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Longitudinal Findings from the NAS

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RUNNING HEAD: Hassles & Uplifts

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ABSTRACT

To examine emotion regulation in later life, we contrasted the modified hedonic treadmill theory with developmental theories, using hassles and uplifts to assess emotion regulation in context. The sample was 1,315 men from the VA Normative Aging Study aged 53 to 85 years, who completed 3,894 observations between 1989 and 2004. We computed three scores for both hassles and uplifts: intensity (ratings reflecting emotion regulation), exposure (count), and summary (total) scores. Computing growth curves over age showed marked differences in trajectory patterns for intensity and exposure scores. Although exposure to hassles and uplifts decreased in later life, intensity scores increased. Growth mixture models (GMM) showed individual differences in patterns of hassles and uplifts intensity and exposure, with relative stability in uplifts intensity, normative non-linear changes in hassles intensity, and complex patterns of individual differences in exposure for both hassles and uplifts. Analyses with the summary scores showed that emotion regulation in later life is a function of both developmental change and contextual exposure, with different patterns emerging for hassles and uplifts. Thus, support was found for both hedonic treadmill and development change theories, reflecting different aspects of change in emotion regulation with age.

KEY WORDS: stress, emotion regulation, aging, hedonic treadmill, affect

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How do Hassles and Uplifts Change with Age?

Longitudinal Findings from the VA Normative Aging Study

Hassles are the ordinary challenges of daily life (Almeida, 2005; Delongis, Folkman, & Lazarus, 1988). These daily stressors are relatively frequent, small events that cause tension or unexpected disruptions (Stawski, Sliwinski, Almeida, & Smyth, 2008). Taken individually, daily stressors can seem minor and insignificant; however, a growing body of literature suggests that these relatively minor stressors influence well-being through their accumulation over time (Almeida, Piazza, Stawski, & Klein, 2011; Zautra, 2003). Because of this linkage between health and the accumulation of exposure to daily stress, it is important to understand how exposure to hassles and their intensity changes over time and with age. The literature on whether aging affects hassles is rather equivocal, and results vary depending on whether exposure or the intensity of daily stressors is investigated. Further, most studies are cross-sectional or short-term longitudinal studies (e.g. less than one year), yet longer-term longitudinal studies are needed to determine whether hassles reflect developmental processes (Stawski et al., 2008).

Even less research exists on the influence of uplifts, or positive daily events, on health, although some recent studies have indicated the potential beneficial effects of positive events on well-being, including inflammatory markers (Jain, Mills, von Känel, Hong, & Dimsdale, 2007), cortisol levels (Pluess et al., 2012), and positive affect (Charles et al., 2010). Thus, the role of uplifts may be important to physical health and well-being in later life (Folkman & Moskowitz, 2000; Maybery, Jones-Ellis, Neale, & Arentz, 2006). However, the literature on whether age affects the experience of uplifts is surprisingly scarce.

We feel that examination of age-related change in hassles and uplifts is important because it provides an opportunity to study aging and emotion-regulation in context. Thus, we explored patterns of change in both hassles and uplifts over a 16-year period in a sample of middle-aged and older men. We were particularly interested in whether there were individual differences in trajectories of hassles and uplifts and in whether individuals showed similar patterns of change in hassles and uplifts, or whether the patterns of trajectories were relatively independent, suggesting complexity in emotion regulation.

Does Age Affect the Occurrence of Hassles and Uplifts?

In the earliest study of age differences in hassles and uplifts, Kanner, Coyne, Schaefer, & Lazarus (1981) found no age differences in hassles in a small middle-aged sample (aged 45-64, divided into 5-year groups), but found that the older groups reported more uplifts. While hassles and uplifts scales have been used in older samples to predict health outcomes (e.g., Klumb & Baltes, 2004), we were surprisingly unable to locate another study that examined age-related differences or change using this measure, although studies with an abbreviated measure found that men in late life are less likely to report hassles than middle-aged men (Aldwin, Sutton, Chiara, & Spiro, 1996; Boeninger, Shiraishi, Aldwin, & Spiro, 2009). Thus, to inform our theoretical model of emotion regulation in context, we reviewed daily diary studies for age-differences in hassles or daily stressors. Given the dearth of studies on aging and uplifts, we drew from the literature on age-related change in positive and negative affect (Charles & Carstensen, 2007; Griffin, Mroczek, & Spiro, 2006; Mroczek & Kolarz, 1998).

Hassles: Intensity and exposure. Ratings of hassles intensity tap appraisal processes that reflect not only an individual's age but also their immediate may context and their immediate context. The literature on age differences in appraisals of the severity or intensity of hassles in daily diary studies is mixed. Some studies found that older adults perceived daily stressors to be less severe and disruptive compared to younger and middle-aged adults (Almeida & Horn, 2004), and interpersonal relationships as less irritating (Birditt, Fingerman,

& Almeida, 2005). In contrast, Stawski et al. (2008) found that younger and older adults did not differ in their reports of stressor severity. This divergence in findings could be attributed to differences in how daily stress was measured, the health status of the older participants in the sample, or the laboratory versus phone interview procedures (Stawski et al., 2008).

In contrast, the pattern of exposure or frequency of hassles during adulthood appears clear. Based on self-reports obtained in cross-sectional studies, older adults report fewer daily stressors when compared to younger adults (Almeida & Horn, 2004; Charles et al., 2010;). Illustrative of this pattern was Stawski et al.'s (2008) comparison between younger adults (mean age = 20 years) with older adults (mean age = 80 years), younger adults reported a stressor on about 74% of days, compared to slightly less than half (46%) in older adults. Charles et al. (2010) found that older adults reported fewer daily stressors in a late-life sample (aged 63 - 93). The number of stressors reported on a particular day mediated the relationship between age and negative affect, highlighting the key role of hassles to the level of negative affect experienced.

Evidence of decreasing hassle frequency or exposure with older age is consistent across studies, but the reasons for this decline are not. Some have suggested that the ability and motivation to avoid negative situations increase with age, or that health limitations constrain activities and reduce exposure to stressful situations (Stawski et al., 2008). Life course factors, such as the acquisition and relinquishment of goals, might influence both the level of and the types of hassles reported. For example, Aldwin et al. (1996) found that older men were less likely to report work and child-related hassles, but were more likely to report health hassles. Stressor type varied somewhat by gender in a sample of 25 - 74 year olds, with men reporting more work-related stress and women reporting more network (family and friends) stress (Almeida, 2005), further suggesting that exposure to hassles may be linked with social roles. Interpersonal tensions were the most frequent type of stressor (Almeida &

Horn, 2004), yet older adults, compared to younger adults, reported fewer interpersonal hassles (Birditt et al., 2005).

In sum, the contradictory findings on intensity are interesting and have important implications for theories of changes in emotional regulation with age. Unlike the inconsistent findings on age differences in intensity, studies of hassles frequency consistently show that older adults report fewer hassles than younger adults. This is somewhat surprising, given that older adults may experience more chronic stressors such as health problems. However, Aldwin et al. (1996) found that the higher number of health-related hassles in older men did not fully compensate for the lower number of work and family-related hassles, which reflect retirement and the end of active parenting in late life.

Uplifts: Intensity and exposure. Little is known about how exposure to uplifts changes across the lifespan and even less is known about the perceived intensity of positive experiences. In a study of daily uplifts in women 63 - 93 years old, age was associated with fewer uplifts (Charles et al., 2010). Together with the Kanner et al. (1981) study cited earlier, this might suggest that uplifts are stable through midlife and decrease in later life. Relevant to this decline in uplifts, Charles et al. (2010) found a positive association between the occurrence of daily stressors and uplifts. This finding is similar to the positive correlation found between frequencies of hassles and uplifts (DeLongis, Coyne, & Dakof, 1982) and supports the idea that older adults might choose to, or by circumstance, place themselves in fewer situations that could be stressful, yet in doing so also reduce their exposure to situations that might provide uplifts.

Limiting exposure to potentially uplifting situations might be detrimental because uplift exposure was related to gains in positive affect by women regardless of age (Charles et al., 2010). Furthermore, recent studies on the beneficial effects of uplifts on health biomarkers and positive affect suggests greater attention should be given to understanding the role of uplifts and other positive processes across the lifespan.

Age Changes in Negative and Positive Affect

Most studies of age-related change in emotion regulation focus simply on patterns of positive and negative affect, and the findings are quite mixed. Cross-sectional studies of age-related differences in negative affect (NA) present a variety of results, ranging from higher levels of NA (Diener, Sapyta, & Suh, 1998; Mroczek & Almeida, 2004), to no age differences (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000; Stawski et al., 2008) to lower levels of NA with age (Basevitz, Pushkar, Chaikelson, Conway, & Dalton, 2008; Charles et al., 2010; Mroczek & Kolarz, 1998; Uchino, Holt-lunstad, Bloor, & Campo, 2005).

Stawski et al. (2008) suggested a possible nonlinear relation between age and negative affect, which was supported by two longitudinal studies. Charles, Reynolds, and Gatz (2001) utilized 23 years of longitudinal data and found young and mid-life adults had a linear decrease until about 60, while older adults had a significantly slower rate of decrease. Griffin et al. (2006) using ten years of data from men in the VA Normative Aging Study (NAS), found that NA was described by a shallow U-shaped curve with age, with NA decreasing until about age 70, and then increasing slopes thereafter. Both studies found evidence for individual differences in NA trajectories. Charles et al. (2001) found personality, health, and education correlated with NA slopes, while Griffin et al. found that these factors moderated slope trajectories. For example, men high in neuroticism showed much steeper increases in NA slopes with age.

It should be emphasized that stressors fully mediated the relationship between age and negative affect (Charles et al., 2010). Similarly, Stawski et al. (2008) found that age differences in NA were not significant when daily stress was controlled, suggesting that all of the variance was mediated through stress exposure and there may be no difference in emotional reactivity between young and older groups. For both young and older adults, NA was significantly higher on days when stressors were reported (Stawski et al., 2008).

Cross-sectional studies of positive affect (PA) also present a varied picture regarding differences in age, although there is less variation in the results than in those with negative affect. Some results showed lower positive affect in late life (Costa, McCrae, & Zonderman, 1987; Diener et al., 1998), and others no difference (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000; Charles et al, 2001), while others showed that older adults had higher levels of positive affect when functional limitations were controlled (Kunzmann, Little, & Smith, 2000).

A number of longitudinal studies have examined how PA changes with age (for a review, see Griffin, Mroczek, & Spiro, 2006). Early studies showed that PA was stable over six (Watson & Walker, 1996) and ten-year periods (Costa et al., 1987). This was confirmed by a more recent study, at least among young and middle-aged adults (Charles et al., 2001). Studies with older samples, however, have found that PA decreased in very late life (Ferring & Fillip, 1995; Kunzmann et al., 2000). Using daily diary data, Charles et al. (2010) also found a negative relationship between positive affect and age.

Carstensen et al. (2011) utilized a burst design, with three waves of daily diary data collected over a ten-year period, and found that positive emotional experiences increased until about age 62 and then decreased thereafter. However, the relative balance between positive and negative affect increased steadily into the 90’s.

There may be individual differences in how affect changes with age. For example, there were individual differences in positive affect trajectories that were related to birth cohort, personality, health, and education (Charles et al., 2001). Griffin et al. (2006) found that there was a linear decline in PA from mid- to late-life; however, this was moderated by contextual factors. For instance, the linear decline in PA was only seen among individuals who kept working in late life, but those who were not working reported relatively stable levels with a slight decrease in late life.

Another study from NAS suggested that PA might be more responsive than NA to adverse negative effects in later life. Neupert, Almeida, Mroczek, and Spiro (2006) examined the impact of the Challenger Space Shuttle disaster on affect in a small sample of men and women who happened to be participating in a daily diary study during this time period. They found that neither NA nor physical symptoms were affected by the disaster, but that positive affect was. Further, Carstensen et al. (2011) found that positive emotional experience trajectories were influenced by personality and physical health, but there were still significant random effects, perhaps reflecting the impact of contextual factors.

Emotion Regulation and Aging

This complex and rather contradictory picture of changes in daily stress and affective processes in adulthood may be more comprehensible if considered in the context of aging and emotional regulation theories. As Griffin et al. (2006) observed, there are two basic approaches to emotion regulation in adulthood. The first is stability (Costa & McCrae, 1980), or what Brickman, Coates, and Janoff-Bulman (1978) termed the “hedonic treadmill.” To the extent that emotion regulation is related to personality, and personality often reflects relatively stable processes, then affective processes, both positive and negative, should also be relatively stable. Early views of the hedonic treadmill argued that environmental events might temporarily alter affect levels, but people largely returned to baseline.

The premise of the hedonic treadmill contrasts with contextual and developmental approaches, both of which argue for the existence of change in affect. From a contextual standpoint, we have known for some time that a large number of psychosocial factors affect well-being, including socioeconomic status, marital status, and social support (cf., Adler & Snibbe, 2003; Argyle, 1999; Ryan & Deci, 2001). These factors can be extended to ethnicity and health behavior habits (Jackson, Knight, & Rafferty, 2010), environmental context (Evans, 2004), the long-term effects of trauma (Aldwin, Levenson, & Spiro, 1994; Bonanno, 2004), and chronic role strain (Elder & Shanahan, 2006). Given this research, Diener, Lucas, and Scollon (2006) argued for a more nuanced version of the hedonic treadmill theory, recognizing that the environmental context and stress can alter emotional "set points." Various aspects of well-being may have different set points and trajectories, and individual differences in how individuals adapt to stress may result in individual differences in stability and change.

The second view argues for systematic developmental changes in emotion regulation with age (for reviews, see Aldwin, Skinner, Zimmer-Gebeck, & Taylor, 2011; Charles et al., 2010). Perhaps the best known of these is Carstensen's socioemotional selectivity theory (Carstensen, Mikels, & Mather, 2006) which posits that growing recognition of one's time limitation – whether due to aging or serious illness – can alter one's perspective such that there is a decrease in attention on negative events or themes and a re-focusing on positive ones. Thus, with age, there should be decreasing levels of negative affect and increasing – or at least stable – levels of positive affect. Consistent with this hypothesis, Carstensen et al. (2011) found that the stability of emotional experiences was greater with age.

Baltes and Smith (2003) argued that this might be true only for the young-old, but the "old-old," those in the "fourth age" of life, are challenged by serious declines in both mental and physical health and thus may show increases in negative affect and decreases in positive affect. Indeed, in a cross-sectional analysis of the Berlin Longitudinal Study on Aging, Smith, Fleeson, Geiselman, Settersten, and Kunzman (1999) found that this was particularly true of positive affect: those 85 and older reported much lower levels of PA than those between the ages of 74 and 84.

Charles (2010) recently applied socioemotional selectivity theory to the "stress and aging" conundrum: older adults are physiologically more vulnerable to stress and in laboratory settings also appear more vulnerable, but in field studies of psychosocial stress, they often appear less vulnerable than younger adults. She argued that this is because older adults have better emotion regulation skills, especially in interpersonal situations (Berg & Upchurch, 2007). Aldwin, Park, and Spiro (2007) came to a similar conclusion, but attributed this phenomenon more specifically to appraisal processes. They argued that the apparent better ability of older adults to maintain equanimity in the face of stress was derived from a greater perspective based on a long history of coping more or less successfully with stressors. Thus, older adults appear less likely to appraise situations as problems, and are more likely to use minimalist strategies that deflect or decrease negative arousal (see Aldwin, 2007). Boeninger et al. (2009) tested the appraisal part of this hypothesis and found that nearly all of the variance in older men's ratings of the stressfulness of problems was due to age differences in primary appraisal processes concerning the type of problem the hassle posed (e.g., harm, threat loss, challenge, threat to others, or annoyance). Older men reported fewer appraisals of particular events, suggesting that they may be more likely to keep problems from multiplying across domains (Pearlin, Mullan, Semple, & Skaff, 1990), thus decreasing stress levels.

These different theoretical approaches to aging and emotion regulation make clearly different predictions of how positive and negative affect should change with age, with some arguing for stability, others for differential patterns of increase in positive and decrease in negative affect, and yet others for non-linear patterns. From a transactionalist viewpoint (Aldwin, 2007; Lerner, 2006), however, changes in emotion regulation with age cannot be adequately examined without understanding the context in which these changes occur, which clearly can influence emotional trajectories. Therefore, examining how negative and positive experiences -- hassles and uplifts – change with age can better address this theoretical controversy, especially if one differentiates between exposure to the event and the appraisal (intensity ratings) of its impact.

Present Study

The purpose of this study was to gain insight into changes in emotion regulation in late life by examining how hassles and uplifts trajectories changed over 16 years in a sample of middle-aged and older men. To our knowledge, the VA NAS is the only study which has longitudinal data on hassles and uplifts over an extended period of time, and thus we are uniquely situated to examine emotion regulation with age in the context of daily experiences. We examined four sets of questions.

(1) *Does emotion regulation change with age?* We used ratings of hassles and uplifts intensity as an indicator of emotion regulation. If the personality/hedonic treadmill approach is correct, then intensity ratings for both hassles and uplifts should be relatively stable. However, if the developmental approach is correct, there should be decreases in the intensity ratings for hassles and increases (or at least stability) in intensity ratings for uplifts, with a possible reversal of these trends in very late life (e.g., >75). We also hypothesized that there would be individual differences in the trajectories of hassles or uplifts with age, which may reflect the various theories on change and stability in affect.

(2) *Does exposure to hassles and uplifts change with age?* Given the normative changes, including loss of social roles in later life, it is likely that there will be decreases in exposure to both hassles and uplifts, although very late life may show an increase in hassles as individuals face functional limitations which can make activities more difficult. Again, we expect individual differences in patterns of changes in exposure to both hassles and uplifts with age.

(3) *Do the summary hassles and uplifts scales change with age, and are there individual differences therein*? We explored whether the summary scores reflected primarily emotion regulation patterns or exposure patterns, or some combination thereof.

(4) *Do people generally show similar changes in hassles and uplifts?* We also examined the overlap in patterns of trajectories between hassles and uplifts trajectory classes. We suspected that individuals may show similar hassles and uplifts trajectories (e.g., low stable in both or high variable in both), but, given Diener et al.'s (2006) caution that different aspects of well-being exhibit different trajectories, it is possible that some individuals will show discrepant patterns.

METHODS

Sample and Procedure

The VA Normative Aging Study (NAS) screened approximately six thousand men in the Boston area between 1961 and 1970 based primarily on their health status. The initial sample consisted of 2,280 men aged 21 to 81 at enrollment, who were free of serious chronic illness and had blood pressures below 140/90. These men also had extensive family and social ties in the region and were likely to remain in the area. They had a higher socioeconomic status than the general Boston population: approximately 90% had a high school diploma. More than 91% of men were married at enrollment. The sample reflected the racial profile of Boston in the late 1960s, primarily White (Spiro & Bossé, 2001).

NAS men complete biomedical examinations every three years. Starting in 1989 the Combined Hassles and Uplifts Questionnaire (Delongis et al., 1988) was completed on the day of the medical examination. To obtain the study sample, we began with 1,389 men who were alive in 1989 and who participated in medical exams or completed questionnaires any time between1989 to 2004. Of these, 1,336 individuals (96%) completed the hassles and uplifts questionnaires at least once during the period. The men were aged 48 to 101;

however, given the small numbers under 53 or over 85, we excluded 104 observations within 89 individuals. (Note that some of these 89 men nonetheless had observations within the designated age range; only 21 men had all observations excluded from the sample). The final sample included 1,315 men with a total of 3,894 observations (mean of 3.6 observations, SD = 1.3, range = 1- 6). The mean age of the sample in 1989 was 63.31 (SD = 7.6).

Most of the study sample (88%) was married. More than half (52%) of them were retired, but 40% of those retirees were still employed part-time. 9% of the study sample did not complete high school, 25% of them had high school degree, and the rest had at least some college education. The study sample did not differ from the 74 men omitted on age, education, marital status, or employment status.

Measures

The *Combined Hassles and Uplifts Scale (CHUS;* DeLongis et al., 1982) includes 53 items that survey health, work, interpersonal, intrapersonal and environmental stressors in the past week. Each stem item is rated as to the extent it has been both a hassle and an uplift, using a 4-point Likert scale (0 = *none or not applicable* to 3 = *a great deal*).

We computed three different types of scores for both hassles and uplifts. First, we computed intensity scores, which were the averages of the ratings for the items which the respondents indicated they had experienced. The intensity scores ranged from 1 to 3 for both hassles (M=1.28, SD=.33) and uplifts (M=1.75, SD=.45). Second, exposure scores for both hassles and uplifts were counts indicating the number of items that the respondent had experienced. The ranges were 0 through 53. The mean (SD) of hassle and uplifts counts were 14.47 (SD=10.76) and 24.43 (SD=11.73), respectively. Lastly, we combined these two components by summing responses across the 53 items. The possible ranges of the combined scores were 0-159; the ranges were 0 to 140 for hassles (M=18.96, SD=15.90) and 0 to 158 for uplifts (M=43.40, SD=25.33).

Analyses

To investigate Questions #1, 2, and 3, we employed two different types of longitudinal analyses. First, to examine normative and age-related changes as well as individual differences in hassles and uplifts intensity, exposure, and summary scores), we fit multilevel-longitudinal models with linear and non-linear age terms. Next, to determine classes of change of hassles and uplifts with age, we used growth mixture models (GMM). For both types of analyses, the time axis was the 33-year age-span rather than the 16-year time period.

We computed the trajectories of hassles and uplifts from the ages of 53 to 85 using multilevel longitudinal modeling (Hox, 2002) in *STATA 12* (StataCorp, 2011). We used the *xtmixed* command for intensity and combined scores (continuous variables) and *xtmepoisson* command for exposure scores (count variables) (Rabe-Hesketh & Skrondal, 2012). All three types of hassles and uplifts scores can be considered two-level data with occasions nested in individuals. Multilevel models handle missing data by using all available information (Hox, 2002), and do not assume an equal number of observations at each wave or equal spacing between waves.

When we examined mean scores by age, there appeared to be non-linear trends (see Table 1). Thus, we tested a quadratic age term at each step. We tested the fixed effects, and then we added random intercepts. Next, the random effect of age was added in the model, and then age squared. Age was centered at 53.

$$Y_{ij} = \beta_0 + (\beta_{1} + \zeta_{ij})\,(\text{centered age}) + \beta_2\,(\text{centered age})^2 + \zeta_j + \varepsilon_{ij} \qquad \text{EQ 1}$$

In the equation, Y_{ij} refers to hassles or uplifts scores at each age. B_0 represents the mean intercept, and ε_{ij} represents the residual at each age *i* within an individual *j*. The value of β_2 indicates the fixed change of hassles or uplifts scores per year, while β_3 refers to the fixed effect of non-linear effect per year. The ζ_j indicates a random intercept for each individual which allows for individual differences in the initial level (intercept) for each person. The ζ_{ij} is the random effect of linear age slopes. (Note that preliminary analyses indicated no significant random effects for the quadratic age term, so those analyses were omitted.)

We identified different patterns of trajectories using a mixture model approach that allows a mixture of probability distributions (Jones, Nagin, & Roeder, 2001). The mixture models are used to identify subgroups in the population having different parameter values. The marginal density for an outcome *y* can be expressed in the following equation.

$$f(\boldsymbol{y}) = \sum_{k=1}^{K} \Pr(C = k) \Pr(\boldsymbol{Y} = \boldsymbol{y} | C = k) = \sum_{k=1}^{K} p_k f(y, \lambda_k). \quad \text{EQ 2}$$

In this equation, C refers to a general class, *k* refers to a particular class; p_k is the probability of belonging to class *k* with corresponding parameter, λ_k, that can vary by time in longitudinal data.

The TRAJ procedure in SAS allows modeling $\Pr(\boldsymbol{Y} = \boldsymbol{y} | C = k)$ in several ways. For the intensity and summary scores, the *CNORM* command was used because this model is appropriate for continuous data (Jones et al., 2001), where *j* is the group tested:

$$y^{*j}_{it} = \beta^j_0 + \beta^j_1(\text{centered age})_{it} + \beta^j_2(\text{centered age})^2_{it} + \varepsilon_{it}. \quad \text{EQ 3}$$

The *ZIP* (zero-inflated Poisson) command was employed for the exposure scores, as these were count variables which had highly skewed Poisson distributions,

$$ln(\lambda^j_{it}) = \beta^j_0 + \beta^j_1(\text{centered age})_{it} + \beta^j_2(\text{centered age})^2_{it} \quad \text{EQ 4}$$

To identify the number of classes, we compared Bayesian information criterion (BIC) for successive models with the same class structure (equation) but different numbers of classes. In this procedure, we started with one class and added successive classes, examining change in BIC, as indicated by 2(ΔBIC), to determine if goodness of fit of the model improved, or until the model no longer converged. A 2(ΔBIC) of at least 10 was needed to establish the existence of an additional class (Jones et al., 2001). For each class, we tested both linear and quadratic age terms, centered at age 53, and then eliminated non-significant terms.

Finally, we examined Question #4 using a two-step process. First, the GMM analysis assigned each individual to a particular class for each type of score. We then compared overlapping membership between classes of hassles and uplifts summary scores and used X^2 to test for independence.

RESULTS

Hassles and Uplifts Scores over Age

Table 1 shows the means and standard deviations for the hassles and uplifts scores grouped by three-year age groups. The change patterns varied with age differently depending on the type of scores. For example, the intensity scores for both hassles and uplifts were slightly non-linear but exposure scores decreased. Combined hassle scores continued to decrease until the 70s but rose again in the 80s, whereas combined uplift scores decreased until 80s. Across age, the NAS men had higher uplifts scores than hassles scores, regardless of the score types.

<Insert Table 1 about here>

Trajectories of Hassles and Uplifts

Intensity scores. Computing multilevel models across age (see Table 2) yielded a significant negative effect of age on hassles intensity, B_1 = -.007, $p < .05$, which was offset by a significant positive age quadratic coefficient, B_2 =.0003, p <.001. Hassles intensity showed a shallow U-shape trajectory, decreasing slightly until about age 68, and then increasing again (Figure 1a). In contrast, age had a positive linear term on uplifts intensity scores, B_1 = .010, p < .001, but a negative quadratic term which approached significance, B_2 = -.0002, p = .068). In other words, uplifts intensity showed an inverted U-shaped trajectory, increasing until about age 60 but then showing a decrease thereafter (Figure 1a). For both hassles and uplifts, the age-related random effects were significant, $\chi^2(3) = 498.32$, $p < .001$ for hassles; $\chi^2(3) = 1130.02$, $p < .001$ for uplift. Table 2 shows the significant terms for both intercepts and slopes.

<Insert Table 2 and Figure 1 about here>

Exposure scores. The linear age term of exposure scores was significant and negative, $B_1 = - .018$, $p < .01$, but the quadratic term was not significant, $B_2 = -.0001$, ns (see Table 2). As indicated in Figure 1b, hassles exposure decreased from mid- to late life. In contrast, for uplifts, the linear term for age was positive and significant, $B_1 = .01$, $p < .01$, and the significant quadratic was negative, $B_2 = -.001$, $p < .001$. The resulting trajectory showed an increase from the 50's to about age 62, and then a decrease thereafter (see Figure 1b). Again, the random effects for both models were highly significant, $\chi^2(3) = 18530.17$, $p < .001$ for hassles; $\chi^2(3) = 11833.74$, $p < .001$ for uplifts, suggesting age-related individual differences in the intercepts and age effect. Table 2 presents the significant terms for both intercepts and slopes.

Summary scores. The linear age term was negative for hassles, $B = 1.72$, $p < .001$, and the quadratic effect was also significant, $B = .019$, $p < .01$ (see Table 2). The summary hassles score showed a shallow U-curve with age, with the trajectory declining until about age 78, and then increasing again the 80s (Figure 1c). In contrast, the linear age term for the summary uplifts scores was not significant, $B = .124$, ns, however, the quadratic term was significant, $B = -.019$, $p < .01$. Uplifts showed an accelerated decrease with age. For both outcomes, the age-related random effects were significant, $\chi^2(3) = 1317.12$, $p < .001$ for hassles and $\chi^2(3) = 1168.82$, $p < .001$ for uplifts. The significant terms for both intercepts and slopes are shown in Table 2.

Classes of Hassles and Uplifts Trajectories

To determine the classes of the hassles and uplifts scores in GMM, we started with one class and added successive classes, examining change in BIC, as indicated by 2(ΔBIC), to determine whether goodness of fit of the model improved, or until the model no longer converged. A 2(ΔBIC) of at least 10 was needed to establish the existence of an additional class (Jones et al., 2001). Tables 3 and 4 present the results of the GMM analyses, with Table 3 showing the fit for different numbers of classes, and Table 4 presenting the parameter estimates for the resulting "best" class for each outcome.

<Insert Tables 3 and 4 about here>

Intensity scores. As shown in Table 3, the model fit improved for hassles intensity scores until we added a fifth class, at which step the 2(ΔBIC) had a negative value of -16.54. Similarly, the model fit for uplifts also improved until we added the the fifth class, 2(ΔBIC) = -10.02. Thus, a four class solution appeared to be the best fit for both hassles and uplifts intensity.

As can be seen in Table 4 and Figure 2a, three of the classes in both measures did not have significant linear trends across age, and basically represented classes that were consistently low, medium, and high (Classes 1, 2, and 4, respectively). Only 30% of the men were in the stable hassles classes, as opposed to 80% of men who were in the stable uplifts classes. Class 3 in both measures had significant quadratic terms. However, for the hassles intensity scores, the trajectory was a shallow U-curve, with the lowest point between ages 65 and 70 (70%). The non-linear uplifts class showed the mirror image: a shallow inverted U with the peak between ages 65 and 70 (but only 20%). Note that the men in the non-linear uplifts class reported relatively higher scores than the non-linear hassles group.

<Insert Figure 2 about here>

Exposure scores. Exposure scores for hassles showed a much more complex pattern (see Tables 3 and 4). Ten classes were identified, nearly all of which were non-linear and had roughly the same percentage of men (range = 4 – 17%) (see Figure 2b). Thus, we did not attempt to individually characterize these classes, but rather note some general tendencies. The men in two of the classes (4 and 5) showed relatively stable levels of moderate hassles, while Class 10 showed a linear decrease from very high initial levels. The other classes showed varying forms of non-linear trajectories, with some showing quadratic decreases and others quadratic increases.

The uplifts exposure showed a similarly complex pattern, with nine classes identified, most of which were non-linear. Again, the men were roughly equally distributed across classes, with the largest having only 26% of the sample. Three groups showed relative declines from high and medium-level intercepts, (Classes 4, 6, and 8), one was relatively stable with low levels of uplifts (Class 1), and the rest showed different non-linear patterns. Interestingly, three groups (Classes 5, 7, and 9) had quadratic slopes with peaks at ages 74, 68, and 62, respectively, while Class 3 was a dramatic U-shaped curve with a nadir around age 70. Finally, the men in Class 2 started with low levels of uplifts but showed a dramatic increase in later life starting at age 65.

Summary scores. The GMM results for the summary scores were more similar to those for the intensity scores than the exposure scores. Three classes were identified for the hassles summary score, and four for uplifts summary scores (see Table 3). For hassles summary scores, both Classes 1 and 3 had significant intercept, linear and quadratic terms, while for Class 2 only the intercept and linear terms were significant (see Table 4). For the uplifts summary scores, only the intercept was significant for three classes (Classes 1, 3, and 4), while Class 2 had significant intercept, linear, and quadratic terms. As seen in Figure 2c, most of the men (67%) were in the low, relatively stable hassles summary class and reported very few hassles over time. The quadratic term was significant, indicating a slight decrease from mid- to late life, and a very slight increase after about age 75. In contrast, the men in

Class 2 (29%) were characterized by medium level intercepts, and showed a more pronounced but still shallow U-related change with age. Finally, there was a small (3.68%) class characterized by high, stable slopes. These men seemed to have high levels of stress and may be a chronic stress group.

For the summary uplifts score, four classes were identified. As Table 3 indicates, solving for five classes did not significantly increase the fit, 2(ΔBIC) = .90, so we kept the four-class solution. Interestingly, Table 4 showed that three classes had no significant linear terms, suggesting no changes in uplifts with age. Inspection of Figure 2a showed a similar pattern to hassles, but with some important differences. In contrast to hassles, it was the middle, nonlinear class that was the most frequent (49%), and the slope was more of an inverted U, with slight increases up until about age 65 and then a sharp decline thereafter. The low, stable uplifts group was the next largest, at 27%. Further, those with high, stable uplifts split into two groups. The high, stable group (22%) reported about the same number of uplifts as the high, stable hassles group, but then there was a small group (3%) that reported a very high level of hassles which also showed no change with age.

Overlapping Class Memberships in Hassles and Uplifts by Intensity

In this analysis, we examined the overlap in class memberships in intensity scores only, as we were most interested in the relative balance between patterns of positive and negative appraisals (and the exposure scores clearly reflected individual differences in environmental contexts). Table 5 presents the number men in each of the overlapping hassles and uplifts intensity classes, with percentage of total sample size in parentheses). The classes were not independent, $\chi^2(9) = 213.74$, $p < .001$. Most of the sample was in one of three classes: medium, non-linear hassles and low uplifts (n = 299), medium stable uplifts (n = 501), or medium non-linear uplifts (n = 180). In other words, most NAS men were variable in their ratings of hassles intensity but relatively stable in their ratings of uplifts intensity.

This is contrary to our hypothesis that positive and negative affective processes would be roughly parallel.

<Insert Table 5 about here>

DISCUSSION

To examine emotion regulation in context, we analyzed trajectories of hassles and uplifts in middle- through late adulthood using longitudinal data over 16 years. We separated hassles and uplifts scores into three different types, including intensity, exposure, and summary scores. The results showed that, regardless of the score type, hassles and uplifts showed different patterns of trajectories over age, most of which were non-linear.

Overall Trajectories

Intensity scores were examined as an indicator of emotion regulation in context. Results showed modest changes in intensity of both hassles and uplifts, but in opposite directions. The intensity ratings of hassles decreased until about age 68 and increased thereafter. In contrast, uplifts intensity scores increased gradually until age 80 and then leveled off. This supports both of the contrasting developmental theories of emotion regulation – the increase (or stability) of positive affect (cf., Carstensen et al., 2011; Charles et al., 2010) and the increase in negative affect in very late life (Baltes & Smith, 2003).

These findings also shed light on some of the discrepancies in the cross-sectional literature on hassles and daily stressors, which variously show lower hassles with age (Almeida & Horn, 2004) and no differences between older and younger groups (Stawski et al., 2008). Our (shallow) U-shaped results in hassles intensity trajectories suggest that hassles decrease with age until about age 68, supporting Almeida and Horn, but then increase thereafter. Given the average age of Stawski et al.'s older sample was 80, it may be that the comparison of 80-year-olds with younger adults missed the non-linear change in mid-life.

The increase in uplifts until age 75, which then the leveled off, contradicted earlier cross-sectional and some longitudinal findings that older adults report less positive affect (Costa et al., 1987; Diener et al., 1998) or those that found no age differences (Carstensen et al., 2000; Charles et al., 2001). However, it is similar to Carstensen et al.'s (2011) findings of increases in positive affect until about age 60, but in our study uplifts increased until about age 75. This difference might be explained by Kunzmann et al.'s (2000) study, which showed that controlling for functional limitations revealed higher levels of positive affect with age. This suggests that personal and/or contextual factors may obscure older adults' developmental changes in emotion regulation. We argue that separating exposure from intensity better differentiates between contextual and developmental effects on emotion regulation.

With regard to exposure, our findings of linear decline in hassles are similar to daily diary findings by both Almeida and Horn (2004) and Stawksi et al. (2008). Our findings of increases in uplifts exposure until age 62 and decreases thereafter supports Charles et al.'s (2010) longitudinal findings documenting similar decreases. Despite this decrease in uplifts exposure with age, uplifts levels were always higher than hassles levels, supporting Carstensen al.'s (2011) findings of a positive affectivity balance.

The summary hassles and uplifts trajectories reflected both developmental trends in intensity and contextual exposure. Despite the linear decrease in hassles exposure, the summary hassles scores were nonlinear, decreasing until about age 71 and then increasing slightly. This reflects the contribution of developmental changes in intensity to the summary scores. In contrast, uplifts intensity showed a linear increase with age, but exposure showed a non-linear decrease. Thus, summary uplifts scores were basically flat until about age 62 and decreased thereafter, but not as steeply as the exposure scores, as these were mitigated by the increase in uplifts intensity.

Taken together, these findings can be interpreted in a number of interesting ways. First, the intensity and exposure scores for both hassles and uplifts showed different patterns. For both, intensity increased slightly, although exposure went down. One interpretation might be that the number of hassles declines, but their stressfulness increases (which is what one might expect as individuals face the challenges of loss and decline in late life). However, the increase in intensity might also reflect problems in self-regulation in late life, given possible declines in coping resources such as cognition, social support, and so on.

This is countered by the fact that although exposure to uplifts goes down, their intensity goes up. As mentioned earlier, this supports the positivity bias found other studies in late life (Carstensen et al., 2011). The combination, however, shows that the intensity scores mitigate the change in exposure. Although exposure goes down, intensity goes up, resulting in rather flat curves for hassles, and mitigating the decrease in uplifts.

Differences in Developmental Trends

Another interpretation is that there are individual differences in developmental trajectories, which was supported by our GMM analyses. For both hassles and uplifts, there were remarkable differences in the number of classes found for intensity and exposure scores, with fewer classes for intensity scores. Both hassles and uplifts showed very similar classes. There were four different classes of trajectories, three of which reflected stability: low, medium and high. Both had one non-linear class – for hassles, there was one group which had a shallow U curve, with decreases until about age 67 and increasing thereafter. The non-linear uplifts intensity class showed the opposite pattern, with increases until age 67 and decreases thereafter.

The remarkable contrast, though, was that the non-linear class for hassles included 70% of the sample, while only 20% of the sample showed change in uplifts. This pattern of results supports Diener et al.'s (2006) modified hedonic treadmill theory -- especially for positive affect. Why there were almost normative changes in hassles intensity, however, is not clear. This suggests that emotion regulation ability increases up through young old age, but then decreases again in very late life, supporting Baltes and Smith's (2003) notion of a difficult fourth age.

In contrast, there were marked individual differences in patterns of exposure to both hassles and uplifts, with 10 and 9 different classes identified, respectively. We suspect that these classes reflect individual differences in life course variables – changes in social roles such as retirement, widowhood, and remarriage; specific events, such as losses (family, friends) or gains (e.g., grandchildren); and other factors such as socioeconomic or health status (see Mancini, Bonanno, & Clark, 2011).

The summary score classes were far more similar to intensity classes, with some interesting differences. Now, only 4% were in the stable category for high hassles –96% of the sample showed U-shaped curves with age. Those with very low hassle scores showed decreases until their mid-70s, and only a slight uptick thereafter. Those with medium hassles scores also showed decreases until their mid-70s but with a slightly greater increase thereafter. For uplifts, 49% were now in the change group, with decreases after age 70. Thus, emotion regulation, especially for positive events, may be relatively stable, but the press of contextual factors may result in change. This complex pattern suggests that both personality and contextual factors combine in complex ways to affect both appraisal (Aldwin et al., 2011; Lazarus & Folkman, 1984) and developmental processes (Lerner, 2006).

Finally, we examined whether individuals exhibited similar patterns of change and stability in hassles and uplifts. For example, if hassles were relatively stable, were uplifts also stable? The answer was, simply, not really. Less than 10% of the sample was in comparable stability groups (e.g., low-low, medium-medium, or high-high). Approximately 39% of the sample had membership in the medium non-linear hassles and medium stable uplifts classes, and 23% were in the medium non-linear hassles and low uplifts classes. Thus, negative and positive affect may show different trajectories within the same individuals.

Limitations

There were a number of limitations to this study, including generalizability. The sample consisted largely of white men. While this reflected the demographics of Boston in the 1960's when the NAS began, other results may well be found in samples with women and minorities. The second concerns growth mixture models. In particular, the complexity of the results with the hassles and uplifts exposure classes are not likely to be replicated in other samples, given that these undoubtedly reflect individual differences in family and other social contexts, as well as life course events. Our intent with these analyses was not to definitively identify all possible types of patterns of hassles and uplifts exposure, but rather to contrast exposure patterns with intensity ratings, which we assumed reflect emotion regulation patterns. These limitations are more than counterbalanced by the strength of the longitudinal analyses which resolved contrasting findings in the cross-sectional literature and showed that the different theories were all partially supported, depending upon whether intensity, exposure, or summary scores were examined.

Summary and Future Research

We examined longitudinal changes in hassles and uplifts in the context of theories of emotion regulation, specifically contrasting hedonic treadmill theories with those arguing for developmental change (both positive and negative). Our argument that emotion regulation processes should not be divorced from contextual variation was supported. While intensity ratings, especially for uplifts (presumably reflecting positive affect) were fairly stable, this was overshadowed by contextual variation – for about half of the sample, decreasing exposure to uplifts resulted in overall lower summary uplifts scores. In contrast, change in hassles intensity (presumably reflecting negative affect) was much more variable, with nearly all of the sample showing decreases in hassles until the 70's and increases their after. Emotion regulation processes may moderate the effect of exposure, with increases in intensity scores either intensifying the effect of exposure to hassles or mitigating the decrease in exposure to uplifts. Thus, evidence was found for all of the theoretical models examined here, suggesting that both hedonic treadmill and developmental theories accurately reflect some aspects of the complexity of changes in emotion regulation with age. Further research should further examine longitudinal change of affect in context in more diverse populations, and extend these analyses be examining reasons for change and other aspects of the regulatory process, including coping strategies.

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Table 1. Hassles and Uplifts Means and SDs by Age Group

	Intensity					
	Hassles			Uplifts		
Age	*n*	*Mean*	*SD*	*n*	*Mean*	*SD*
53-55	99	1.27	.31	102	1.68	.39
56-58	202	1.26	.29	206	1.74	.44
59-61	315	1.27	.29	328	1.72	.43
62-64	468	1.27	.29	487	1.74	.43
65-67	565	1.26	.34	583	1.74	.44
68-70	591	1.27	.32	612	1.76	.45
71-73	501	1.27	.33	521	1.74	.46
74-76	401	1.31	.37	412	1.76	.47
77-79	259	1.32	.33	279	1.77	.49
80-82	170	1.38	.40	170	1.76	.48
83-85	84	1.40	.42	84	1.40	.42

	Exposure					
	Hassles			Uplifts		
Age	*n*	*Mean*	*SD*	*n*	*Mean*	*SD*
53-55	104	18.38	11.58	104	27.93	11.99
56-58	207	16.87	11.67	207	27.92	11.71
59-61	327	16.10	10.96	327	16.09	10.96
62-64	489	15.88	11.24	489	26.17	11.50
65-67	589	14.52	10.97	588	25.48	12.01
68-70	623	13.48	10.23	622	24.53	11.24
71-73	533	13.64	10.48	531	23.56	11.14
74-76	435	13.12	10.28	424	21.93	11.65
77-79	287	13.92	10.25	288	21.60	11.21
80-82	177	12.99	9.78	176	20.58	11.76
83-85	95	13.55	10.93	95	19.43	11.98

	Summary					
	Hassles			Uplifts		
Age	*n*	*Mean*	*SD*	*n*	*Mean*	*SD*
53-55	104	23.78	16.26	104	48.34	25.84
56-58	207	21.92	16.41	207	49.64	26.22
59-61	327	20.87	15.92	331	47.58	25.75
62-64	489	20.85	16.90	489	46.62	25.66
65-67	589	18.74	16.19	588	45.44	26.47
68-70	623	17.44	15.06	622	44.36	25.97
71-73	533	17.74	15.36	531	41.77	23.84
74-76	435	17.38	15.36	424	38.51	23.10
77-79	287	18.59	15.69	288	38.34	23.03
80-82	177	17.96	15.08	176	36.50	24.03
83-85	95	19.57	17.13	95	33.65	23.33

Table 2. Multilevel Longitudinal Models for Hassles and Uplifts Trajectories over Age

	Intensity			
	Hassles (*n* = 1293)		Uplifts (*n* = 1306)	
	B	*SE*	*B*	*SE*
Fixed effects				
Constant	1.292***	.022	1.648***	.029
Age	-.007*	.003	.010**	.004
Age2	.0003***	.0001	-.0002†	.0001
Random effects				
Slope variances	.009	.002	.011	.003
Intercept variances	.170	.025	.335	.028
Residual variances	.258	.004	.299	.005
LR Test vs. Linear Regression χ^2 (df)	χ^2 (3)= 498.32	Prob > χ^2 =0.000	χ^2 (3)=1130.02	Prob > χ^2 =0.000

	Exposure			
	Hassles (*n* = 1313)		Uplifts (*n* = 1311)	
	B	*SE*	*B*	*SE*
Fixed effects				
Constant	2.678***	.065	3.088***	.044
Age	-.018**	.007	.018***	.005
Age2	-.0001	.0002	-.001***	.0001
Random effects				
Slope variances	.074	.003	.047	.002
Intercept variances	1.284	.049	.849	.033
Residual variances	-	-	-	-
LR Test vs. Linear Regression χ^2 (df)	χ^2 (3)= 18530.17	Prob > χ^2 =0.000	χ^2 (3)=11833.74	Prob > χ^2 =0.000

	Summary			
	Hassles (*n* = 1313)		Uplifts (*n* = 1311)	
	B	*SE*	*B*	*SE*
Fixed effects				
Constant	26.300***	1.063	46.637***	1.759
Age	-.830***	.125	.124	.205
Age2	.019***	.004	-.019**	.006
Random effects				
Slope variances	.366	.104	.619	.159
Intercept variances	14.037	.858	23.536	1.471
Residual variances	10.175	.155	16.653	.257
LR Test vs. Linear Regression χ^2 (df)	χ^2 (3)= 1317.12	Prob > χ^2 =0.000	χ^2 (3)=1168.82	Prob > χ^2 =0.000

Note. † $p < .1$, * $p < .5$, ** $p < .01$, *** $p < .001$

Table 3. Determining Numbers of Classes for Hassles and Uplifts Trajectories

# of Groups	*Hassles*					
	Intensity (n=1293)		Exposure (n=1313)		Summary (n=1313)	
	BIC	2(ΔBIC)	BIC	2(ΔBIC)	BIC	2(ΔBIC)
1	-2404.11	-	-24063.55	-	-15689.13	-
2	-2220.06	368.10	-17492.71	13141.68	-15200.95	976.36
3	-2185.75	68.62	-15982.57	3020.28	-15059.00	283.90*
4	-2168.92	33.66*	-15627.24	710.66	False Convergence	
5	-2177.19	-16.54	-15384.23	486.02		
6			-15189.49	389.48		
7			-15136.98	105.02		
8			-14887.54	498.88		
9			-14873.98	27.12		
10			-14820.62*	106.72		
11			False Convergence			

# of Groups	*Uplifts*					
	Intensity (n=1306)		Exposure (n=1313)		Summary (n=1311)	
	BIC	2(ΔBIC)	BIC	2(ΔBIC)	BIC	2(ΔBIC)
1	-2673.82	-	-21842.53	-	-17731.37	-
2	-2242.32	863.00	-17637.21	8410.64	-17331.72	799.30
3	-2134.31	216.02	-16573.00	2128.42	-17221.38	220.68
4	-2123.68	21.26*	-16268.42	609.16	-17184.97	72.82*
5	-2128.69	-10.02	-16034.52	467.8	-17184.52	.90
6			-15879.26	310.52		
7			-15752.24	254.04		
8			-15683.78	136.92		
9			-15645.42	76.72*		
10			-15645.06	.72		

Note. (ΔBIC) = BIC of the alternative (more complex) model – BIC of the null (simpler) model; 2(ΔBIC) higher than 10 indicates the alternative model is strongly favored (Jones et al, 2001)

*Indicates model selected as “best fitting.”

Table 4. Latent Class Growth Analysis Results

				Intensity					
		Hassles (4 groups)					Uplifts (4 groups)		
Class	(%)	Parameter	Estimate	S.E	Class	(%)	Parameter	Estimate	S.E
1	(17.98)	Intercept	.837***	.072	1	(29.11)	Intercept	1.351***	.022
2	(10.51)	Intercept	1.710***	.042	2	(44.00)	Intercept	1.700***	.027
3	(70.43)	Intercept	1.285***	.036	3	(19.75)	Intercept	1.979***	.076
		Linear	-.014***	.004			Linear	.024*	.010
		Quadratic	.001***	.000			Quadratic	-.001***	.000
4	(1.07)	Intercept	2.420***	.096	4	(7.14)	Intercept	2.592***	.036
				Exposure					
		Hassles (10 groups)					Uplifts (9 groups)		
Class	(%)	Parameter	Estimate	S.E	Class	(%)	Parameter	Estimate	S.E
1	(4.03)	Intercept	1.920***	.177	1	(5.28)	Intercept	2.100***	.196
		Linear	-.323***	.037			Linear	-.067*	.026
		Quadratic	.011***	.001			Quadratic	.002*	.001
2	(8.99)	Intercept	1.774***	.234	2	(8.72)	Intercept	2.569***	.088
		Linear	-.045†	.023			Linear	-.029**	.011
		Quadratic	.003***	.001			Quadratic	.002***	.000
3	(10.35)	Intercept	2.623***	.122	3	(5.21)	Intercept	5.002***	.224
		Linear	-.163***	.023			Linear	-.295***	.034
		Quadratic	.005***	.001			Quadratic	.008***	.001
4	(17.12)	Intercept	2.482***	.020	4	(15.37)	Intercept	3.152***	.052
							Linear	-.003	.008
5	(14.89)	Intercept	2.949***	.017			Quadratic	-.001*	.000
6	(9.30)	Intercept	3.391***	.070	5	(4.84)	Intercept	-4.720***	.518
		Linear	-.061***	.015			Linear	.846***	.054
		Quadratic	-.004***	.001			Quadratic	-.022***	.001
7	(9.37)	Intercept	3.458***	.084	6	(25.98)	Intercept	3.389***	.034
		Linear	-.016	.015			Linear	.000	.005
		Quadratic	-.003***	.001			Quadratic	-.0004*	.0002
8	(6.55)	Intercept	1.305***	.212	7	(6.61)	Intercept	1.180***	.135
		Linear	.156***	.021			Linear	.333***	.021
		Quadratic	-.003***	.001			Quadratic	-.012***	.001
9	(10.89)	Intercept	3.198***	.063	8	(22.99)	Intercept	3.733***	.017
		Linear	.048***	.010			Linear	-.009***	.001
		Quadratic	-.003***	.000	9	(4.98)	Intercept	2.973***	.119
10	(8.51)	Intercept	3.693***	.037			Linear	.166***	.022
		Linear	-.013***	.002			Quadratic	-.010***	.001

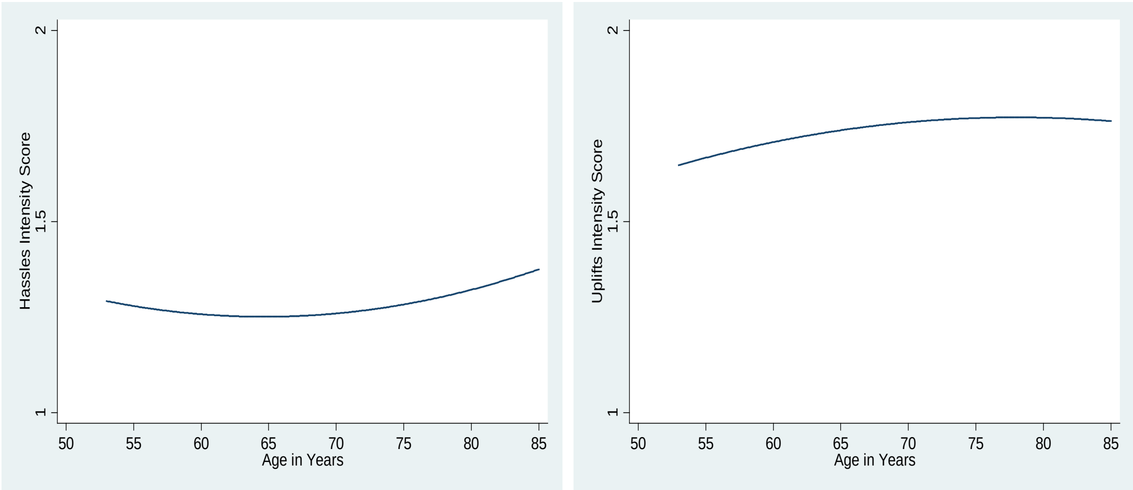
Table 4 (Cont'd). Latent Class Growth Analysis Results

Summary									
Hassles (3 groups)					Uplifts (4 groups)				
Class	(%)	Parameter	Estimate	S.E	Class	(%)	Parameter	Estimate	S.E
1	(67.11)	Intercept	16.525***	1.066	1	(26.60)	Intercept	20.487***	1.174
		Linear	-.605***	.136	2	(48.75)	Intercept	44.313***	2.350
		Quadratic	.014***	.004			Linear	.330	.281
2	(29.21)	Intercept	40.687***	2.258			Quadratic	-.027***	.009
		Linear	-1.226***	.264	3	(22.09)	Intercept	66.092***	1.240
		Quadratic	.031***	.008	4	(2.55)	Intercept	101.130***	.236
3	(3.68)	Intercept	58.301***	1.606					

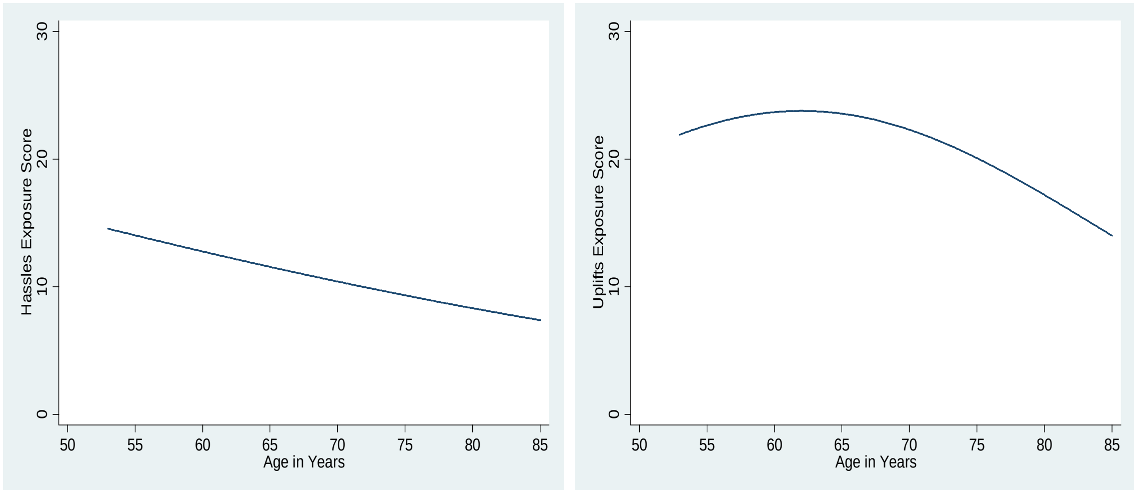
Table 5. Cross-tabulation of Hassles and Uplifts Intensity Classes (Total Percent) (N=1,286)

	Uplifts Class			
Hassles Class	Low-Stable (n=368)	Medium-Stable (n=601)	Medium-Nonlinear (n=242)	High-Stable (n=75)
Low-Stable (n=156)	61 (4.74)	63 (4.90)	24 (1.87)	8 (0.62)
Medium-Stable (n=102)	8 (0.62)	36 (2.80)	35 (2.72)	23 (1.79)
Medium-Nonlinear (n=1014)	299 (23.25)	501 (38.96)	180 (14.00)	34 (2.64)
High-Stable (n=14)	0 (0.00)	1 (0.08)	3 (0.23)	10 (0.78)

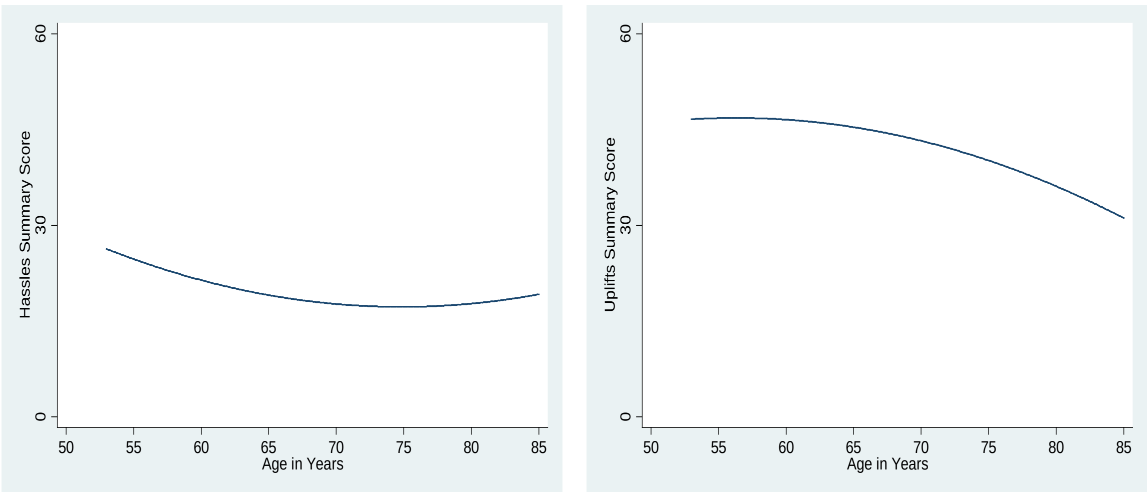
Figure Captions



a. Hassles (left) and Uplifts (right) Intensity Score Predicted Trajectories

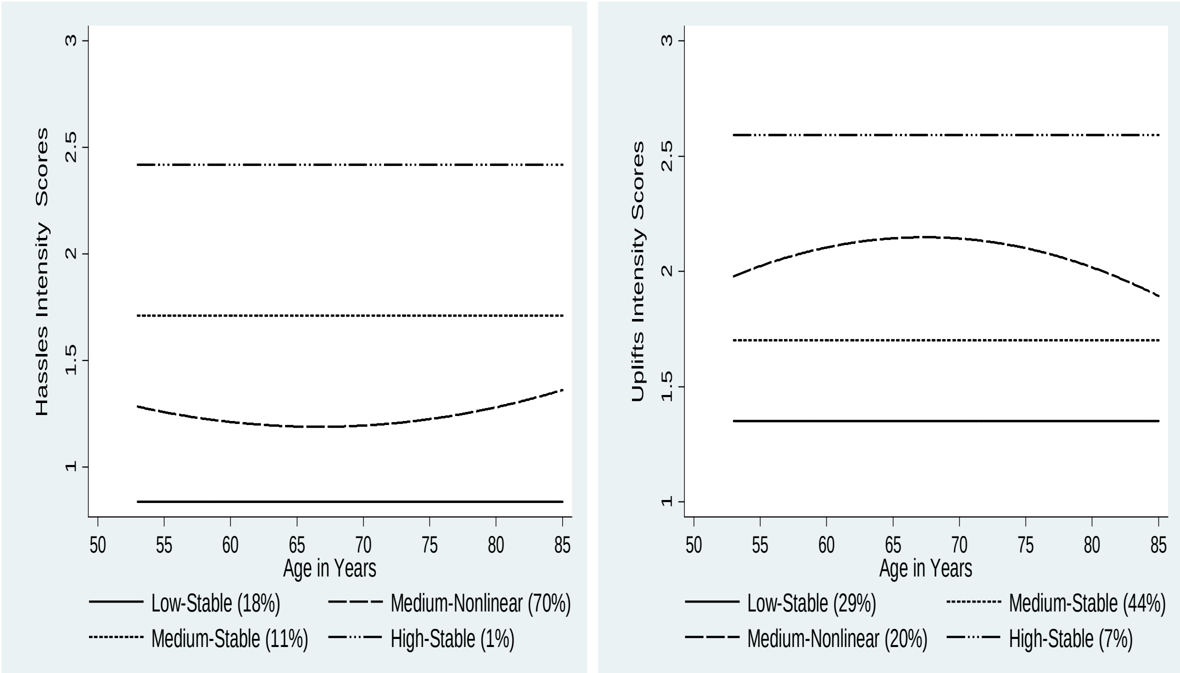


b. Hassles (left) and Uplifts (right) Exposure Score Predicted Trajectories

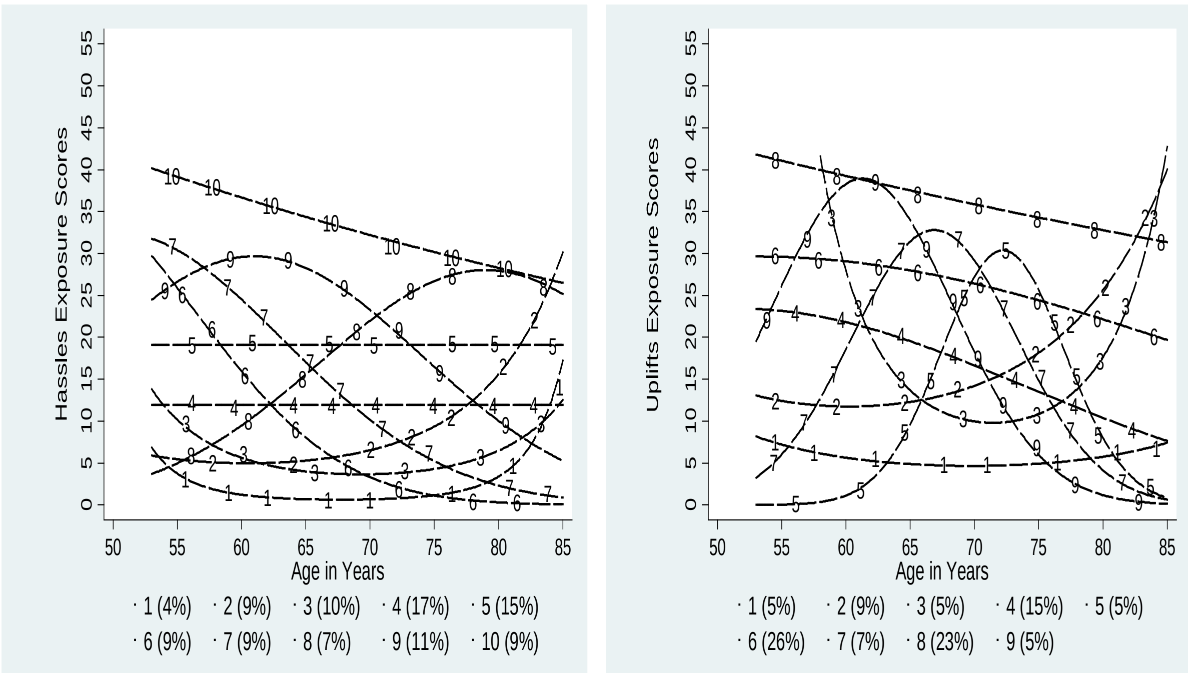


c. Hassles (left) and Uplifts (right) Summary Score Predicted Trajectories

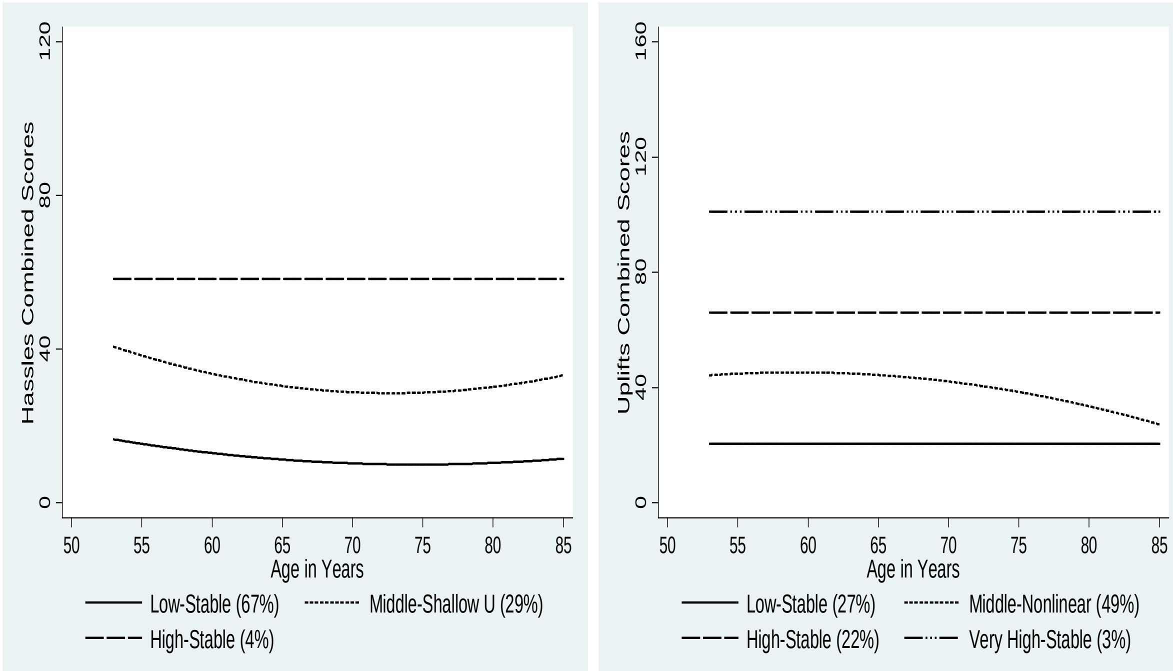
Figure 1. Predicted Trajectories of Hassles and Uplift Scores[a]



a. Predicted Trajectories for Hassles (Left) and Uplifts (Right) Intensity Scores Classes



b. Predicted Trajectories for Hassles (Left) and Uplifts (Right) Exposure Scores Classes



c. Predicted Trajectories for Hassles (Left) and Uplifts (Right) Summary Scores Classes

Figure 2. Predicted Trajectories for Hassles and Uplifts Scores Classes[a]