Published in final edited form as:

Int J Stress Manag. 2006 August ; 13(3): 253–272.

Long-Term Patterns and Predictors of Successful Stressor Resolution in Later Life

Penny L. Brennan, Kathleen K. Schutte, and Rudolf H. Moos

Center for Health Care Evaluation, Department of Veterans Affairs and Stanford University, Palo Alto, California

Abstract

At 1 year, 4 years, and 10 years after baseline, late-middle-aged adults reported whether they had successfully resolved their most important stressor of the past year. Compared to individuals who never resolved focal stressors over the 10-year interval, those who always did consistently showed less negative stressor appraisal, less reliance on avoidance coping, and less use of exploratory relative to directed coping responses, independent of type and severity of focal stressor. Less use of exploratory relative to directed coping and having more social resources, fewer health problems, and fewer depressive symptoms at baseline predicted more stressor resolution over the next 10 years. These predictors are promising foci for prospective efforts to optimize ways in which aging adults manage late-life stressors.

Keywords

life stress; coping behavior; aging

Most studies of the stress and coping process consider the prevention or alleviation of emotional distress to be key criteria of coping success (Harnish, Aseltine, & Gore, 2000). However, coping-context transactions during adulthood may also result in such important outcomes as growth (Holahan, Moos, & Schaefer, 1996), thriving (Park, 1998), and successful resolution of stressors (Harnish et al., 2000).

Stressor resolution deserves more attention from researchers interested in stress and coping during later life. Stressor resolution reflects the efficacy of coping efforts to manage or change a stressful situation, independent of emotional distress (Harnish et al., 2000). It is of interest to know whether indicators of coping effectiveness, such as stressor resolution, are more evident as people age. Furthermore, stressor resolution frees up coping resources for allocation to new and ongoing coping efforts. This assumes particular importance in late adulthood when individuals must increasingly conserve and more efficiently use coping resources.

STATEMENT OF THE PROBLEM

To our knowledge, no one has examined longitudinal patterns of successful stressor resolution during late adulthood, and there has been no research addressing factors that predict successful stressor resolution in later life. Accordingly, the purposes of this exploratory study were to (a) describe the 10-year pattern of stressor resolution in a community sample of late-middle-aged and older adults, (b) focus on group differences and (c) changes over time in appraisals and coping responses of individuals who consistently do or do not resolve their stressors during late adulthood, and (d) examine baseline personal and social resources predictive of more

occasions of successful stressor resolution over a 10-year interval. Below, we review literature relevant to each of these goals and then pose the specific research questions addressed in this study.

BACKGROUND

Ten-Year Pattern of Stressor Resolution

By late middle age, adults have accrued considerable experience with stressors and, in theory, should have culled and refined their most effective coping efforts (Aldwin, Sutton, & Lachman, 1996). Therefore, it might be expected that a high percentage of late-middle-aged adults will consistently resolve the most salient stressors they encounter. On the other hand, because of variations in the novelty, severity, and complexity of late-life stressors and variation in available coping resources, it may be difficult for adults to consistently do this. In this study, we describe the percentage of late-middle-aged and older adults who never, intermittently, or always report successful resolution of the most important stressor they experienced, 1, 4, and 10 years after baseline assessment.

Appraisal and Coping Responses Associated with Patterns of Stressor Resolution

We also examined appraisal and coping responses associated with older adults' 10-year patterns of stressor resolution. Older adults who consistently resolve their stressors may appraise and cope with stressors differently than do individuals who consistently do not resolve their stressors, independent of the type and severity of stressors encountered. Anticipating and preparing for a stressful situation, and viewing it as a challenge rather than a threat, lessens its negative emotional effects (Aspinwell & Taylor, 1997; Friedman & Scholnick, 1997). Here, we considered whether anticipating the occurrence of a stressful event and then appraising it more positively are also associated with successful stressor resolution.

Many researchers classify coping responses according to their focus: whereas *approach* coping responses reflect an individual's active efforts to change stressful circumstances, *avoidance* coping responses lack this focus and are directed mainly at managing emotions associated with the situation (Skinner, Edge, Altman, & Sherwood, 2003; Moos, 2004). Because avoidance coping responses entail orientation away from stressful circumstances, they tend to be ineffective for alleviating distress associated with stressors (for reviews see Moos & Holahan, 2003; Vingerhouts, 2001; Zeidner & Endler, 1996). Similarly, avoidance coping responses may be relatively ineffective for assuring stressor resolution.

There is mixed evidence that approach coping responses are effective for alleviation of emotional distress (see Vingerhouts, 2001; Zeidner & Endler, 1996). In part, this may be because exploratory approach coping responses, such as logical analysis and support seeking, may result in increased distress, as when prolonged efforts to understand a stressor and to solicit assistance with it reflect rumination (Nolen-Hoeksema, 1998) or procrastination that prevent individuals from confronting and managing the problem.

We extended previous research in this area by examining whether an imbalance of exploratory coping relative to directed coping hinders stressor resolution. Specifically, we considered whether stressor resolution is less likely when logical analysis and support-seeking coping, which can be aimed primarily at understanding and enlisting others' help to change a stressor (exploratory coping responses), outweigh problem-solving and positive reappraisal responses, which reflect behavioral and cognitive efforts to change a stressor (directed coping responses). We predicted that individuals who never resolve their stressors would use more exploratory relative to directed coping responses than would individuals who always resolve their stressors.

Changes Over Time in Appraisal and Coping Responses

Aldwin (1994) believes that as individuals age, they change their appraisal of stressors to perceive them as less threatening and improve their coping efficiency. However, researchers examining this issue have inferred possible age-related change in coping responses from cross-sectional studies, and these studies provide conflicting evidence about whether individuals' coping responses "improve" with age. For example, some researchers have found that older adults use about the same amount of problem-solving coping, and less escapist coping, than do younger adults (Aldwin, 1991; McCrae, 1982). However, Folkman and colleagues reported the opposite pattern: compared with younger individuals, older adults used more escapist and fewer problem-solving coping responses (Folkman, Lazarus, Pimley, & Novacek, 1987). We sought to clarify previous research in this area by providing longitudinal analysis of change in late-middle-aged individuals' coping responses as they age over a 10-year interval.

We also considered whether stressor resolution and coping responses are linked in a deviation amplification process over the course of late adulthood. The concept of deviation amplification (Maruyama, 1963) has been borrowed from systems theory to describe life-span developmental processes (e.g., Aldwin et al., 1996) and mutually reinforcing relations between key components of adaptation (e.g., social resources and coping responses) that unfold over time as "adaptive spirals" (Aldwin et al., 1996; Frazier, Tashiro, Berman, Steger, & Long, 2004; Hobfall, Johnson, Ennis, & Jackson, 2003). These can be positive, as when increasing personal resilience leads to and is influenced by increasingly effective coping responses (e.g., Aldwin, Spiro, Levenson, & Bosse, 1989), or negative, as when decreasing levels of social support contribute to and are further reduced by increasingly poor coping efforts (e.g., Frazier et al., 2004). If coping responses and stressor resolution are linked over time in adaptive spirals, there should be differential change over time in specific coping responses in groups of individuals who never, and who always, resolve stressors. Based on previous research demonstrating that avoidance coping responses are generally ineffective, we expected to find a "negative spiraling" process linking avoidance coping responses and failure to resolve stressors. Specifically, we predicted increasingly higher levels of avoidance coping responses over the 10-year interval among individuals who never resolve their stressors but no such increase among individuals who always resolve their stressors.

Although there are mixed findings in support of approach coping effectiveness, we nonetheless considered whether a "positive spiraling" process links approach coping responses and consistent success at stressor resolution. Specifically, we predicted increasingly higher levels of approach coping responses over the 10-year interval among individuals who always resolve their stressors but no such increase among individuals who never resolve their stressors.

Baseline Predictors of Successful Stressor Resolution

Finally, we considered whether coping responses and personal resources known at baseline in late middle age predict the extent of stressor resolution over the next 10 years. With regard to coping responses, a cross-sectional study of young adults by Harnish et al. (2000) showed that active behavioral coping was associated with a higher likelihood of stressor resolution, whereas avoidance coping and active cognitive coping reduced the probability of resolution. More depressive symptoms and poorer health in late middle age may also predict less success at stressor resolution over the ensuing decade. A history of depression is itself a stress modifier and is associated with factors that exacerbate negative effects of stressors (e.g., social resource deficits; Kessler, 1997). Poorer health may be a proxy for worse health habits and higher "allostatic load," accumulated physical damage sustained historically in encounters with stressors (Taylor, Repetti, & Seeman, 1997). In contrast, because family and friends provide a context for initiation and evaluation of coping efforts, as well as direct instrumental, informational, and emotional support with stressors (Cohen, 1992; Moos & Holahan, 2003;

Taylor et al., 1997), having more social resources in late middle age may foreshadow more subsequent success at stressor resolution.

SUMMARY OF RESEARCH QUESTIONS

In summary, this study addressed four questions: (a) What is the 10-year pattern of stressor resolution in a community sample of late-middle-aged and older adults? Specifically, across three data points covering 10 years, what percentage of individuals never, intermittently, or always successfully resolve their focal stressors? (b) Do the appraisal and coping responses of older adults who never resolve their stressors differ from those who always resolve their stressors, independent of type and severity of stressors? (c) Among individuals who never or who always resolve stressors, do appraisal and coping responses change over time? Do differential patterns of change in levels of coping responses in these groups imply occurrence of a deviation amplification process, wherein stressor resolution and coping responses are linked over time in mutually reinforcing adaptive spirals? (d) Do coping, personal, and social resources assessed at baseline in late middle age predict more occasions of successful stressor resolution as individuals age over the ensuing 10 years?

METHOD

Participants

Participants took part in a 10-year longitudinal study of life context, coping responses, and health behavior, which included drinking patterns and problems. At baseline data collection, the sample comprised individuals age 55 to 65 and was comparable to community samples of similar age with respect to health characteristics such as hospitalization and prevalence of chronic illness (Brennan & Moos, 1990). Over the next 10 years and three waves of follow-up, survivor response rates ranged from 93% to 95% (Schutte, Byrne, Brennan, & Moos, 2001). (For details about participant recruitment, baseline sample characteristics, and rate of participation, see Brennan & Moos, 1990; Moos, Brennan, Fondacaro, & Moos, 1990; and Schutte et al., 2001). Participants in the present study ($n = 1,159$) took part in all four waves of data collection and, at each wave, provided complete data on their coping responses to a focal stressor.

Measures

Demographic Characteristics—Demographic characteristics included gender, race, and baseline marital status, education, employment status, age, and annual income.

Appraisals, Coping Responses, and Stressor Resolution—Respondents were asked to identify their most important (focal) stressor in the past 12 months, to indicate how they appraised it, and to complete 48 items from the Coping Responses Inventory (CRI; Moos, 1993) describing specific strategies for managing the focal stressor.

CRI appraisal items were rated on 4-point scales, ranging from *definitely no* to *definitely yes*, and assessed whether respondents had *enough time to prepare* for the focal stressor, whether they *viewed it as a threat*, and whether they *viewed it as a challenge*.

Coping response items were rated on 4-point scales ranging from *not at all* to *fairly often*. The items comprised 8 subscales, 4 of which tap approach coping and 4 of which reflect avoidance coping. The approach coping subscales include *logical analysis*, which measures cognitive attempts to understand a stressor and its consequences; *positive reappraisal*, which assesses cognitive attempts to construe and restructure a problem in a positive way; *guidance/support*

seeking, which measures behavioral attempts to seek information, guidance, or support; and *problem solving*, behavioral attempts to take action and deal directly with the problem.

The avoidance coping indices were *cognitive avoidance*, which assesses cognitive attempts to avoid thinking realistically about a problem; *resigned acceptance*, which assesses cognitive attempts to react to the problem by accepting it; *alternative rewards*, which measures behavioral attempts to get involved in substitute activities and create new sources of satisfaction; and *emotional discharge*, which measures behavioral attempts to reduce tension by expressing negative feelings.

The eight CRI subscales have internal consistency ranging from .61 to .74, are moderately positively intercorrelated (average $r = .29$), and have strong construct and predictive validity (Moos, 1993, 2004). To assess participants' use of *exploratory relative to directed coping responses*, we summed their responses to the logical analysis and guidance/support-seeking subscales and divided this by the sum of the problem solving and positive reappraisal subscales.

Participants were asked to indicate on a 4-point scale ranging from 0 (*definitely no*) to 3 (*definitely yes*) whether they had resolved their focal stressor; responses were dichotomized (0 = *no*, 1 = *yes*) for use in subsequent analyses. Reflecting its content validity, baseline affirmative responses to the stressor resolution item were significantly correlated with higher self-confidence, fewer depressive symptoms, and less fatigue ($r_s = .20, -.32$, and $-.27$, respectively).

To classify individuals with respect to stressor resolution, we examined their pattern of resolution over the three waves of data collection that followed baseline assessment. Individuals who did not resolve their stressors at any of the three points were classified as having never resolved their stressors; those who did not resolve stressors two of three times were classified as rarely resolving their stressors. Individuals who did resolve stressors two of three times were classified as usually resolving their stressors, and those who resolved their focal stressors at all three points were classified as always resolving their stressors.

Severity and Type of Focal Stressor—Experienced raters used documented decision rules to classify participants' focal stressors into categories (interpersonal, health, finances, and other) and then to assign the stressors standard weights derived from the work of Dohrenwend, Krasnoff, Askenasy, and Dohrenwend (1978) and Holmes and Rahe (1967). For example, a major illness or injury was given a weight of 53; interpersonal problems with a spouse or partner were assigned a weight of 35, and general financial problems were given a weight of 38. All ratings were independently cross-checked for agreement. On rare occasions of disagreement, raters met and used the documented decision rules to reach agreement.

At each wave of data collection, almost 50% of participants designated an interpersonal event or situation as their focal stressor. Accordingly, we created a dummy variable for each wave indicating whether the focal stressor was interpersonal in nature (0 = *no*, 1 = *yes*), to be used as a covariate in subsequent analyses.

Baseline Predictors of Stressor Resolution—In addition to *avoidance coping* (sum of scores on the CRI cognitive avoidance, seeking alternative rewards, resigned acceptance, and emotional discharge subscales) and *reliance on exploratory coping relative to directed coping*, three other baseline variables were used to predict the number of stressor resolutions over the ensuing 10-year interval. Participants' social resources were assessed with the Life Stressors and Social Resources Inventory (LISRES; Moos & Moos, 1994). The LISRES social resources subscales assess ongoing resources in the domains of *work*, the sum of scores on six items rated on 5-point scales that assess the extent of challenge, independence, and support at work; and four separate *spouse*, *child*, *extended family*, and *friend resources* subscales that tap

the degree of interpersonal support available from these sources (for scoring details, see Moos & Moos, 1994). In brief, the social resource indices have moderate to high internal consistency (average $\alpha = .79$), are only moderately intercorrelated (average $r = .20$), and discriminate as expected between groups of healthy and ill respondents (Moos & Moos, 1994). To tap participants' baseline *global social resources*, we summed their baseline social resources across the five domains and divided the sum by the number of domains in which individuals had social resources at baseline.

Baseline health problems were assessed with items from LISRES (Moos & Moos, 1994) and comprised the sum of current medical conditions (such as anemia, cancer, and diabetes) and physical ailments (such as shortness of breath and fatigue) that began more than 12 months ago. *Baseline depressive symptoms* were tapped with the Depressive Symptoms Severity Index drawn from the Health and Daily Living Form (Moos, Cronkite, & Finney, 1990). This index ($\alpha = .93$) is the sum of 18 symptoms derived from the Research Diagnostic Criteria (Spitzer, Endicott, & Robins, 1978) rated on 5-point scales ranging from never to often.

Summary of Analyses

We first calculated the percentage of individuals who never, rarely, usually, or always resolved their stressors across the three data collection points after baseline. Preliminary analyses showed that mean values on appraisals and coping responses generally followed a linear pattern across these four groups. For example, means for each of the avoidance coping response subscales were highest among individuals who never resolved their stressors and successively lower in the groups of individuals who rarely, usually, and always resolved their stressors.

However, for purposes of this study, we restricted analyses to individuals who never resolve their stressors and individuals who always do. We did this for two reasons. First, the groups have high internal validity. It is questionable whether individuals who rarely resolve their stressors (one of three times) are conceptually distinct from those who usually (two of three times) resolve their stressors. In contrast, participants who have never and always resolved their stressors have clearly managed life stressors differently over the 10-year interval. Second, individuals in the rarely and usually resolved groups vary as to the specific measurement points at which they reported successful stressor resolution. This prevents clear interpretation of associations between coping and stressor resolution in these groups. To illustrate, individuals in the never resolve group are homogeneous with regard to stressor resolution: they never do so at any follow-up period. An observed increase over time in a particular type of coping in this group could plausibly be associated with failure to resolve focal stressors over the 10-year interval. In contrast, in the rarely resolved group, successful stressor resolution may have occurred at the 1-, or 4-, or 10-year follow-up. An observed increase over time in a particular type of coping in this group may or may not be associated with stressor resolution; without a one-to-one correspondence between the timing of individuals' coping efforts and stressor resolution (yes/no), one could not infer a plausible causal association between coping and stressor resolution. In view of these considerations, and for exploratory purposes, we compared the appraisals and coping responses of individuals who never resolve their stressors over a 10-year interval with individuals who always do so.

Accordingly, we first used analyses of variance and chi-square analyses to compare the demographic and stressor characteristics of individuals who never resolved their focal stressors to those of individuals who always resolved them. Next, we conducted repeated measures multivariate analyses of covariance (RM MANCOVA) to examine group differences, changes over time, and group by time interactions in these two groups' appraisal and coping responses, controlling for stressor type and severity. To further consider whether group differences in appraisal and coping responses occurred, holding constant the type of focal stressor, we reran the comparisons within two subsamples: individuals who reported an interpersonal problem

as their focal stressor at all three waves of follow-up ($n = 59$), and individuals who indicated a health problem as their focal stressor at all three waves ($n = 19$). There were too few cases to conduct the analyses among participants for whom financial or other focal stressors had occurred at all three waves.

In the overall sample ($N = 1,159$), we then conducted multiple regression analyses in which the predictors were baseline coping responses, social resources, health problems, and depressive symptoms, and the criterion was number of stressor resolutions over the follow-ups after baseline. Preliminary analyses showed that demographic characteristics and baseline stressor appraisal were not significant predictors of subsequent stressor resolution. Accordingly, these variables were excluded from the final regression model. We also excluded baseline stressor type and severity on the grounds that these variables were closely tied to the specific stressful encounter described at baseline and could thus be expected to be only weakly or unrelated to stressor resolution over the next 10 years. In contrast, because coping responses were moderately stable in this sample, and because avoidance coping responses and exploratory coping responses relative to directed coping responses strongly distinguished between older adults who never and who always resolved stressors, we included baseline values of these coping variables in the final predictive model.

We also conducted a logistic regression analysis restricted to the extreme groups to determine whether significant baseline predictors of stressor resolution identified in the multiple regression analyses were also predictive of never or always resolving stressors. As a subsidiary analysis, we determined whether the coping, social, and health resource variables were associated with stressor resolution, independent of depressive symptoms, at each of the 1-year, 4-year, and 10-year follow-ups.

RESULTS

Of the 1,159 participants, 20% never resolved their focal stressors, 36% rarely did, 32% usually did, and 12% always resolved their focal stressor over the 10-year interval following baseline assessment. When participants who never resolved their stressors were compared with those who always did, there were no statistically significant differences between the groups with respect to gender, marital status, race, employment status, age, educational attainment, income, stressor type, or stressor severity (Table 1).

Even after stressor type and severity were statistically controlled, the two groups differed with respect to appraisals (multivariate $F(3, 367) = 30.1, p < .01$). In comparison with older adults who never resolved their stressors, those who were always successful were, at every time of assessment, more likely to report having had time to prepare for their focal stressors. They were also less likely to view their stressors as a threat and, in general, more likely to view them as a challenge (Table 2).

The groups also differed in coping responses, even after controlling for stressor type and severity (multivariate $F(9, 301) = 19.6, p < .01$). With regard to approach coping responses, individuals who were always successful at stressor resolution used less logical analysis in response to focal stressors than did individuals who were never successful. They also used significantly fewer avoidance coping responses. Specifically, they used less cognitive avoidance, resigned acceptance, seeking alternative rewards, and emotional discharge. Their coping efforts were significantly less likely to be dominated by exploratory relative to active coping efforts. Essentially the same pattern of findings occurred when we examined group differences among individuals who reported only interpersonal stressors, or only health problems, as their focal stressors at all three waves of follow-up (not shown).

There were no statistically significant changes over time in participants' appraisals of stressors (multivariate $F(6, 1478) = 1.1, ns$). However, independent of type and severity of stressors, participants' coping responses significantly changed over time (multivariate $F(18, 1466) = 3.8, p < .01$). Specifically, they reduced their use of logical analysis, positive reappraisal, seeking alternative rewards, and emotional discharge.

There was a statistically significant multivariate interaction of group by time on appraisals (multivariate $F(6, 1478) = 2.7, p < .01$). However, the only interaction to reach univariate statistical significance pertained to challenge appraisals: whereas participants who were never successful at stressor resolution increasingly viewed their focal stressors as challenging, individuals who were always successful were less likely to view their focal stressors this way. There was no statistically significant interaction between group and time on coping responses (multivariate $F(18, 1466) = 1.3, ns$).

Table 3 shows the results of multiple regression analysis using baseline coping responses and social and personal resources to predict the extent of successful stressor resolution in the entire sample ($N = 1,159$) over the 10-year follow-up. Less use of exploratory relative to directed coping responses predicted more stressor resolution, as did more social resources and fewer health problems and depressive symptoms. Results of logistic regression analysis (not shown) confirmed that all of these baseline factors were also significant predictors of never versus always resolving stressors over the 10-year follow-up.

At the 1-year and 4-year follow-ups, participants' depressive symptoms were significantly ($p < .01$) predictive of stressor resolution ($\beta = -.13$ and $-.11$, respectively). However, participants' use of avoidance coping, heavier reliance on exploratory relative to active coping, and global social resources also contributed significantly to stressor resolution, independent of depressive symptoms. At the 10-year follow-up, depressive symptoms were not associated with stressor resolution ($\beta = .04$); the strongest predictors of resolution were less use of avoidance coping, low use of exploratory relative to active coping, better health, and more social resources (not shown).

DISCUSSION

Stressor resolution is an important outcome of the stress and coping process that may assume increasing importance as individuals age. However, very little research has focused on stressor resolution, and none has described patterns and predictors of stressor resolution in later life.

Ten-Year Pattern of Stressor Resolution

Over a 10-year interval, the late-middle-aged adults we studied had mixed success at resolving their most salient stressor of the past year. More than 50% of participants in this study never or rarely resolved their stressors. Judging from the comparison of extreme groups, that is, individuals who never or always resolved their stressors, this was not attributable to stressor type or severity; these stressor characteristics were similar in the two groups. However, participants who did not resolve stressors might have been prevented from doing so by stressor characteristics not measured here, such as novelty, complexity, or controllability. In contrast, the results show clear links between older adults' appraisal and coping responses and their late-life patterns of stressor resolution.

Appraisal and Coping Responses Associated with Patterns of Stressor Resolution

There were systematic differences in the appraisals and coping responses of individuals who never versus those who always resolved their late-life stressors. Consistent with the idea that preparedness and anticipatory coping facilitate more successful coping outcomes (Aspinwell

& Taylor, 1997; Friedman & Scholnick, 1997), individuals who always resolved their stressors were more likely to report that they had been prepared for their focal stressors. Furthermore, they were less likely to view their stressors as a threat and, in general, more likely to consider them a challenge.

As in prior research demonstrating that avoidance coping responses are generally ineffective for alleviating distress associated with stressors (Moos & Holahan, 2003; Vingerhouts, 2001; Zeidner & Endler, 1996), older adults who never resolved their stressors were consistently more likely to use cognitive avoidance, resigned acceptance, seeking alternative rewards, and emotional discharge in response to focal stressors, independent of the type and severity of stressors they encountered. These results indicate that, in addition to failing to eliminate the distress related to stressors, avoidance coping strategies are relatively ineffective ways of managing the stressor itself.

Mirroring prior research, the findings regarding approach coping are less clear. Of the four approach coping strategies examined here, only one distinguished between groups. Use of logical analysis was more characteristic of individuals who never resolved their stressors than of individuals who always did so. This may reflect higher levels of rumination among individuals who never resolved their stressors. Rumination may sustain negative affect associated with a stressor and prevent or delay efforts to change it (Nolen-Hoeksema, 1998).

Individuals who never resolved their stressors were also more likely to use coping efforts in which exploratory efforts exceeded directed coping responses. Efforts that emphasize exploration over directed coping responses prevent the resolution of stressors because effort is disproportionately allocated to understanding and soliciting assistance with stressful circumstances relative to behavioral and cognitive efforts to change them. The fact that this occurs more often among individuals who never resolved their stressors may be consistent with a compensatory model of aging (e.g., Baltes, 1997): aging-related decrements in physical and emotional reserves may hinder directed coping efforts that are most effective for stressor resolution and necessitate increased compensatory, exploratory coping responses such as more detailed problem analysis and intensified support seeking. Future research should examine this possibility and seek other reasons why use of more exploratory relative to directed coping responses appears to diminish older adults' coping effectiveness.

The overall pattern of group differences in appraisal and coping was replicated when we controlled for type of event by focusing on subsamples of individuals who reported only interpersonal stressors, or only health problems, as focal stressors at all three waves of follow-up. This adds to previous findings (Moos, Brennan, Schutte, & Moos, 2005) indicating that late-life stress and coping processes occur independent of specific types of focal stressors.

Changes Over Time in Appraisal and Coping Responses

In both groups there was decline over time in use of logical analysis, positive reappraisal, seeking alternative rewards, and emotional discharge. This finding lends partial support to the idea that, as older adults mature, they invest less effort in coping processes (Aldwin, 1994). Importantly, however, levels of coping responses on these subscales dropped in both the never and always resolved groups, detracting from the idea that this decline reflected greater coping efficacy or that stressor resolution and coping responses are linked in "adaptive spirals" in later life. If the latter were the case, differential change over time in the two groups on specific types of coping responses should have occurred (e.g., increased approach coping among individuals who always resolved their stressors but not among those who never did so).

A deviation amplification model of coping and stressor resolution was not strictly assessed in this design, given the time gaps between measurements. Further evaluation of this model,

encompassing more frequent and more closely spaced time intervals, should focus on the possibility that coping responses and stressor resolution are reciprocally related in mutually reinforcing ways. In addition, we focused here only on individuals who never or who always resolved their stressors over the course of 10 years; evidence for a mutually reinforcing adaptive process should be sought within groups with more variability in resolution.

Predicting Successful Stressor Resolution

We examined whether late-middle-aged individuals' baseline coping responses, social resources, health problems, and depressive symptoms predicted the extent of their stressor resolution over the ensuing 10 years. Late-middle-aged adults who used more exploratory coping efforts relative to directed coping efforts at baseline experienced fewer instances of stressor resolution over the next 10 years. This extends previous research by suggesting that tendencies toward engaging in more extensive analysis and support-seeking in response to stressors, rather than direct efforts to manage them, interferes over the long term with late-life stressor resolution.

Consistent with research showing positive effects of social resources in preventing or diminishing distress associated with stressors (Cohen, 1992), participants who had more social resources at baseline were more likely to resolve their stressors over the next 10 years. Thus, level of support from family and friends at late middle age has enduring implications for coping efficacy in ensuing years.

Having more ongoing health conditions, physical ailments, and depressive symptoms at baseline predicted fewer occasions of stressor resolution over the next 10 years, independent of baseline coping responses and social resources. Poorer health may reflect lifelong lifestyle habits, such as smoking and excessive drinking, and may also be indicative of higher allostatic load, the accumulated burden of historical stressors (Taylor et al., 1997). As Kessler (1997) points out, a history of depression can exacerbate stressors and contribute to the erosion of social resources that protect against the negative effects of stressors. Poorer health and depressive symptoms at late middle age are thus important risk factors that foreshadow reduced coping efficacy over the course of later life.

In subsidiary analyses, we examined the relation between participants' depressive symptoms and their reports of stressor resolution. As expected, in two of three postbaseline waves of data collection, more depressive symptoms predicted less resolution of stressors. However, at all three waves, coping responses, social resources, and health problems were also predictive of stressor resolution, independent of depressive symptoms. Accordingly, individuals' actions in response to stressors, as well as their health and social resources, seem to be as important as negative affect for determining stressor resolution. However, retrospective self-reports can provide only limited information about this issue; multiple methods are needed to unentangle the affective, behavioral, and contextual determinants of stressor resolution.

Limitations

The results of this study should be interpreted in light of its limitations. This study has a predominately unidirectional causal emphasis; future research should focus on reciprocal effects of coping responses and stressor resolution. Improved measures of coping responses and stressor resolution are needed to facilitate description of relations between coping responses and stressor resolution in later life. Participants in this study gave retrospective accounts of the coping responses they used to manage the most important stressor of the past year. Further research should consider whether real-time stressor-coping transactions associated with stressor resolution mirror the patterns described here. Furthermore, additional information is needed about the validity of the stressor resolution measure used here, including

the subjective meaning of the term *stressor resolution* for participants and independent verification of whether participants' stressors were really resolved.

Another concern is shared measurement variance. Some associations reported here may reflect the fact that more pessimistic respondents consistently view their own appraisals, coping responses, and the outcome of their coping efforts more negatively. The longitudinal design of this study helps to reduce this concern, as do results from subsidiary analyses showing that coping responses, social context, and health status contribute to stressor resolution, independent of depressive symptoms. Nonetheless, further research should consider relationships between coping responses and stressor resolution independent of respondents' mood.

Further research should also examine how specific types of stressors and stressor characteristics that were not measured here, such as novelty, complexity, and controllability, modify the relations between coping responses and stressor resolution. This study describes stressor resolution and coping responses in a predominately Caucasian, well educated sample; further research should examine these factors in samples that vary more widely in race, education, and income. In a related vein, insofar as they replicate findings from a mixed-age sample (Harnish et al., 2000), the results reported here imply there are cross-cohort similarities in the relation between coping responses and stressor resolution. However, more information is needed about this issue. Finally, we caution that although restricting the group comparisons to extreme groups increased the internal validity of this study, it did so at the cost of its external validity. The present study should therefore be considered exploratory; it takes only preliminary steps toward understanding associations between adults' coping efforts and stressor resolution in later life.

CONCLUSION

Notwithstanding these limitations, this investigation makes an important contribution to the study of stress and coping among older adults: it offers a preliminary description of the longitudinal pattern of stressor resolution in later life, highlights systematic differences between appraisals and coping responses of individuals who consistently do and do not resolve their most salient stressors, and identifies key baseline predictors of stressor resolution over the next 10 years. The latter contribution has potential clinical implications. Less effective coping responses, social resource deficits, health problems, and depressive symptoms are identifiable and potentially modifiable characteristics of late-middle-aged adults. Thus, they are promising foci for prospective efforts by professional and community care providers to help older adults optimize ways in which they manage late-life stressors.

Acknowledgements

This research was supported by National Institute on Alcohol Abuse and Alcoholism Grants AA06699 and AA15685 and by Department of Veterans Affairs Health Services Research and Development Services research funds. The views expressed in this article are those of the authors and do not necessarily represent those of the Department of Veterans Affairs.

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Table 1
Demographic and Stressor Characteristics

	Never successful <i>n</i> = 229	Always successful <i>n</i> = 144	<i>F</i> or χ^2 value
Demographic characteristics			
% Women	40.2	45.1	0.89
% Married	65.5	71.5	1.47
% Caucasian	90.4	91.0	0.35
% Employed	47.6	52.1	0.71
Age, in yrs (M)	61.0	61.5	1.68
Education, in yrs (M)	14.4	14.5	0.61
Income (M)	27,162	31,050	3.54
Stressor characteristics			
Stressor type ^a			
1-yr follow-up	48.9	42.4	1.50
4-yr follow-up	47.6	46.5	.04
10-yr follow-up	44.1	45.1	.04
Stressor severity (M)			
1-yr follow-up	38.8	36.5	1.78
4-yr follow-up	37.1	40.2	2.80
10-yr follow-up	39.3	40.4	.34

^aPercentage with interpersonal situation as focal stress.

Table 2

Appraisals and Coping Responses

	Follow-up	Never successful <i>n</i> = 229	Always successful <i>n</i> = 144	Group <i>F</i>	Time <i>F</i>	Group × Time <i>F</i>
Appraisals						
Had enough time to prepare	1-yr	39.2%	46.4%	21.1**	.08	1.1
	4-yr	38.3%	52.5%			
	10-yr	36.2%	55.3%			
Thought of stressor as a threat	1-yr	58.1%	33.3%	69.5**	2.7	.9
	4-yr	56.8%	34.5%			
	10-yr	59.3%	29.8%			
Thought of stressor as a challenge	1-yr	45.5%	69.6%	5.0**	1.0	5.7**
	4-yr	55.0%	52.5%			
	10-yr	50.7%	55.3%			
Coping Responses						
Logical analysis	1-yr	11.12	10.01	16.4**	16.5**	.3
	4-yr	10.85	9.53			
	10-yr	10.02	8.43			
Positive reappraisal	1-yr	9.22	10.24	1.03	7.6**	1.8
	4-yr	9.11	9.27			
	10-yr	8.67	8.83			
Seeking guidance and support	1-yr	9.24	7.97	5.6	.6	2.1
	4-yr	8.99	8.61			
	10-yr	8.93	8.33			
Problem Solving	1-yr	10.05	11.08	3.0	2.9	1.6
	4-yr	9.97	10.50			
	10-yr	9.75	10.25			
Cognitive avoidance	1-yr	7.07	4.52	68.2**	.4	.4
	4-yr	7.01	4.14			
	10-yr	7.18	4.19			
Resigned acceptance	1-yr	7.87	5.65	49.8**	3.1	.2
	4-yr	8.57	6.31			
	10-yr	8.21	6.21			
Seeking alternative rewards	1-yr	6.10	5.33	12.9**	4.9**	1.3
	4-yr	5.89	4.61			
	10-yr	5.67	4.45			
Emotional discharge	1-yr	3.98	2.17	56.4**	4.3**	3.7
	4-yr	3.90	1.74			
	10-yr	3.35	1.97			
More exploratory than directed responses (%yes)	1-yr	58.1	28.5	16.2**	1.9	1.1
	4-yr	58.6	38.9			
	10-yr	59.9	38.2			

Note. Results of repeated measures multivariate analyses of covariance, controlling for type and severity of stressors. Multivariate *F* values given in text; univariate *F* values shown here. For appraisal variables, *F* values from repeated measures multivariate analyses of covariance conducted on continuous values [range = 0 (definitely not) through 3 (definitely yes)]; percentages shown to aid clarity of presentation.

**
p < .01.

Table 3

Summary of Multiple Regression Analysis: Baseline Predictors of Successful Stressor Resolution over a 10-Year Interval ($n = 1,159$)

Predictors	<i>B</i>	<i>SE B</i>	β
Baseline coping responses:			
Avoidance coping responses	.00	.01	-.02
Exploratory relative to active coping	-.19	.05	-.10**
Baseline social resources:			
Global social resources	.02	.01	.10**
Baseline personal resources:			
Health problems	-.03	.01	-.11**
Depressive symptoms	-.02	.00	-.22**
Constant	2.44	.16	
Adjusted R^2	12.3%		

**
 $p < .01$.