

**A Domain-Differentiated Approach to Everyday Emotion Regulation
from Adolescence to Older Age**

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The data, analytic code, and materials associated with this study are available here: https://osf.io/z36xs/?view_only=c6e5c54f21024597ae1dabc71a1c5d31.

Abstract

Flexibly using different emotion-regulation strategies in different situational contexts, such as domains, has been argued to promote effective emotion regulation. Additionally, emotion regulation processes may change with age as narrowing time horizons shift emotion regulation preferences. The purpose of the present study was to examine the occurrence and effectiveness of flexible emotion regulation in response to daily hassles from different domains within the age range from adolescence to old age. Participants, ranging from 14 to 88 years old ($N = 325$), completed an experience sampling study of approximately 9 days over a 3-week period. At each momentary assessment, participants reported on their hassles, emotion-regulation strategies, and affect. As expected, strategy use varied across individuals and domains. For example, emotion expression and suppression were typical responses to interpersonal hassles, whereas social sharing was often used in response to work/school hassles. In situations wherein hassles included multiple life domains, participants reported the use of more emotion-regulation strategies than for single-domain hassles. Although flexible emotion regulation was evident in participants' responses to hassles, the expectation that it would be associated with lower hassle reactivity was not confirmed. These patterns were, for the most part, consistent across ages. This study contributes new insights into situational characteristics that are associated with emotion regulation flexibility, showing that hassles domains are important for strategy selection, and that this holds from adolescence to old age. It also suggests that such defined emotion regulation flexibility is not as strongly linked to emotion regulation effectiveness as has been previously suggested.

Public Significance Statement

When hassles occur, adolescents through older adults flexibly matched their use of emotion-regulation strategies (e.g., sharing emotions with others or suppressing emotions) with different everyday life domains such as health, finance, and work/school. More emotion-

regulation strategies were used when hassles involved multiple life domains as compared to a single domain. A better understanding of the emotion-regulation strategies that work well in different domains could help individuals to flexibly regulate in everyday life.

Keywords: emotion regulation, stress, hassles, domains, flexibility

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At work, at school, or even with friends, hassles are an inevitable part of our everyday lives. Everyday hassles can elicit negative affective experiences, which, in turn, people may engage in efforts to regulate. Emotion regulation refers to attempts to modify and control the experience and expression of emotions, and this can be achieved by employing a variety of different strategies (Gross, 1998). In the context of hassles, emotion regulation typically derives from motivations to decrease negative affect elicited by the event.

Past research has focused on identifying generally effective versus ineffective emotion regulation strategies; for example, expressing feelings is generally considered more beneficial than suppressing them (Marroquín et al., 2017). Although this research provides a useful framework for understanding which strategies are generally helpful, it often does not consider the situational differences that can influence the use of ER strategies in daily life. Indeed, current theory and empirical evidence support the effectiveness of emotion regulation flexibility, that is, the view that emotion regulation is most likely to be successful for reducing negative affect when strategy use is matched to the situation (Birk & Bonanno, 2016; Bonanno & Burton, 2013; Hollenstein, 2015). This idea is consistent with the stress and coping perspective of Lazarus and Folkman (1984), which emphasizes that successful coping occurs when there is a “goodness of fit” between the situational characteristics of hassles and the coping strategies used. Currently, there is a lack of consensus regarding which situation characteristics are pertinent for understanding emotion regulation (English & Eldesouky, 2020) and if these vary with age. We maintain that the life domains that are affected by daily stressors may be a relevant situational characteristic calling for emotion regulation flexibility in daily life. Based on these considerations, the central aims of the present research were to examine (1) the relevance of hassle domains for flexible emotion

regulation in daily life (i.e., do individuals modify their use of ER strategies by domain), (2) the effectiveness of domain-based flexibility for ameliorating negative affect associated with hassles, and (3) if age-related differences were evident in these associations.

Emotion Regulation Strategies

Prior research and theory have identified a large variety of ER strategies individuals can use to modify and control their emotional experiences (Gross, 2015; Marroquín et al., 2017). While there are many possible strategies, here we focus on strategies that are commonly deployed in everyday life after a negative situation, such as a hassle, occurs (Benson et al., 2019; Gross, 1998; Heiy & Cheavens, 2014). Furthermore, the strategies we focus on in this paper are typically employed consciously (as opposed to automatically), so that their use is accessible to self-report in an experience-sampling design (cf. Mauss et al., 2007). We included the following five strategies that are representative of daily life ER strategies (cf. Benson et al., 2019; Blanke et al., 2020; Brans et al., 2013; English et al., 2017): distraction (directing attention away from the hassle), reappraisal (considering the positive aspects of the situation), expression (communicating emotions related to the hassle), social sharing (telling others about the hassle), and suppression (restraining expression of feelings related to the hassle).

In their review of ER strategies, Marroquín and colleagues (2017) distinguish those strategies that have generally been found “adaptive” in regards to their relationship with various indicators of well-being including less negative affect and fewer depressive symptoms. Among those strategies typically considered “adaptive” are expression, social sharing, and positive reappraisal, whereas distraction and suppression have typically been considered “maladaptive.” However, these authors and others also argue that personal and situational differences will modify when these strategies are effective (Haines et al., 2016; Lazarus & Folkman, 1984). Thus, a flexible approach to using these strategies is considered

to be most effective, with past work indicating that flexible emotion regulation is beneficial for effectively regulating negative affect in everyday life (Blanke et al., 2020) and related to individuals' better overall psychological adjustment (Bonanno et al., 2004; Westphal et al., 2010). In line with this perspective, we examined how ER strategies are used in different hassle domains with the presumption that even ostensibly "maladaptive" strategies may be preferred and effective in some situations (Birk & Bonanno, 2016; Bonanno & Burton, 2013; Hollenstein, 2015).

Flexible Regulation and Hassle Domains

Domains have a long history of being used to understand hassles (cf. Almeida et al., 2002; Bolger et al., 1989; Hay & Diehl, 2010; McIntyre et al., 2008; Neupert et al., 2007; Scott et al., 2013; Stone, 1987). However, the significance of hassle domains for understanding emotion regulation is not yet well understood. We considered common and important hassle domains within the age range from adolescence to old age (cf. Almeida et al., 2002; Hay & Diehl, 2010; Neupert & Bellingtier, 2019; Stone, 1987). They include the interpersonal domain (i.e., tensions involving other people such as arguments), the work or school domain (i.e., problems related to employment or education such as deadlines), the health domain (i.e., issues related to a person's physical condition such as allergies), the financial domain (i.e., concerns related to money or assets such as paying a bill), the domain of future plans (i.e., threats to future goals such as family planning), and the everyday hassles domain (i.e., hassles related to the mundane tasks of daily living, such as taking out the garbage or commuting). Similar domains have been used in other large studies of daily hassles (cf. Almeida, 2017; Schneider & Waite, 2008).

Hassle domains are relevant to emotion regulation because domains can inform appraisals about the significance of the hassle to the individual and the potential resources and options available and/or appropriate for responding (Aldwin et al., 1996; Almeida, 2005;

Brose et al., 2013). For example, there can be differences in the situational norms and affordances that accompany some hassle domains. It could be considered inappropriate, for instance, to express negative feelings at work such that employees may favor distraction or suppression of their emotions (e.g., Diefendorff et al., 2008). Likewise, cultural norms against the discussion of topics related to finances (Atwood, 2012) could make it less likely that individuals would engage in social sharing for this type of concern. On the other hand, individuals may be more motivated to share their health complaints as it could help them gain sympathy or attention (Kowalski, 2002). In short, the most effective ER strategy to use is unlikely to be the same across all domains, nor do we assume it will necessarily be the same for all individuals. For example, extraversion has been associated with a higher preference for social sharing, but also with a greater tendency to vary coping based on hassle content (Lee-Bagley et al., 2005; Williams et al., 2011). In sum, some domains may be more amenable to particular strategies, and, in addition, individuals may vary in the extent to which they tailor their ER strategy use by domain (English & Eldesouky, 2020; Grommisch et al., 2019).

ER Strategy Dominance as an Indicator of Emotion-Regulation Flexibility

Daily hassles are often assessed using categorical response option to facilitate quick assessments of multiple hassle features, such as which ER strategies are used or which life domains are affected by the hassle (Koffer et al., 2018). A metric that allows for the simultaneous consideration of two categorically measured hassle features, and thus the operationalization of emotion regulation flexibility across hassle domains, is dominance (Koffer et al., 2018). Dominance is the supremacy of an individual's most frequently used (i.e., modal) ER strategy across different hassle domains. This indicator can go beyond flexibility indices that only consider the sum or diversity of emotion regulation strategies, as it can additionally incorporate situational information, namely in which hassle domains ER strategy use occurs. Thus, dominance better aligns with the conceptualization of flexibility as

the varied use of ER strategies in response to different situational characteristics. Importantly, this indicator accommodates between-person differences in which strategies are dominant in which hassle domains (Grommisch et al., 2019). This is an important requirement for an indicator of emotion-regulation flexibility as past research indicates that individual differences such as personality can influence strategy preferences (Lee-Baggley et al., 2005; Williams et al., 2011).

High dominance indicates less differentiation of regulation based on hassle domain, in other words, less flexible emotion regulation. Building on the considerations introduced earlier, it should thus be associated with less effective emotion regulation when hassles occur. Although we expected individual differences in dominant strategies across domains, we additionally explored if there were any general trends in the frequencies of ER strategies used with particular domains.

Hassle Complexity as an Indicator of Emotion-Regulation Flexibility

In addition, we operationalized flexibility by considering hassle complexity. We conceptualized complex hassles as those that involve multiple life domains, for example, a hassle related to both interpersonal relationships and health. Greater complexity can indicate that multiple areas of one's life are harmed or threatened by the hassle. Such complex hassles are typically, although not always, appraised as more severe and are associated with greater emotional responses than simple hassles that are prescribed to a single domain (Wrzus et al., 2013). Thus complex hassles may require additional regulation efforts to down-regulate the emotion responses associated with them (Charles, 2010). Aldao and colleagues (2015) similarly argued that flexible regulation would conserve emotion regulation resources for occasions when they are most needed. Thus, we expected flexible regulation would be evident in the use of more regulation strategies to address complex hassles, which affect multiple life domains, as opposed to hassles confined to a single life domain.

Age Differences in Emotion Regulation and Hassles

Older age has been theoretically associated with a greater prioritization of emotional well-being goals compared to earlier in life (i.e., socioemotional selectivity theory; Carstensen et al., 1999). Indeed, the maintenance or improvement of affective well-being into early old age is often attributed to higher motivation to, and greater competence in, regulating emotions (e.g., Blanchard-Fields, 2007; Burr et al., 2020; Charles, 2010; Reed & Carstensen, 2012). To the extent that flexible regulation is beneficial, it could thus be expected that older adults would employ it more often than younger adults. This could be one mechanism by which older adults maintain their affective well-being in later life (Haines et al., 2016). On the other hand, current empirical evidence for the benefits of flexible emotion regulation in everyday life derives primarily from age-homogeneous samples (e.g., Benson et al., 2019; Eldesouky & English, 2019), and research on the domain-general use of ER strategies does not support systematic age-related differences in their use (Allen & Windsor, 2019; Riediger & Bellingtier, 2021).

Another relevant consideration is that older adults' emotion regulation strengths may derive particularly from greater abilities to avoid situations where hassles occur. Emotion regulation in response to a hassle that could not be avoided may then not necessarily indicate an age-related advantage. Indeed once hassles have occurred, older adults may be even more vulnerable to less effective emotion regulation compared to younger adults due to more limited physiological and cognitive resources necessary for hassle regulation (i.e., strength and vulnerability integration; Charles, 2010). This may be especially true for complex hassles, whereby older age is associated with greater accompanying physiological and affective responses (Wrzus et al., 2013).

Taken together, the extant literature on adult age differences in emotion regulation offers competing notions regarding possible age differences in everyday emotion regulation

flexibility. Although the motivation and competence to regulate may be higher in older adults as compared to younger individuals, older adults may be more vulnerable in their emotion regulation after having experienced daily hassles, particularly when these are complex. With these competing notions in mind, we explored possible age-related differences in emotion regulation flexibility.

Current Study

The current study sought to examine the existence and usefulness of a domain-differentiated approach to flexible emotion regulation in response to everyday hassles in adolescents through older adults. Our first aim was to investigate if emotion-regulation flexibility was evident in how individuals respond to hassle from various domains in everyday life. We expected that individuals would engage in flexible emotion regulations as evidenced by employing strategies more often in some domains than others and the use of more ER strategies for complex over simple hassles. Our second aim was to examine the extent to which a domain-differentiated approach to flexible emotion regulation would be associated with higher emotion regulation effectiveness. In line with past empirical and theoretical arguments for the benefits of flexible regulation (e.g., Birk & Bonanno, 2016; Bonanno & Burton, 2013; Hollenstein, 2015), we expected that individuals who employed more flexible regulation (as evidenced by more domain differentiation in their use of emotion regulation strategies) would show lower increases in negative affect in response to daily hassles than individuals with lower emotion regulation flexibility. Finally, our third aim was to explore age-related differences in the occurrence and consequences of flexible emotion regulation. Acknowledging that older age is associated with both strengths and vulnerabilities for emotion regulation (Charles, 2010), we did not specify directional hypotheses.

Method

Transparency and Openness

The datasets and analytic codes needed to reproduce the analyses, as well as the study materials, are available on the Open Science Framework. The link is available in the Author Note. Note that as the current study is part of a larger project, we provide detailed information on the measures used in this study and an overview of the other measures included in the project, but not reported on here. There are no preregistrations associated with this study.

Participants and Procedure

Participants were part of the Multi-Method Ambulatory Assessment (MMAA) Project (Riediger, 2018; Riediger et al., 2009), an ongoing longitudinal project including an experience sampling component.¹ Project participants, ranging in age from adolescence to older adulthood, were recruited from three German regions (Berlin, Dusseldorf, and Munich). All participants provided informed consent before beginning study participation, and the ethics committee of the Max Planck Institute for Human Development, Berlin, approved the study procedure.

The current study draws on data from the 2013 wave of the project, which was the first wave to introduce assessments of ER strategies following daily hassles. Of the 365 individuals who participated in the 2013 wave, the present analyses include 325 participants who reported at least one daily hassle during the experience sampling phase. Forty participants who never reported a hassle could not be included because they never answered the emotion regulation questions described below. These participants did not differ from included participants with respect to their age, gender, parental status, physical health complaints, or overall positive or negative affect during the experiencing sampling phase (all $p > .05$). These 40 participants are not considered further. Participants in the current analyses ranged in age from 14 to 88 ($M = 43.93$, $SD = 19.84$) and were roughly equally divided by

¹ The sample size was determined to fulfill the original study aims (see Riediger, 2018; Riediger et al., 2009).

age group (8% 14-17 years; 24% 18-29 years; 14% 30-39 years; 14% 40-49 years; 15% 50-59 years; 14% 60-69 years; 12% 70-88 years), gender (56% women, 44% men), and location (36% Berlin, 32% Munich, 32% Dusseldorf). We did not collect information on their racial backgrounds. Of those who were no longer attending secondary school ($n = 304$), 23% had attained a degree from a university or technical college. The majority of participants were currently employed (49%), attending university or vocational training (12%), or retired (23%).

To obtain a representative picture of the participant's daily lives, we completed experience sampling assessments over the course of about 3 weeks during which participants were asked to carry a researcher-provided mobile phone (Huawei Ascend G330) for nine days. Assessment days were organized in three phases of 3 consecutive days each, with breaks in between, such that assessments occurred overall on 6 weekdays and 3 weekend days. Participants chose their own 12-hour window during which to be assessed (e.g., from 8am to 8pm), and received a "beep" approximately every 2 hours (although the exact timing was pseudo-randomized to avoid participants anticipating the beep, but to also ensure sufficient spacing of minimally 15 minutes between beeps). We added additional measurement days to compensate for any days when fewer than 5 of the 6 daily assessments were completed (additional measurement days per participant: $M = 1.07$, $SD = 1.57$). On average, participants in our analyses (i.e., who reported at least one hassle) completed 56 experience sampling assessments. On about 9% of these assessments, they reported that a daily hassle had occurred since the previous assessment, or since waking up for the first assessment on a given day ($M = 5.19$ hassle reports per person, $SD = 5.03$). Thus, the analyses were based on 1,688 total reported hassles across participants.

Measures

Affect

At each experience sampling assessment participants rated their momentary positive (joyful, content, interested) and negative affect (angry, nervous, downhearted, disappointed) on a scale from 0 (*not at all*) to 6 (*very strongly*).² Participants were asked to report their affect at each assessment occasion regardless of hassle occurrence and before they reported on their hassles. The selection of items was designed to not over-burden participants, yet provide diverse affect indicators including both high and low arousal, positive and negative affect facets. Mean scores for positive and negative affect were calculated for each moment and then averaged for person-level scores. Multilevel reliability analyses (Bryk & Raudenbush, 1992; Nezlek, 2017) found occasion-level reliability of .74 and .56 for NA and PA respectively. Reliability at the person-level was .87 and .60 for NA and PA respectively. These estimates are similar to those found in other experience sampling studies that report multilevel (vs. between-person) reliability estimates (e.g., Brans et al., 2013; Kashdan & McKnight, 2013).

Hassle Occurrence

Prior to beginning the experience sampling phase, research assistants explained that hassles referred to unpleasant daily experiences, such as disagreements or running behind schedule. Subsequently, at each experience sampling assessment participants were asked if they had experienced anything unpleasant since waking up (first daily beep) or since the last momentary assessment (all following beeps that day). Specifically, we asked, “Since the last time we asked, have you experienced or thought about anything very unpleasant or objectionable?”³ Participants responded by selecting “yes” or “no.” If “yes” was selected the following measures of hassle domain and emotion regulation were assessed.

Hassle Domain and Hassle Complexity

² Original German wording for positive affect items: froh, zufrieden, interessiert; for negative affect items: ärgerlich, nervös, niedergeschlagen, enttäuscht.

³ Original German: “Haben Sie seit der letzten Befragung etwas sehr Unangenehmes/ Unerfreuliches erlebt oder darüber nachgedacht?”

Participants then indicated the domain content of the hassle. Specifically, we asked, “What was it about?”⁴ Participants could select one or more of the following options: interpersonal, work/school, health, finances, future plans, and everyday hassles (i.e., adversities that occur as part of everyday life, e.g., missing the alarm clock or a slow internet connection). In addition to the specified domains, participants could select “other” if they thought the hassle related to a content domain beyond the given choices. Each content domain was dichotomously coded (0 = *no*, 1 = *yes*).

We also used these responses to code for hassle complexity. In line with Wrzus and colleagues (2013), hassles that were associated with only one domain were considered as circumscribed (i.e., non-complex) hassles and coded as “0” (1,219 hassles, 72%). Hassles associated with two or more domains were considered as complex and coded as “1” (469 hassles, 28%).

Emotion-Regulation Strategies

Participants selected if they had used any of the following strategies to respond to the hassle: reappraisal (looked for something good in the situation), social sharing (shared it with others), expression (showed feelings), distraction (distracted myself), and suppression (suppressed my feelings).⁵ In addition, participants could select “other regulation” to capture strategies that may have been used but were not listed as response options. Participants could select as many or as few emotion-regulation strategies as were applicable to the hassle. Finally, participants could also indicate that they did nothing, which excluded the possibility of selecting any other options. Each strategy was dichotomously coded (0 = *not used*, 1 = *strategy used*). An indicator of the number of different strategies used in response to a given hassle was created by summing across all strategies. This variable is 0 when participants

⁴ Original German: “Womit hatte es zu tun?” and response options: Andere Person(en), Beruf / Schule / Uni, Gesundheit, Finanzen/Besitz, Zukunftspläne, Alltagswidrigkeit, Anderes.

⁵ Original German: “Was haben Sie gemacht?” and response options: Gutes daran gesucht, es anderen mitgeteilt, Gefühle gezeigt, mich abgelenkt, Gefühle verdrängt, etwas anderes, nichts gemacht.

indicated that they did nothing in response to the hassle. For an overview of the co-occurrence of hassles from different domains see Table S1.

Dominance

In line with Koffer and colleagues' recommendations for assessing dominance with categorical variables (2018), the modal response (i.e., most frequently endorsed ER strategy including doing nothing) for each hassle domain was determined for each participant. To do so, the modal strategy was determined for each domain, and the total number of modal strategies, counted across domains. Multiple modes were possible for a given domain if more than one strategy was reported as equally common for that domain (e.g., if social sharing and distraction were used equally often in the work domain, then both would be considered modes for this domain). Next, we determined the dominant strategy for each participant by identifying the strategy which was most frequently modal for this person across all domains. It is possible that several strategies are dominant for a given person, if their use across domains was similarly high.

Continuing the example from above where social sharing and distraction were the modal strategies for work hassles, let's assume that (1) social sharing was also the modal strategy for interpersonal, finance, everyday, and other hassles for this participant. Social sharing was thus modal for a total of 5 domains including work. Let us further assume that (2) distraction was also the modal strategy for health and future plans, that is, was modal for a total of 3 domains including work. If (3) no other strategies were modal in any domains, then social sharing would be the dominant strategy for this participant. Next, the number of hassle domains for which the dominant strategy was modal (between 1 and 7; in our example 5) was divided by the total number of modes across domains. Thus,

$$\text{Dominance} = \text{hassle domains relevant for dominant strategy} / \text{total modes across domains.}$$

In our example, we would divide 5 (the number of domains the dominant strategy, social sharing, was modal for) by 8 (total modes across domains: 1 each for interpersonal, finance, everyday, other, health, and future plans, and 2 for work). This would result in a dominance score of .625. If several strategies are equally dominant for a given participant, the numerator would be the number of domains any one of these strategies is dominant for. For example, if the distraction and social sharing were both dominant in 3 domains each (and no other strategy was dominant in more domains) than the numerator would be 3.

In theory, the denominator could be as high as 49 (if each of the seven strategies was used equally in each of the seven domains) but most individuals had only one modal strategy per domain. Only 14% of participants had a denominator above seven, and the maximum denominator was 15. Smaller scores on the resulting dominance indicator signify lower levels of dominance and hence a greater tendency to flexibly vary strategies across domains. Maximal dominance is indicated by a value of 1, and occurs when a single strategy is the only mode in all reported domains. The minimum theoretically possible score approaches 0, but varies based on total modes reported.

Results

Descriptive Statistics and Age-Related Associations

On average, participants reported hassles related to one content domain ($M = 1.30$, $SD = 0.46$), and they typically reported using one ER strategy to respond to these hassles ($M = 1.08$, $SD = 0.47$). Participants' ages were unrelated to the average number of content domains reported per hassle ($r(323) = .01$, $p = .84$) and to the average number of strategies used ($r(323) = -.07$, $p = .20$). The frequency of each ER strategy and hassle domain is summarized in Table 1. Of the ER strategies, social sharing was reported by the most participants and on the most hassle occasions whereas positive reappraisal was reported by the fewest participants on the least number of occasions (Table 1). Of the hassle domains, interpersonal hassles were

reported by the most participants and on the most hassle occasions whereas hassles related to future plans were reported by the fewest participants on the least number of occasions (Table 1).

We calculated the percent of hassles per individual that were regulated with each strategy and that pertained to each domain. We then examined if the relative frequency of ER strategy use varied with age (see Figure 1) and if the relative frequency of hassle domains varied with age (see Figure 2). Neither linear nor quadratic age was associated with any of the strategies (all $p > .12$).⁶

Age-related differences were observed in the within-person distribution of hassle domains: The likelihood of experiencing hassles in the interpersonal domain was negatively associated with age ($r(323) = -.17, p = .002$) and quadratic age ($r(323) = -.18, p = .001$), indicating that the relative occurrence of interpersonal hassles was lower with older age and that this effect became more pronounced in older adulthood, consistent with previous research (see review by Luong et al., 2011). Hassles related to work and school showed a similar pattern (age $r(323) = -.20, p < .001$; quadratic age $r(323) = -.20, p < .001$), as did hassles related to future plans (age, $r(323) = -.12, p = .025$; quadratic age $r(323) = -.14, p = .013$). Hassles related to health were positively associated with age ($r(323) = .14, p = .014$) and quadratic age ($r(323) = .15, p = .007$) indicating that their relative occurrence was higher with older age and that this effect intensifies in older adulthood. Everyday hassles were also positively associated with age ($r(323) = .24, p < .001$) and quadratic age ($r(323) = .25, p < .001$) indicating a relatively similar level of occurrence from adolescence to early old age with a relatively higher frequency in those over 70 years. Indeed, everyday hassles were the most frequently endorsed hassles for those beyond 70 years of age.

⁶ In all cases where associations and interactions with linear age are reported, quadratic age associations were also examined. Except where reported, all associations with quadratic age were not significant and removed from models in the interest of parsimony.

Evidence for Flexible Use of ER Strategies Across Domains

Dominance and Associations Between Hassle Domains and ER Strategies

On average, participants evinced moderate levels of ER strategy dominance $M = 0.61$, $SD = 0.25$, range = .22-1, which was unrelated to age, $r(323) = .09$, $p = .12$. This indicates that participants tended to prefer their dominant ER strategy across a modest majority of hassle domains, and this tendency did not vary by age. As the calculation of dominance is based on the number of modes reported, we tested and verified that this was not systematically restricted by age (see Table S2).

Although we expected individual differences in the preferred associations between ER strategies and hassle domains, we examined if general patterns could be observed in the likelihood of using specific ER strategies depending on the hassle domain. To do so, we separately regressed the variable coding usage of an ER strategy on the six hassle content domains assessed in the experience-sampling questionnaire (dummy coded as 1 = hassle was related to target domain, 0 = hassle was related to a different domain).⁷ We estimated multilevel logistic regression in a series of generalized linear mixed models using SAS PROC GLIMMIX (Ene et al., 2015) and maximum likelihood estimation based on adaptive quadrature (quadrature points set to ten). These models account for the nested nature of the data (occasions within persons) and are appropriate for categorical outcomes. Note that due to the relationship between the mean and the variance for discrete variables, the variance cannot be estimated as a free parameter (i.e., no error term is specified at level 1). To test for possible age-related differences in the associations between emotion-regulation strategies and hassle content domains, grand-mean centered age, as well as its interaction with each domain, were included in the models. We specified only a random intercept, as the inclusion of

⁷ We also considered the alternate approach, regressing content domains on ER strategies using “no regulation” as the reference category. This approach produced a similar pattern of associations between strategies and domains (see Table S3).

random slopes resulted in the model failing to converge. These models pertain only to occasions when hassles occurred. The final equation was:

$$\text{Level 1: Strategy}_{it} = \beta_{0i} + \beta_{1i}\text{DOMAIN}_{it} \quad (1)$$

$$\text{Level 2: } \beta_{0i} = \gamma_{00} + \gamma_{01}\text{AGE}_i + u_{0i}$$

$$\beta_{1i} = \gamma_{10} + \gamma_{11}\text{AGE}_i$$

Results regarding the daily flexible use of ER strategies in association with different hassle content domains are presented in Table 2. The odds ratios represent higher (numbers above 1) or lower (numbers below 1) odds of a strategy being used when a hassle pertained to the specified domain in comparison to hassles related to any other domain.

Greater associations between some hassle domains and ER strategies were observed. On occasions when hassles were related to interpersonal content, participants were more likely to report strategies related to the behavioral manifestation of emotion: expression and suppression. Whereas on occasions when hassles were related to work or school, participants were more likely to report using social sharing and less likely to report expression. Occasions with everyday hassle content were associated with higher odds of using disengaging strategies: distraction and suppression. Participants reported higher odds of using distraction on occasions when hassles were related to health and higher odds of using positive reappraisal when hassles were related to finances. Finally, the odds of using social sharing, positive reappraisal, and suppression were higher when the hassle content was related to future plans.

There was only one statistically significant age-related interaction: Age moderated the relationship between use of suppression and financial hassles ($\gamma_{11} = 0.04$, $t = 2.23$, $p = .026$) such that the association between use of suppression and financial hassles was stronger with older age.

Associations Between Hassle Complexity and Number of ER Strategies

We next examined if flexible emotion regulation would be evident in the use of more ER strategies when hassles were more complex. We ran a multilevel model (MLM; Raudenbush & Bryk, 2002) with SAS PROC MIXED using restricted maximum likelihood estimation.⁸ Total number of strategies used was regressed on the number of hassle domains affected per occasion (i.e., momentary hassle complexity). To account for between-person differences in complexity, person-average number of hassle domains (i.e., average complexity) was entered as a level-2 variable (Snijders & Bosker, 2012). Grand-mean centered age, as well as its interaction with the momentary complexity, was included to test for age-related differences. Random effects were included for the intercept and severity slope. The final equation was:

$$\text{Level 1: Total_Strategies}_{it} = \beta_{0i} + \beta_{1i} \text{MOMENTARY COMPLEXITY}_{it} + \epsilon_{it} \quad (2)$$

$$\text{Level 2: } \beta_{0i} = \gamma_{00} + \gamma_{01} \text{AVERAGE COMPLEXITY}_i + \gamma_{02} \text{AGE}_i + u_{0i}$$

$$\beta_{1i} = \gamma_{10} + \gamma_{11} \text{AGE}_i + u_{1i}$$

As presented in Table 3, and in line with our hypothesis, there was a within-person effect of hassle complexity such that occasions with complex hassles affecting more than one domain were occasions associated with using more emotion-regulation strategies ($\gamma_{10} = 0.24$, $t = 4.44$, $p < .001$).⁹ Note that this within-person effect indicates greater use of strategies for complex hassles beyond one's average hassle complexity level (γ_{01}). There was no evidence that age moderated this effect. We also explored a model including the interaction between

⁸ Models were additionally run using general linear polytomous models, treating total ER strategies as ordinal, as opposed to interval data. The pattern of findings remained unchanged (see Table S4).

⁹ This effect remains when hassle complexity is modeled as a continuous variable ($\gamma_{10} = 0.21$, $t = 6.35$, $p < .001$), but the between-person effect of mean hassle complexity reported in Table 2 is no longer significant ($\gamma_{01} = 0.05$, $t = 0.82$, $p = .411$)

age and average complexity. The pattern of findings remained unchanged and there was not a significant interaction ($\gamma_{02} = 0.003$, $t = 0.62$, $p = .534$).

The Effectiveness of Flexibility for Hassle Reactivity

In order to determine the benefits of a domain-differentiated approach to regulation, we examined if individuals low in dominance (i.e., high in emotion regulation flexibility) would respond to hassles with less increase in momentary negative affect. We used multi-level models whereby momentary negative affect was predicted by hassle occurrence, dominance, and the interaction of hassle occurrence by dominance. Average hassle occurrence represents the proportion of occasions an individual reports experiencing hassles and was included to control for between-person differences in hassle occurrence. We tested for possible age-related differences by including interactions of age with hassle occurrence, dominance, and their interaction. Random effects were included for the intercepts and hassle slopes. The final equation was:

$$\text{Level 1: } NA_{it} = \beta_{0i} + \beta_{1i}HASSLE_{it} + \varepsilon_{it} \quad (3)$$

$$\text{Level 2: } \beta_{0i} = \gamma_{00} + \gamma_{01}DOMINANCE_i + \gamma_{02}AGE_i + \gamma_{03}AVG. HASSLE_i \\ + \gamma_{04}DOMINANCE \times AGE_i + u_{0i}$$

$$\beta_{1i} = \gamma_{10} + \gamma_{11}DOMINANCE_i + \gamma_{12}AGE_i + \gamma_{13}DOMINANCE \times \\ AGE_i + u_{1i}$$

where hassle refers to hassle occurrence (1= yes, 0 = no).

Table 4 displays the results of a multilevel model examining the association of dominance with momentary NA hassle reactivity. Contrary to our expectations, dominance (γ_{01}) did not moderate participants' hassle reactivity (i.e., the association of hassle occurrence with negative affect, γ_{11}) and this did not vary by age (γ_{13}). Additional analyses showed that more frequent hassle occurrences were associated with lower strategy dominance (i.e., more emotion regulation flexibility), $r(323) = -.31$, $p < .001$. Analyses were repeated

systematically excluding participants who reported fewer hassle domains. The general pattern of findings held for those who reported between 2 and 6 hassle domains.¹⁰

Discussion

We investigated the relevance of hassle domains for flexible emotion regulation in daily life, the effectiveness of domain-based flexibility for reducing negative affect associated with hassles, and age-related differences in these associations. Our findings suggest that domains are a relevant situation characteristic for understanding flexible emotion regulation to hassles in daily life. For example, expression and suppression were on average more likely to be used in the interpersonal domain whereas expression was less likely to be used at work or school. As predicted, hassles related to more than one domain were more likely to evoke the use of multiple regulation strategies. Although these relationships indicate a tendency to vary regulation based on the hassle domain, the lack of a beneficial association between strategy dominance and hassle reactivity was counter to theoretical expectations and our own hypotheses (Birk & Bonanno, 2016; Bonanno & Burton, 2013; Hollenstein, 2015). Although older age has been associated with greater experience with and motivation to regulate emotions (e.g., Blanchard-Fields, 2007; Burr et al., 2020; Reed & Carstensen, 2012), it has also been associated with greater vulnerability when hassles occur (Charles, 2010; Wrzus et al., 2013). Our findings point towards age similarities from adolescence to older adulthood in the use and (in)effectiveness of flexible domain-differentiated regulation.

Flexible Use of ER Strategies in Everyday Life

Our first aim was to examine if emotion-regulation flexibility was evident in how individuals respond to hassle from various domains in everyday life.

Dominance and Hassle Domains

¹⁰ In addition, we re-ran the model as described in Equation 3 substituting dominance with diversity as calculated by Shannon's Entropy Index. The pattern of findings remained the same.

In line with past work indicating ER strategy use varies based on social context and goals (English et al., 2017), our results indicate that strategy use also varies by hassle domain in three ways. First, the mean dominance score was near the scale midpoint indicating that, on average, individuals used their preferred ER strategy in a moderate number of life domains, neither employing it in every situation nor switching ER strategies for every domain.

Second, the results indicated that the odds of using an ER strategy vary within different hassle domains. Across ages, we found that when hassles involved others (i.e., interpersonal hassles), individuals were more likely to engage in expression regulation—either by showing or hiding their feelings. Interactions with others may require a coordinated effort to express one's feelings so as to be understood by one's partner whilst suppressing more intense feelings that could be harmful for the interaction (Dworkin et al., 2019). Everyday hassles capture the nuisances of daily lives (e.g., too much traffic, bad weather), and individuals were more likely to respond to these hassles with distraction or suppression. There may not be much long-term benefit to engaging with these hassles as they are often minor and uncontrollable, which may explain the greater choice of disengaging strategies (Scheibe et al., 2015).

Hassles related to work and school were associated with higher use of social sharing and lower use of expression. Work and school are both situations characterized by the presence of others, a pre-condition for social sharing, and possibly explaining its higher use in this domain (Gabriel et al., 2019). On the other hand, one may not wish to show their feelings to their colleagues or schoolmates possibly due to social scripts or appropriateness in those settings (Diefendorff et al., 2008). Additional associations included higher use of distraction with health-related hassles and the higher use of positive reappraisal for financial hassles. We did not specify which strategies and domains would be associated, and future

work should focus on replicating these associations. Nevertheless, the findings indicate flexibility in the use of ER strategies in various hassle domains and provide an overview of the ways strategies and domains align in everyday life.

Hassle Complexity

Third, on occasions when hassles were more complex (i.e., involved more domains), participants reported using more ER strategies. Greater use of ER strategies during complex hassle occasions would be sensible as greater hassle complexity is often indicative of greater hassle severity and higher levels of negative affect (e.g., Sliwinski et al., 2009). In addition, regulation can be an effortful process (Aldao et al., 2015), and keeping regulation efforts to a minimum for less complex hassles can help to conserve resources for future regulation efforts (Hobfoll, 1989). This finding is in line with past research indicating a greater use of regulation on occasions with greater emotional intensity (Blanke et al., 2021; Brans et al., 2013; Dixon-Gordon et al., 2015).

Past work found that more complex hassles could be especially taxing for older adults (Charles, 2010; Wrzus et al., 2013), such that complex hassles are more likely to result in higher psychological and physiological responses compared to younger adults. However, we did not find evidence that age was differentially related to the use of more regulation strategies for these complex hassles. The lack of an age-effect may indicate that complex hassles require more regulation from all individuals. On the other hand, it could be that our design, which only allows us to assess if multiple strategies were used, and not the extent or sequence of their use, masked age-related differences. Future work could examine if multiple strategies are applied in a methodical way to downregulate negative affect and if this effect varies by age.

Flexible Regulation and Hassle Reactivity

Our second aim was to examine if a domain-differentiated approach to emotion regulation would be associated with lower hassle reactivity. Overall, our findings do not support this hypothesis: higher dominance, indicating a less flexible approach to regulation across domains, was unrelated to hassle reactivity. This stands in contrast to past work suggesting that engaging in a mix of strategies is advantageous in everyday life (Blanke et al., 2020).

Instead, the finding that participants who experience higher hassle frequency also tend to report lower dominance points towards the conclusion that flexibility may arise out of necessity: Individuals who encounter more hassles may need to employ more varied strategies to maintain their emotional well-being. Although this does not appear to result in less hassle reactivity, it could be the case that individuals high in domain differentiation might have even more negative responses to hassles were they not to engage in flexible emotion regulation. It may also be that despite basing dominance on hassle domains, this indicator of flexible emotion regulation could still be signaling an ineffective approach to coping. Matching a strategy to a specific domain, does not necessarily indicate that this match will work or that another strategy might not be better suited based on other features of the situation, thus we may be capturing some element of instability in emotion regulation responses, such as when individuals are trying out multiple strategies to find one that will be effective (cf. MacDonald & Stawski, 2015). Future work should consider both the momentary effectiveness in maintaining emotional stability and long-term effectiveness of a domain-differentiated approach, as well as the possibility that lower emotional well-being may lead to repetitive strategy use.

Similarity from Adolescence to Older Age

Although we examined all the above relationships for age-related differences, on the whole, the pattern of findings was consistent across ages. Specifically, there was no evidence

of age-related differences in the use or effectiveness of dominance, nor in the use of more strategies to regulate complex hassles. When examining the individual strategies and domains, there was an association between the use of suppression and financial hassles with older age that was not present for younger individuals. One possibility for this finding is that financial problems in older age are less controllable or solvable and thus disengaging strategies may be more beneficial (cf. Haines et al., 2016; Scheibe et al., 2015). With the exception of this single association, the pattern of findings held for participants from adolescence to older adulthood. Older age is associated with both strengths and vulnerabilities when it comes to everyday hassles (Charles, 2010) as well as changes in the experience of hassles across domains (Brose et al., 2013). Although we also found age-related differences in the experience of hassles from various domains, the current study provides little evidence that age is related to the ways individuals flexibly regulate in their everyday life domains.

Limitations and Future Directions

This study provides the first empirical evidence that hassle domains are an important situational characteristic for understanding emotion regulation in daily life. However, in order to not unduly burden participants, we were limited in the number of hassle domains and strategies we could assess in daily life. We selected hassle domains with a desire to cover a wide range of life domains of potential interest to the various age groups under study, but other domains could be considered in future research. We selected ER strategies that are consciously applied in everyday life in response to hassles, but could not include all possible strategies (cf., Heiy & Cheavens, 2014), nor did we assess the effort expended on each strategy (i.e., we infer greater regulation from the use of more strategies). The levels of strategy use and associations with domains are likely to be affected by the response options available to participants. Furthermore, we predicted that complex hassles would require the

use of more ER strategies as they are associated with more domains. However, we recognize that this may not always be the case, and other indicators of hassle severity could also be considered (e.g., emotional intensity of the hassle; Sheppes et al., 2014). Likewise, we have focused on domains and complexity, but other features of hassles (e.g., controllability, forecasting) were not assessed (Haines et al., 2016; Neupert & Bellingtier, 2019). Future work is needed to fully understand the array of situational differences important for flexible emotion regulation as well as to understand potential mediational paths between domains and ER strategies.

Future work should also consider interpersonal differences such as attitudes, and broader contextual features such as presence of major-life and historical events that have been shown to be important for understanding responses to everyday hassles (e.g., Bellingtier et al., 2021; Bellingtier & Neupert, 2018, 2019; Neupert et al., 2021). Finally, we have conceptualized flexible regulation by looking for patterns in the association of ER strategies with hassle domains and by calculating dominance, an approach appropriate for our non-independent categorical variables (Koffer et al., 2018). However, we recognize that other approaches have been suggested in the literature, especially for studies involving continuous variables (e.g., Aldao et al., 2015; Benson et al., 2019; Grommisch et al., 2019). Nevertheless, our approach did not rely on participants' self-reports of emotion-regulation flexibility or regulation success, thus mitigating socially-desirable responding.

Conclusion

This study provides the first evidence that flexible emotion regulation is evident in the way individuals use ER strategies in respond to hassles in various everyday life domains. ER strategies were not used equally across domains and the number of strategies used was adjusted to the hassle complexity. However, dominance, as an indicator of flexible emotion regulation, was not associated with lower hassle reactivity, but instead with the occurrence of

more hassles. These patterns are similar across ages and are perhaps most important for individuals who experience more hassles in their everyday lives. A better understanding of the emotion-regulation strategies that work well in different domains could help individuals to flexibly regulate in everyday life (Aldao et al., 2015; Cheng et al., 2014).

References

- Aldao, A., Sheppes, G., & Gross, J. J. (2015). Emotion regulation flexibility. *Cognitive Therapy and Research, 39*(3), 263–278. <https://doi.org/10.1007/s10608-014-9662-4>
- Aldwin, C. M., Sutton, K. J., Chiara, G., & Spiro, A. (1996). Age differences in stress, coping, and appraisal: Findings from the normative aging study. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences, 51*(4), 179–188. <https://doi.org/10.1093/geronb/51B.4.P179>
- Allen, V. C., & Windsor, T. D. (2019). Age differences in the use of emotion regulation strategies derived from the process model of emotion regulation: A systematic review. *Aging & Mental Health, 23*(1), 1–14. <https://doi.org/10.1080/13607863.2017.1396575>
- Almeida, D. M. (2005). Resilience and vulnerability to daily stressors assessed via diary methods. *Current Directions in Psychological Science, 14*(2), 64–68. <https://doi.org/10.1111/j.0963-7214.2005.00336.x>
- Almeida, D. M. (2017). *Midlife in the United States (MIDUS 1) National Study of Daily Experiences (NSDE), 1996-1997*. Inter-university Consortium for Political and Social Research [distributor]. <https://doi.org/10.3886/ICPSR03725.v5>
- Almeida, D. M., Wethington, E., & Kessler, R. C. (2002). The Daily Inventory of Stressful Events: An interview-based approach for measuring daily stressors. *Assessment, 9*(1), 41–55. <https://doi.org/10.1177/1073191102091006>
- Atwood, J. D. (2012). Couples and money: The last taboo. *American Journal of Family Therapy, 40*(1), 1–19. <https://doi.org/10.1080/01926187.2011.600674>
- Bellingtier, J. A., Mund, M., & Wrzus, C. (2021). The role of extraversion and neuroticism for experiencing stress during the third wave of the COVID-19 pandemic. *Current Psychology, 0123456789*. <https://doi.org/10.1007/s12144-021-02600-y>
- Bellingtier, J. A., & Neupert, S. D. (2018). Negative aging attitudes predict greater reactivity

- to daily stressors in older adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 73(7), 1155–1159. <https://doi.org/10.1093/geronb/gbw086>
- Bellingtier, J. A., & Neupert, S. D. (2019). Daily subjective age in emerging adults: “Now we’re stressed out.” *Emerging Adulthood*, 7(6), 468–477. <https://doi.org/10.1177/2167696818785081>
- Benson, L., English, T., Conroy, D. E., Pincus, A. L., Gerstorf, D., & Ram, N. (2019). Age differences in emotion regulation strategy use, variability, and flexibility: An experience sampling approach. *Developmental Psychology*, 55(9), 1951–1964. <https://doi.org/10.1037/dev0000727>
- Birk, J. L., & Bonanno, G. A. (2016). When to throw the switch: The adaptiveness of modifying emotion regulation strategies based on affective and physiological feedback. *Emotion*, 16(5), 657–670. <https://doi.org/10.1037/emo0000157>
- Blanchard-Fields, F. (2007). Everyday Problem Solving and Emotion. *Psychological Science*, 16(1), 26–31. <https://doi.org/10.1111/j.1467-8721.2007.00469.x>
- Blanke, E. S., Bellingtier, J. A., Riediger, M., & Brose, A. (2021). When and how to regulate: Everyday emotion-regulation strategy use and stressor intensity. *Affective Science*.
- Blanke, E. S., Brose, A., Kalokerinos, E. K., Erbas, Y., Riediger, M., & Kuppens, P. (2020). Mix it to fix it: Emotion regulation variability in daily life. *Emotion*, 20(3), 473–485. <https://doi.org/10.1037/emo0000566>
- Bolger, N., DeLongis, A., Kessler, R. C., & Schilling, E. A. (1989). Effects of daily stress on negative mood. *Journal of Personality and Social Psychology*, 57(5), 808–818. <https://doi.org/10.1037/0022-3514.57.5.808>
- Bonanno, G. A., & Burton, C. L. (2013). Regulatory flexibility: An individual differences perspective on coping and emotion regulation. *Perspectives on Psychological Science*, 8(6), 591–612. <https://doi.org/10.1177/1745691613504116>

- Bonanno, G. A., Papa, A., Lalande, K., Westphal, M., & Coifman, K. (2004). The importance of being flexible: The ability to both enhance and suppress emotional expression predicts long-term adjustment. *Psychological Science, 15*(7), 482–487.
<https://doi.org/10.1111/j.0956-7976.2004.00705.x>
- Brans, K., Koval, P., Verduyn, P., Lim, Y. L., & Kuppens, P. (2013). The regulation of negative and positive affect in daily life. *Emotion, 13*(5), 926–939.
<https://doi.org/10.1037/a0032400>
- Brose, A., Scheibe, S., & Schmiedek, F. (2013). Life contexts make a difference : Emotional stability in younger and older adults. *Psychology and Aging, 28*(1), 148–159.
<https://doi.org/10.1037/a0030047>
- Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models: Applications and data analysis methods*. Sage Publications, Inc.
- Burr, D. A., Castrellon, J. J., Zald, D. H., & Samanez-Larkin, G. R. (2020). Emotion dynamics across adulthood in everyday life: Older adults are more emotionally stable and better at regulating desires. *Emotion*. <https://doi.org/10.1037/emo0000734>
- Carstensen, L. L., Isaacowitz, D. M., Charles, S. T., Prakash, R. S., De Leon, A. A., Patterson, B., Schirda, B. L., & Janssen, A. L. (1999). Taking time seriously: A theory of socioemotional selectivity. *The American Psychologist, 54*(3), 165–181.
<https://doi.org/10.1037/0003-066X.54.3.165>
- Charles, S. T. (2010). Strength and vulnerability integration: A model of emotional well-being across adulthood. *Psychological Bulletin, 136*(6), 1068–1091.
<https://doi.org/10.1037/a0021232>
- Cheng, C., Lau, H.-P. B., & Chan, M.-P. S. (2014). Coping flexibility and psychological adjustment to stressful life changes: A meta-analytic review. *Psychological Bulletin, 140*(6), 1582–1607. <https://doi.org/10.1037/a0037913>

- Diefendorff, J. M., Richard, E. M., & Yang, J. (2008). Linking emotion regulation strategies to affective events and negative emotions at work. *Journal of Vocational Behavior*, 73(3), 498–508. <https://doi.org/10.1016/j.jvb.2008.09.006>
- Dixon-Gordon, K. L., Aldao, A., & De Los Reyes, A. (2015). Emotion regulation in context: Examining the spontaneous use of strategies across emotional intensity and type of emotion. *Personality and Individual Differences*, 86, 271–276. <https://doi.org/10.1016/j.paid.2015.06.011>
- Dworkin, J. D., Zimmerman, V., Waldinger, R. J., & Schulz, M. S. (2019). Capturing naturally occurring emotional suppression as it unfolds in couple interactions. *Emotion*, 19(7), 1224–1235. <https://doi.org/10.1037/emo0000524>
- Eldesouky, L., & English, T. (2019). Regulating for a reason: Emotion regulation goals are linked to spontaneous strategy use. *Journal of Personality*, 87(5), 948–961. <https://doi.org/10.1111/jopy.12447>
- Ene, M., Leighton, E. A., Blue, G. L., & Bell, B. A. (2015). Multilevel models for categorical data using SAS® GLIMMIX: The basics. In *SAS Global Forum*.
- English, T., & Eldesouky, L. (2020). Emotion regulation flexibility. *European Journal of Psychological Assessment*, 36(3), 456–459. <https://doi.org/10.1027/1015-5759/a000581>
- English, T., Lee, I. A., John, O. P., & Gross, J. J. (2017). Emotion regulation strategy selection in daily life: The role of social context and goals. *Motivation and Emotion*, 41(2), 230–242. <https://doi.org/10.1007/s11031-016-9597-z>
- Gabriel, A. S., Koopman, J., Rosen, C. C., Arnold, J. D., & Hochwarter, W. A. (2019). Are coworkers getting into the act? An examination of emotion regulation in coworker exchanges. *Journal of Applied Psychology*. <https://doi.org/10.1037/apl0000473>
- Grommisch, G., Koval, P., Hinton, J. D. X., Gleeson, J., Hollenstein, T., Kuppens, P., & Lischetzke, T. (2019). Modeling individual differences in emotion regulation repertoire

in daily life with multilevel latent profile analysis. *Emotion*.

<https://doi.org/10.1037/emo0000669>

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, 2(3), 271–299. <https://doi.org/10.1037/1089-2680.2.3.271>

Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological Inquiry*, 26(1), 1–26. <https://doi.org/10.1080/1047840X.2014.940781>

Haines, S. J., Gleeson, J., Kuppens, P., Hollenstein, T., Ciarrochi, J., Labuschagne, I., Grace, C., & Koval, P. (2016). The wisdom to know the difference: Strategy-situation fit in emotion regulation in daily life is associated with well-being. *Psychological Science*, 27(12), 1651–1659. <https://doi.org/10.1177/0956797616669086>

Hay, E. L., & Diehl, M. (2010). Reactivity to daily stressors in adulthood: The importance of stressor type in characterizing risk factors. *Psychology and Aging*, 25(1), 118–131. <https://doi.org/10.1037/a0018747>

Heiy, J. E., & Cheavens, J. S. (2014). Back to basics: A naturalistic assessment of the experience and regulation of emotion. *Emotion*, 14(5), 878–891. <https://doi.org/10.1037/a0037231>

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. <https://doi.org/10.1037/0003-066X.44.3.513>

Hollenstein, T. (2015). This time, it's real: Affective flexibility, time scales, feedback loops, and the regulation of emotion. *Emotion Review*, 7(4), 308–315. <https://doi.org/10.1177/1754073915590621>

Kashdan, T. B., & McKnight, P. E. (2013). Commitment to a purpose in life: An antidote to the suffering by individuals with social anxiety disorder. *Emotion*, 13(6), 1150–1159. <https://doi.org/10.1037/a0033278>

Koffer, R. E., Ram, N., & Almeida, D. M. (2018). More than counting: An intraindividual

- variability approach to categorical repeated measures. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, 73(1), 87–99.
<https://doi.org/10.1093/geronb/gbx086>
- Kowalski, R. M. (2002). Whining, griping, and complaining: Positivity in the negativity. *Journal of Clinical Psychology*, 58(9), 1023–1035. <https://doi.org/10.1002/jclp.10095>
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.
- Lee-Baggley, D., Preece, M., & DeLongis, A. (2005). Coping with interpersonal stress: Role of big five traits. *Journal of Personality*, 73(5), 1141–1180.
<https://doi.org/10.1111/j.1467-6494.2005.00345.x>
- Luong, G., Charles, S. T., & Fingerman, K. L. (2011). Better with age: Social relationships across adulthood. *Journal of Social and Personal Relationships*, 28(1), 9–23.
<https://doi.org/10.1177/0265407510391362>
- MacDonald, S. W. S., & Stawski, R. S. (2015). Intraindividual variability- An indicator of vulnerability or resilience in adult development and aging? *Handbook of Intraindividual Variability across the Lifespan*, 158–173.
- Marroquín, B., Tennen, H., & Stanton, A. L. (2017). Coping, emotion regulation, and well-being: Intrapersonal and interpersonal processes. In *The Happy Mind: Cognitive Contributions to Well-Being* (Issue January, pp. 253–274). Springer International Publishing. https://doi.org/10.1007/978-3-319-58763-9_14
- Mauss, I. B., Cook, C. L., & Gross, J. J. (2007). Automatic emotion regulation during anger provocation. *Journal of Experimental Social Psychology*, 43(5), 698–711.
<https://doi.org/10.1016/j.jesp.2006.07.003>
- McIntyre, K. P., Korn, J. H., & Matsuo, H. (2008). Sweating the small stuff: How different types of hassles result in the experience of stress. *Stress and Health*, 24(5), 383–392.
<https://doi.org/10.1002/smi.1190>

- Neupert, S. D., Almeida, D. M., & Charles, S. T. (2007). Age differences in reactivity to daily stressors: The role of personal control. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, *62*(4), P216–P225.
- Neupert, S. D., & Bellingtier, J. A. (2019). Daily stressor forecasts and anticipatory coping: Age differences in dynamic, domain-specific processes. *The Journals of Gerontology: Series B: Psychological Sciences and Social Sciences*, *74*(1), 17–28.
<https://doi.org/10.1093/geronb/gby043>
- Neupert, S. D., Bellingtier, J. A., & Smith, E. L. (2021). Emotional reactivity changes to daily stressors surrounding the 2016 U.S. presidential election. *Current Psychology*, *40*(6), 2832–2842. <https://doi.org/10.1007/s12144-019-00215-y>
- Nezlek, J. B. (2017). A practical guide to understanding reliability in studies of within-person variability. *Journal of Research in Personality*, *69*, 149–155.
<https://doi.org/10.1016/j.jrp.2016.06.020>
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods*.
- Reed, A. E., & Carstensen, L. L. (2012). The theory behind the age-related positivity effect. *Frontiers in Psychology*, *3*(SEP), 1–10. <https://doi.org/10.3389/fpsyg.2012.00339>
- Riediger, M. (2018). Ambulatory assessment in survey research: The Multi-Method Ambulatory Assessment Project. In K. Erlinghagen, K. Hank, & M. Kreyenfeld (Eds.), *Innovation und Wissenstransfer in der empirischen Sozial- und Verhaltensforschung. Festschrift für Gert G. Wagner* (pp. 85–100). Campus Verlag.
- Riediger, M., & Bellingtier, J. A. (2021). Emotion regulation across the lifespan. In D. Dukes, A. C. Samson, & E. A. Walle (Eds.), *The Oxford handbook of emotional development*. Oxford University Press.
- Riediger, M., Schmiedek, F., Wagner, G. G., & Lindenberger, U. (2009). Seeking pleasure

and seeking pain: Differences in prohedonic and contra-hedonic motivation from adolescence to old age. *Psychological Science*, 20(12), 1529–1535.

<https://doi.org/10.1111/j.1467-9280.2009.02473.x>

Scheibe, S., Sheppes, G., & Staudinger, U. M. (2015). Distract or reappraise? Age-related differences in emotion-regulation choice. *Emotion*, 15(6), 677–681.

<https://doi.org/10.1037/a0039246>

Schneider, B., & Waite, L. J. (2008). *The 500 Family Study [1998-2000: United States]*. Inter-university Consortium for Political and Social Research [distributor].

<https://doi.org/10.3886/ICPSR04549.v1>

Scott, S. B., Whitehead, B. R., Bergeman, C. S., & Pitzer, L. (2013). Combinations of stressors in midlife: Examining role and domain stressors using regression trees and random forests. *Journals of Gerontology - Series B Psychological Sciences and Social Sciences*, 68(3), 464–475. <https://doi.org/10.1093/geronb/gbs166>

Sheppes, G., Scheibe, S., Suri, G., Radu, P., Blechert, J., & Gross, J. J. (2014). Emotion regulation choice: A conceptual framework and supporting evidence. *Journal of Experimental Psychology: General*, 143(1), 163–181. <https://doi.org/10.1037/a0030831>

Sliwinski, M. J., Almeida, D. M., Smyth, J., & Stawski, R. S. (2009). Intraindividual change and variability in daily stress processes: Findings from two measurement-burst diary studies. *Psychology and Aging*, 24(4), 828–840. <https://doi.org/10.1037/a0017925>

Snijders, T. A. B., & Bosker, R. J. (2012). *Multilevel analysis :An introduction to basic and advanced multilevel modeling* (2nd editio). Sage.

Stone, A. A. (1987). Event content in a daily survey is differentially associated with concurrent mood. *Journal of Personality and Social Psychology*, 52(1), 56–58.

<https://doi.org/10.1037/0022-3514.52.1.56>

Westphal, M., Seivert, N. H., & Bonanno, G. A. (2010). Expressive flexibility. *Emotion*,

10(1), 92–100. <https://doi.org/10.1037/a0018420>

Williams, P. G., Smith, T. W., Gunn, H. E., & Uchino, B. N. (2011). Personality and stress:

Individual differences in exposure, reactivity, recovery, and restoration. In R. J.

Contrada & A. Baum (Eds.), *The handbook of stress science: Biology, psychology, and*

health. (pp. 231–245). Springer Publishing Company.

Wrzus, C., Müller, V., Wagner, G. G., Lindenberger, U., & Riediger, M. (2013). Affective

and cardiovascular responding to unpleasant events from adolescence to old age:

Complexity of events matters. *Developmental Psychology*, 49(2), 384–397.

<https://doi.org/10.1037/a0028325>

Table 1*Descriptive Statistics for Emotion Regulation Strategies and Hassle Domains*

| Variables | Mean | SD | Range | # participants | # occasions |
|-----------------------|------|-------|-------|----------------|-------------|
| <i>ER Strategies</i> | | | | | |
| Social Sharing | 2.36 | 1.99 | 1-17 | 214 | 505 |
| Distraction | 2.12 | 2.43 | 1-27 | 161 | 342 |
| Expression | 2.10 | 1.63 | 1-12 | 161 | 338 |
| Suppression | 2.11 | 1.67 | 1-9 | 129 | 272 |
| Positive Reappraisal | 1.59 | 1.22 | 1-8 | 70 | 111 |
| Other | 1.93 | 1.44 | 1-8 | 141 | 272 |
| Total Regulation | 5.84 | 5.63 | 1-48 | 315 | 1840 |
| No Regulation | 2.08 | 2.78 | 1-32 | 154 | 320 |
| <i>Hassle Domains</i> | | | | | |
| Interpersonal | 3.44 | 3.95 | 1-45 | 248 | 854 |
| Everyday | 2.07 | 1.51 | 1-7 | 169 | 350 |
| Other | 1.85 | 1.57 | 1-10 | 137 | 254 |
| Work/School | 2.43 | 4.15 | 1-46 | 127 | 308 |
| Health | 2.67 | 5.19 | 1-52 | 109 | 291 |
| Finances | 2.42 | 5.33 | 1-47 | 78 | 189 |
| Future Plans | 1.68 | 1.38 | 1-10 | 71 | 119 |
| All Domains | 7.28 | 12.45 | 1-201 | 325 | 2111 |

Note. Values reflect sums across the entire assessment period for participants who reported the strategy/domain. # participants = number of participants who reported this strategy/hassle domain at any point in the study; # occasions = number of occasions when this strategy/hassle domain was reported at any point in the study.

Table 2

Odds Ratios and 95% Confidence Intervals for the Use of ER Strategies in Each Content Domain

| | | Hassle Content Domain | | | | | |
|---------------|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | | Interpersonal | Everyday | Work/School | Health | Finances | Future Plans |
| ER Strategies | Social Sharing | 0.81 [0.63, 1.06] | 1.01 [0.74, 1.38] | 1.93 [1.35, 2.75] | 1.28 [0.87, 1.89] | 1.24 [0.79, 1.95] | 1.77 [1.09, 2.89] |
| | Distraction | 1.05 [0.80, 1.40] | 1.45 [1.05, 2.00] | 0.98 [0.67, 1.43] | 1.86 [1.30, 2.67] | 1.33 [0.86, 2.04] | 1.25 [0.76, 2.03] |
| | Positive Reappraisal | 0.64 [0.40, 1.04] | 1.17 [0.69, 1.99] | 0.66 [0.32, 1.34] | 1.04 [0.54, 2.02] | 2.01 [1.01, 3.99] | 2.07 [1.02, 4.20] |
| | Expression | 1.98 [1.49, 2.65] | 0.89 [0.64, 1.26] | 0.50 [0.32, 0.79] | 0.96 [0.63, 1.45] | 0.69 [0.41, 1.16] | 1.52 [0.91, 2.54] |
| | Suppression | 1.75 [1.25, 2.46] | 1.77 [1.23, 2.53] | 0.68 [0.42, 1.10] | 0.68 [0.41, 1.13] | 1.36 [0.77, 2.39] | 1.98 [1.12, 3.49] |

Note. Odds ratios represent higher (numbers above 1) or lower (numbers below 1) likelihood of the specified regulation strategy being used in each domain. Odds ratios significantly different from 1 at $p < .05$ are bolded.

Table 3*Multilevel Model predicting Total ER Strategies from Hassle Complexity*

| Fixed Effects | Estimate [95% CI] |
|--|--------------------------|
| Intercept, γ_{00} | 0.98 [0.91, 1.04] |
| Average Complexity, γ_{01} | 0.24 [0.03, 0.43] |
| Age, γ_{02} | -0.002 [-0.01, 0.001] |
| Momentary Complexity, γ_{10} | 0.24 [0.14, 0.35] |
| Momentary Complexity \times Age, γ_{11} | 0.003 [-0.002, 0.01] |
| Random Effects | |
| Intercept, u_{0i} | 0.09 [0.06, 0.13] |
| Residual, ε | 0.41 [0.38, 0.45] |
| Complexity slope, u_{1i} | 0.10 [0.05, 0.27] |
| Modeled Variance | |
| Within persons (Pseudo R^2_{Residual}) | 5% |
| Between persons (Pseudo $R^2_{\text{Intercept}}$) | 25% |

Note. Intraclass correlation (ICC) for total regulation = .21. Significant effects at $p < .05$ are bolded. γ_{00} , γ_{01} , and γ_{02} are between-person effects; γ_{10} is a within-person effect; and γ_{11} is a cross-level interaction.

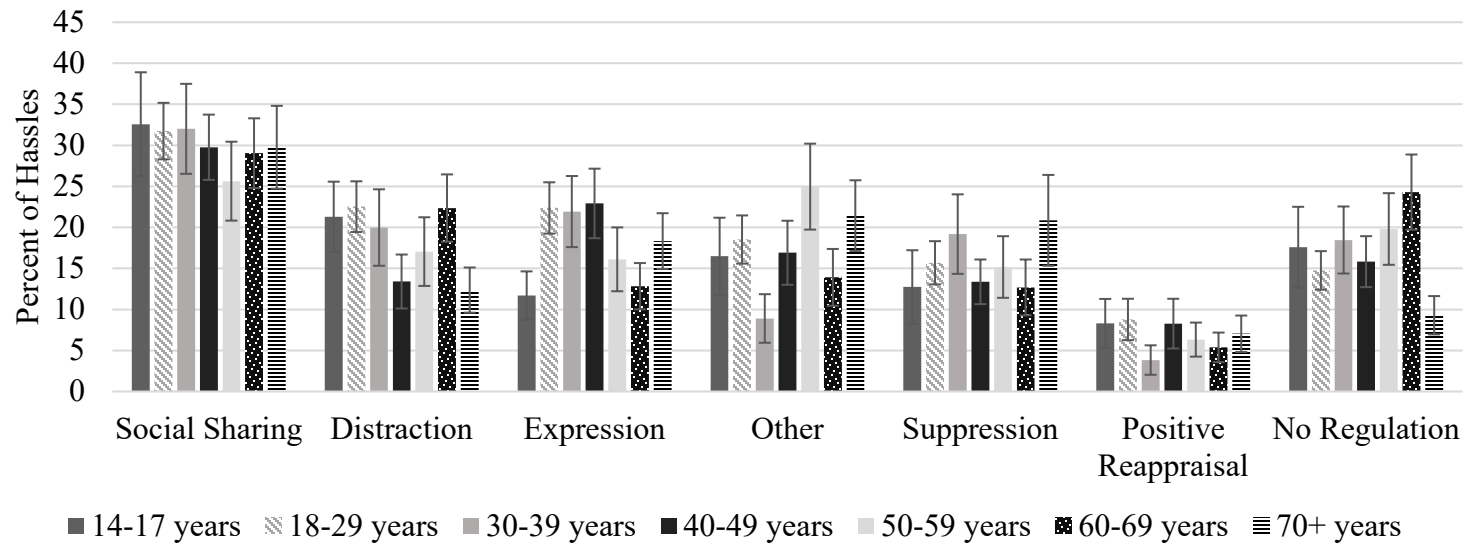
Table 4*Multilevel Model predicting Negative Affect from Dominance and Hassle Occurrence*

| Fixed Effects | Estimate [95% CI] |
|---|--------------------------|
| Intercept, γ_{00} | 0.63 [0.37, 0.89] |
| Dominance, γ_{01} | -0.01 [-0.34, 0.32] |
| Age, γ_{02} | -0.003 [-0.01, 0.01] |
| Avg. Hassles, γ_{03} | 2.02 [1.02, 3.02] |
| Dominance \times Age, γ_{04} | -0.01 [-0.02, 0.01] |
| Momentary Hassle, γ_{10} | 1.16 [0.93, 1.40] |
| Momentary Hassle \times Dominance, γ_{11} | -0.08 [-0.46, 0.30] |
| Momentary Hassle \times Age, γ_{12} | 0.01 [-0.01, 0.02] |
| Momentary Hassle \times Dominance \times Age, γ_{13} | -0.01 [-0.02, 0.01] |
| Random Effects | |
| Intercept, u_{0i} | 0.49 [0.42, 0.59] |
| Residual, ε | 0.72 [0.71, 0.74] |
| Hassle slope, u_{1i} | 0.49 [0.40, 0.62] |
| Modeled Variance | |
| Within persons (Pseudo R^2_{Residual}) | 15% |
| Between persons (Pseudo $R^2_{\text{Intercept}}$) | 20% |

Note. Intraclass correlation (ICC) for negative affect = .42. Significant effects at $p < .05$ are bolded.

Figure 1

Percent of Hassles for Which Given ER Strategies Were Endorsed by Age Group

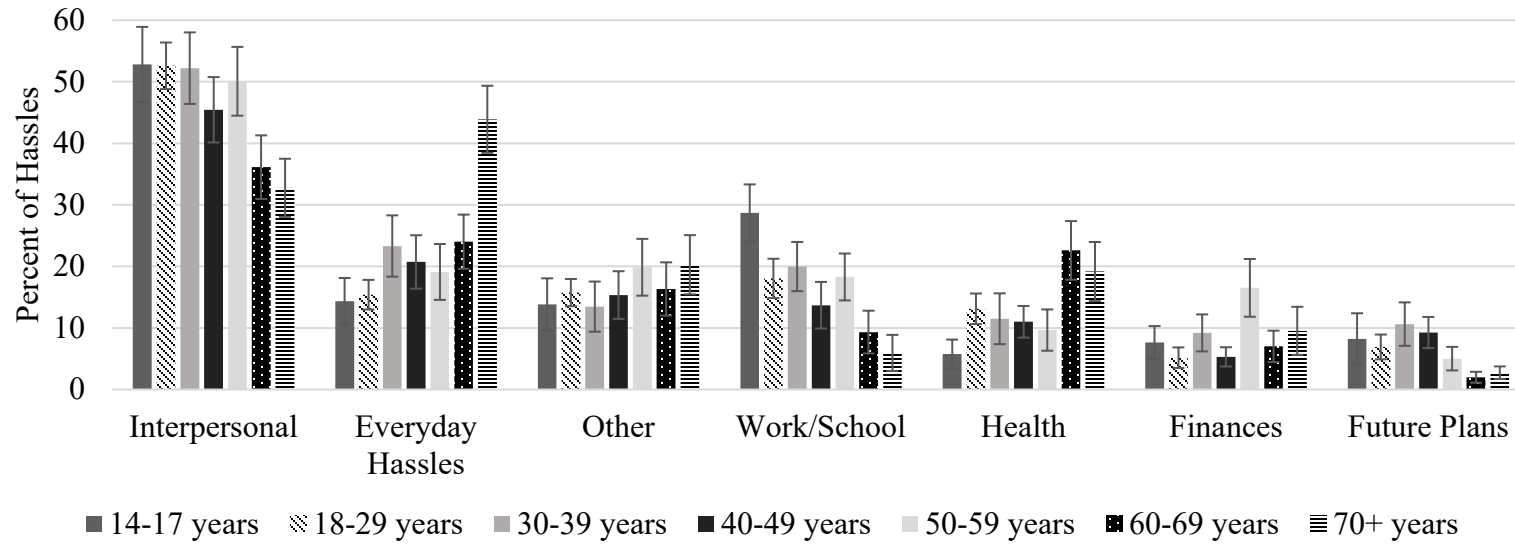


Note. ER strategies are arranged in order of descending frequency for the entire sample with no regulation separated at the end.

Percentages do not add up to 100 as multiple strategies could be endorsed for each hassle. Error bars are standard errors.

Figure 2

Percent of Hassles by Hassle Content Domains by Age Group



Note. Domains are arranged in order of descending frequency for the entire sample. Percentages do not add up to 100 as multiple domains could be endorsed for each hassle. Error bars are standard errors.