mediated moderation effect, where empathy was the moderator and tension coping strategies served as the mediator.
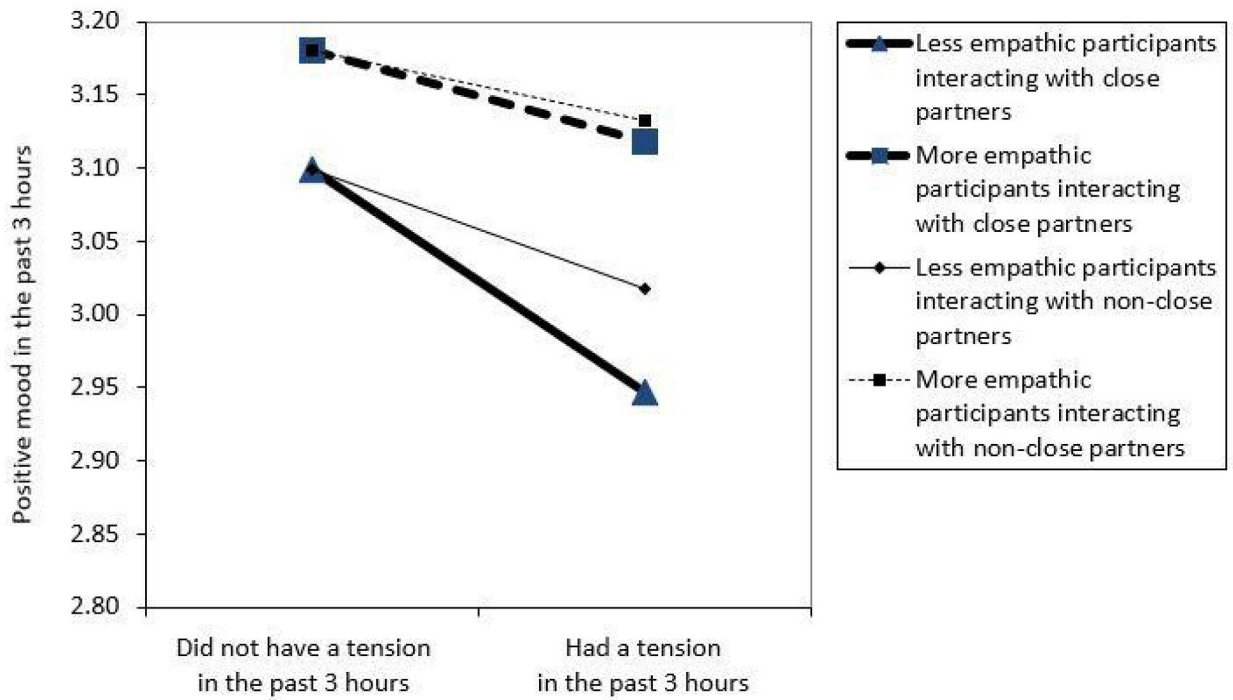
Fig. 2.
Interaction effects of empathy × interpersonal tensions with close partners and with non-close partners on older adults' positive mood throughout the day

Table 1.

Descriptive information of participants

	Participants (*n* = 302)		
	M	*SD*	Range
Age	73.82	6.32	65–89
Education	5.92	1.57	1–8
Self-rated health	3.59	1.00	1–5
Empathy	3.77	0.66	1–5
Agreeableness	3.45	0.48	1–4
Neuroticism	2.41	0.67	1–5
Tension coping strategies			
With close partners			
Avoidant	2.73	0.76	1–5
Constructive	3.55	0.73	1–5
Destructive	2.01	0.85	1–5
With non-close partners			
Avoidant	3.33	0.87	1–5
Constructive	2.90	0.87	1–5
Destructive	1.59	0.68	1–5
Interpersonal tensions throughout the day[a]			
With anyone	0.20	0.19	0–1
With close partners	0.14	0.16	0–1
With non-close partners	0.09	0.11	0–1
Negative mood	1.23	0.29	1–5
Positive mood	3.45	0.71	1–5
		Proportion	
Female		.55	
Married		.59	
Ethnic or racial minority		.30	
Non-Hispanic African American		.14	
Hispanic/Latinx		.15	
Other minority[b]		.01	

[a]Proportion of encounters viewed as negative or unpleasant.

[b]Other minority includes American Indian or Alaska Native, and Asian.

Table 2.

Multilevel models predicting coping strategies from participants' empathy: Type of social partners as a moderator

Parameter	Avoidant Coping				Constructive Coping				Destructive Coping			
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Fixed effects												
Intercept	2.44***	0.66	2.74***	0.66	4.27***	0.68	3.95***	0.68	2.17***	0.61	1.96**	0.61
Empathy	−0.06	0.06	0.00	0.07	0.27***	0.06	0.23**	0.07	−0.18**	0.06	−0.16*	0.07
Type of social partners[a]	—	—	−0.61***	0.05	—	—	0.65***	0.05	—	—	0.42***	0.05
Empathy[a] × Type of social partners[a]	—	—	−0.11	0.08	—	—	0.08	0.07	—	—	−0.02	0.07
Covariates												
Gender			−0.29***	0.09			0.09	0.09			0.03	0.08
Age			0.01*	0.01			−0.01	0.01			−0.01*	0.01
Education			0.01	0.03			0.00	0.03			0.02	0.02
Health			0.02	0.04			0.03	0.04			−0.09*	0.04
Marital status			−0.06	0.09			0.16	0.09			0.25**	0.08
Minority status			−0.30**	0.09			0.14	0.09			−0.10	0.09
Agreeableness			−0.16	0.08			−0.04	0.09			0.01	0.08
Neuroticism			0.09	0.06			−0.11	0.06			0.22***	0.05
Random effects												
Intercept VAR (Level 2: Participant)			0.12***	0.04			0.17***	0.04			0.14***	0.03
Residual VAR			0.59***	0.05			0.54***	0.04			0.42***	0.03
−2 log likelihood	1528.3		1420.9		1511.2		1368.0		1377.3		1313.5	

Note. Participant $n = 302$. VAR = Variance.

[a] The type of social partner was coded as 1 (*close partners*) and 0 (*non-close partners*).

*
  $p < .05$.

**
  $p < .01$.

***
  $p < .001$.

Table 3.

Multilevel linear models predicting positive mood throughout the day from interpersonal tension: Empathy as a moderator

Variable	B	SE
Fixed effects		
Intercept	3.14***	0.64
Empathy	0.06	0.06
Tension with close partners	−0.11***	0.02
Empthy ×Tension with close partners	0.07**	0.03
Tension with non-close partners	−0.06***	0.02
Empthy ×Tension with non-close partners	0.03	0.64
Covariates		
Gender	−0.01	0.09
Age	−0.01	0.01
Education	−0.01	0.03
Health	0.09***	0.01
Marital status	0.25	0.09
Minority status	0.05	0.09
Agreeableness	0.39***	0.09
Neuroticism	−0.17	0.06
Random effects		
Intercept VAR (Level 2: Day)	0.04***	0.00
Intercept VAR (Level 3: Participant)	0.41***	0.04
Residual VAR	0.13***	0.00
−2 log likelihood	6925.7	

Note. Participant n = 302. VAR = Variance.

**
$p < .01$.

***
$p < .001$